



# Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 07:01 PM GMT

PDB ID : 4LT8  
Title : Crystal Structure of tRNA Proline (CGG) Bound to Codon CCC-G on the Ribosome  
Authors : Maehigashi, T.; Dunkle, J.A.; Dunham, C.M.  
Deposited on : 2013-07-23  
Resolution : 3.14 Å(reported)

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

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

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

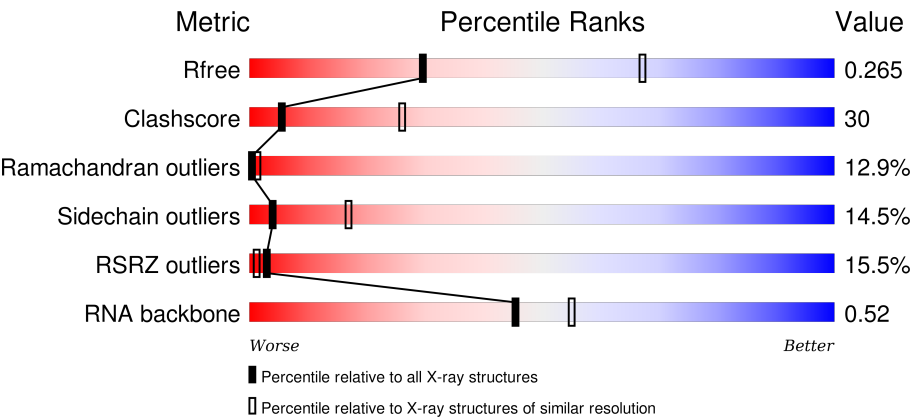
# 1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 3.14 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 <sub>free</sub>	91344	1095 (3.18-3.10)
Clashscore	102246	1202 (3.18-3.10)
Ramachandran outliers	100387	1162 (3.18-3.10)
Sidechain outliers	100360	1162 (3.18-3.10)
RSRZ outliers	91569	1097 (3.18-3.10)
RNA backbone	2183	1016 (3.58-2.70)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=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>19%</div><div><div></div><div>50%</div><div>37%</div><div>10%</div><div>..</div></div></div>
1	XA	1522	<div><div>20%</div><div><div></div><div>50%</div><div>37%</div><div>11%</div><div>..</div></div></div>
2	QB	256	<div><div>18%</div><div><div>17%</div><div>58%</div><div>16%</div><div>7%</div></div></div>
2	XB	256	<div><div>9%</div><div><div>17%</div><div>59%</div><div>16%</div><div>7%</div></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	QY	17	
23	XY	17	
24	QX	25	
24	XX	25	
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	

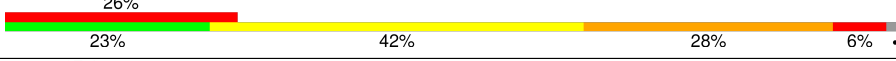
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Mol	Chain	Length	Quality of chain
40	YU	118	
41	RV	101	
41	YV	101	
42	RW	113	
42	YW	113	
43	RX	96	
43	YX	96	
44	RY	110	
44	YY	110	
45	RZ	206	
45	YZ	206	
46	R0	85	
46	Y0	85	
47	R1	98	
47	Y1	98	
48	R2	72	
48	Y2	72	
49	R3	60	
49	Y3	60	
50	R4	71	
50	Y4	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	R9	37	
55	Y9	37	
56	Z6	3	
56	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
57	MG	QA	1615	-	-	-	X
57	MG	QA	1631	-	-	-	X
57	MG	QA	1657	-	-	-	X
57	MG	RA	3005	-	-	-	X
57	MG	RA	3029	-	-	-	X
57	MG	RA	3034	-	-	-	X
57	MG	RA	3035	-	-	-	X
57	MG	RA	3039	-	-	-	X
57	MG	RA	3053	-	-	-	X
57	MG	RA	3056	-	-	-	X
57	MG	RA	3060	-	-	-	X
57	MG	RA	3063	-	-	-	X
57	MG	RA	3088	-	-	-	X
57	MG	RA	3099	-	-	-	X
57	MG	RA	3125	-	-	-	X
57	MG	RA	3126	-	-	-	X
57	MG	RA	3131	-	-	-	X
57	MG	RA	3192	-	-	-	X
57	MG	RA	3200	-	-	-	X
57	MG	RA	3204	-	-	-	X
57	MG	RA	3220	-	-	-	X
57	MG	RA	3221	-	-	-	X
57	MG	RA	3230	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
57	MG	RA	3238	-	-	-	X
57	MG	Y7	101	-	-	-	X
57	MG	YA	3015	-	-	-	X
57	MG	YA	3020	-	-	-	X
57	MG	YA	3023	-	-	-	X
57	MG	YA	3027	-	-	-	X
57	MG	YA	3034	-	-	-	X
57	MG	YA	3050	-	-	-	X
57	MG	YA	3099	-	-	-	X
57	MG	YA	3100	-	-	-	X
57	MG	YA	3144	-	-	-	X
57	MG	YA	3171	-	-	-	X
57	MG	YA	3207	-	-	-	X
57	MG	YA	3219	-	-	-	X
57	MG	YA	3240	-	-	-	X
57	MG	YA	3255	-	-	-	X
57	MG	YA	3258	-	-	-	X
57	MG	YA	3259	-	-	-	X
58	PAR	QA	1670	-	-	-	X
58	PAR	XA	1675	-	-	-	X

## 2 Entry composition

There are 59 unique types of molecules in this entry. The entry contains 291998 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	1500	Total	C	N	O	P	0	0	0
			32249	14354	5984	10412	1499			

- 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 messenger RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	QY	15	Total	C	N	O	P	0	0	0
			323	144	58	106	15			
23	XY	15	Total	C	N	O	P	0	0	0
			323	144	58	106	15			

- Molecule 24 is a RNA chain called A-site ASL Pro.

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

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

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

- 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 L11.

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 L13.

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 L14.

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 L15.

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 L16.

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 L17.

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 L18.

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 L19.

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 L20.

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 L21.

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 L22.

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 L23.

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 L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	RZ	183	Total	C	N	O	S	0	0	0
			1461	933	260	265	3			
45	YZ	183	Total	C	N	O	S	0	0	0
			1461	933	260	265	3			

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

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 L27.

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 L28.

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 L29.

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 L30.

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 L32.

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 L33.

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 L34.

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 50S ribosomal protein L35.

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 protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	R9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			
55	Y9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			

- Molecule 56 is a RNA chain called tRNA acceptor end mimic.

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

- Molecule 57 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	QA	69	Total	Mg	0	0
			69	69		
57	RP	1	Total	Mg	0	0
			1	1		
57	YA	265	Total	Mg	0	0
			265	265		
57	QM	1	Total	Mg	0	0
			1	1		
57	XX	1	Total	Mg	0	0
			1	1		

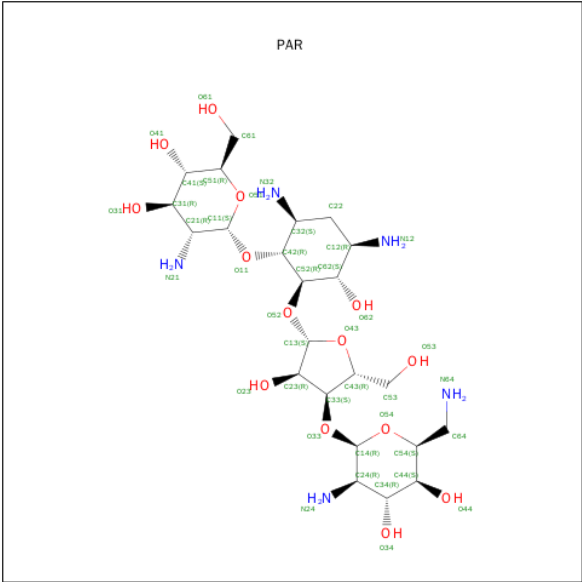
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	QV	1	Total 1	Mg 1	0	0
57	XA	74	Total 74	Mg 74	0	0
57	R0	1	Total 1	Mg 1	0	0
57	QH	1	Total 1	Mg 1	0	0
57	YQ	1	Total 1	Mg 1	0	0
57	RR	2	Total 2	Mg 2	0	0
57	RD	1	Total 1	Mg 1	0	0
57	Y7	1	Total 1	Mg 1	0	0
57	QF	1	Total 1	Mg 1	0	0
57	R5	1	Total 1	Mg 1	0	0
57	Y0	1	Total 1	Mg 1	0	0
57	RA	240	Total 240	Mg 240	0	0
57	YP	1	Total 1	Mg 1	0	0
57	Y5	1	Total 1	Mg 1	0	0
57	RE	2	Total 2	Mg 2	0	0
57	YB	3	Total 3	Mg 3	0	0
57	XV	2	Total 2	Mg 2	0	0
57	RB	2	Total 2	Mg 2	0	0
57	RF	1	Total 1	Mg 1	0	0
57	YE	2	Total 2	Mg 2	0	0

- Molecule 58 is PAROMOMYCIN (three-letter code: PAR) (formula:  $C_{23}H_{45}N_5O_{14}$ ).





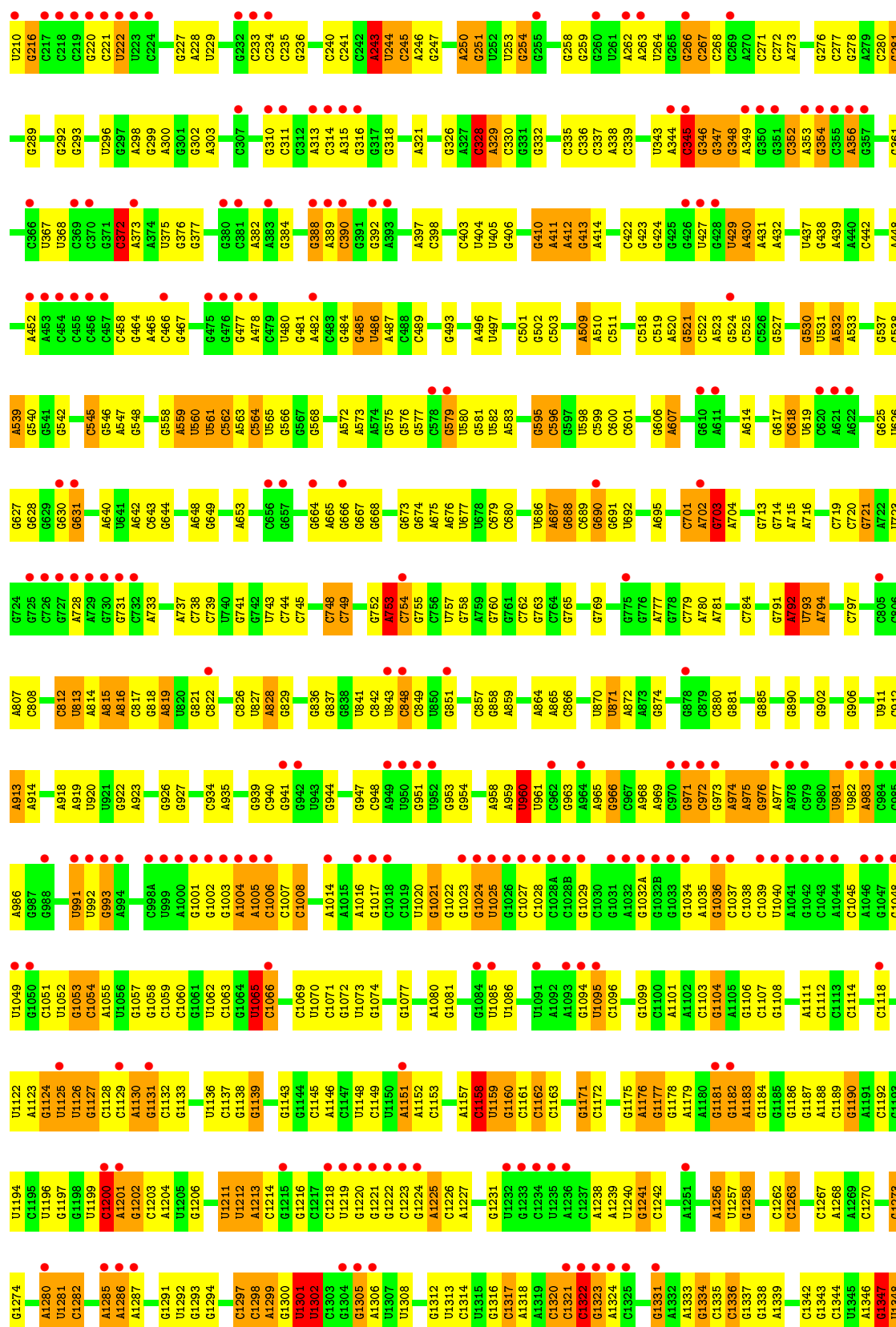
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
58	QA	1	Total	C	N	O	0	0
			42	23	5	14		
58	XA	1	Total	C	N	O	0	0
			42	23	5	14		

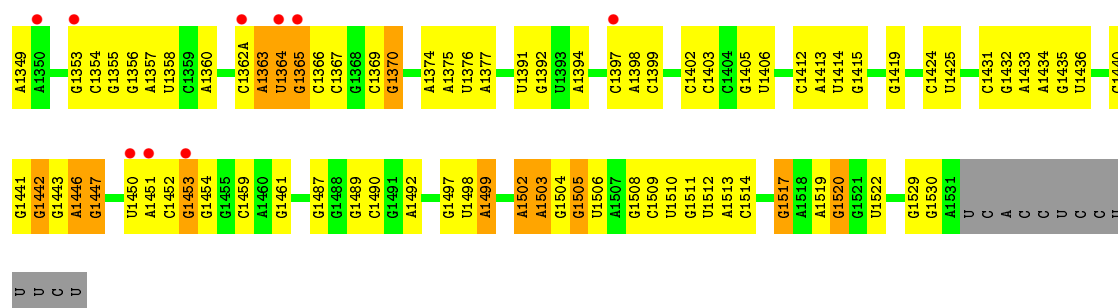
- Molecule 59 is ZINC ION (three-letter code: ZN) (formula: Zn).

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

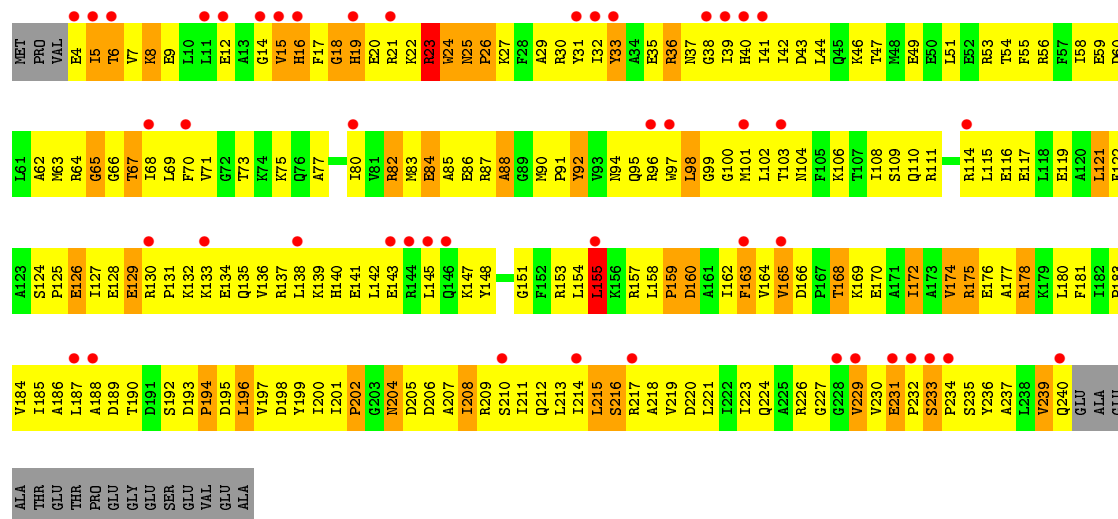




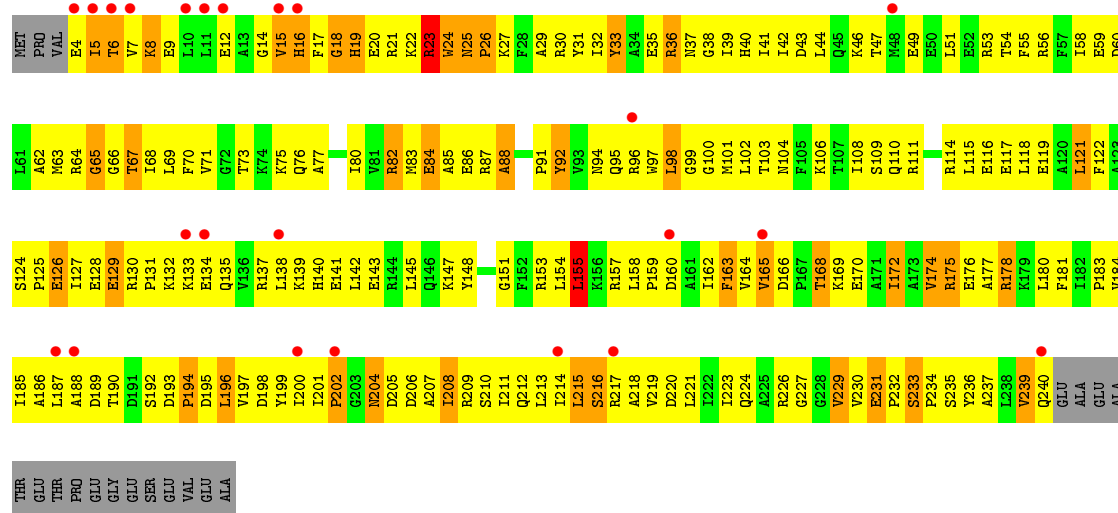




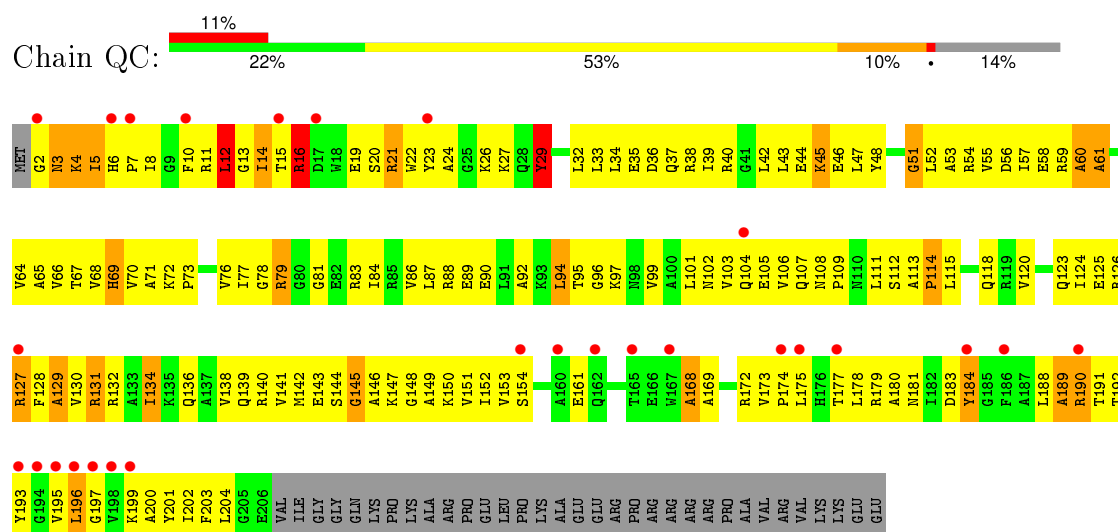
- Molecule 2: 30S ribosomal protein S2



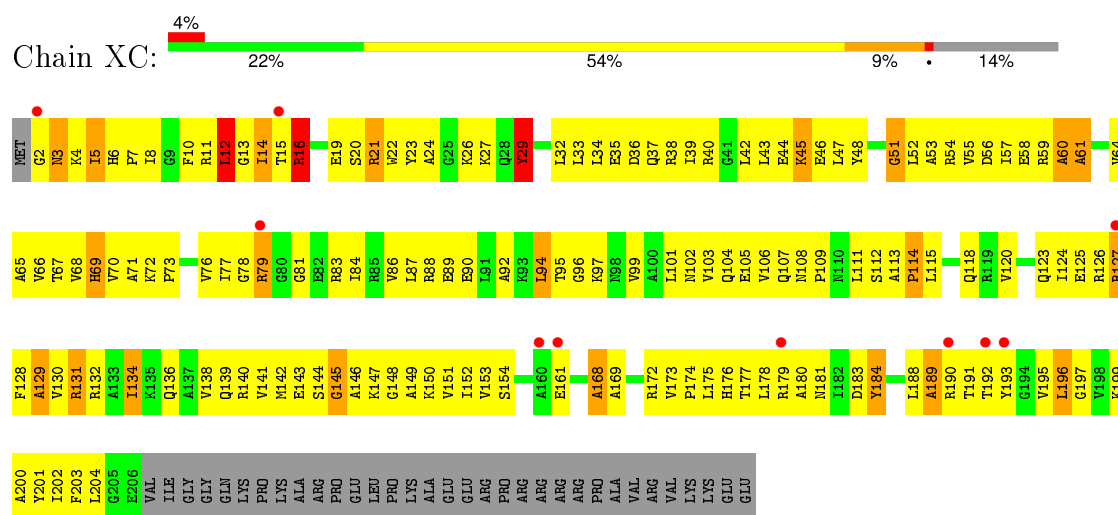
- Molecule 2: 30S ribosomal protein S2



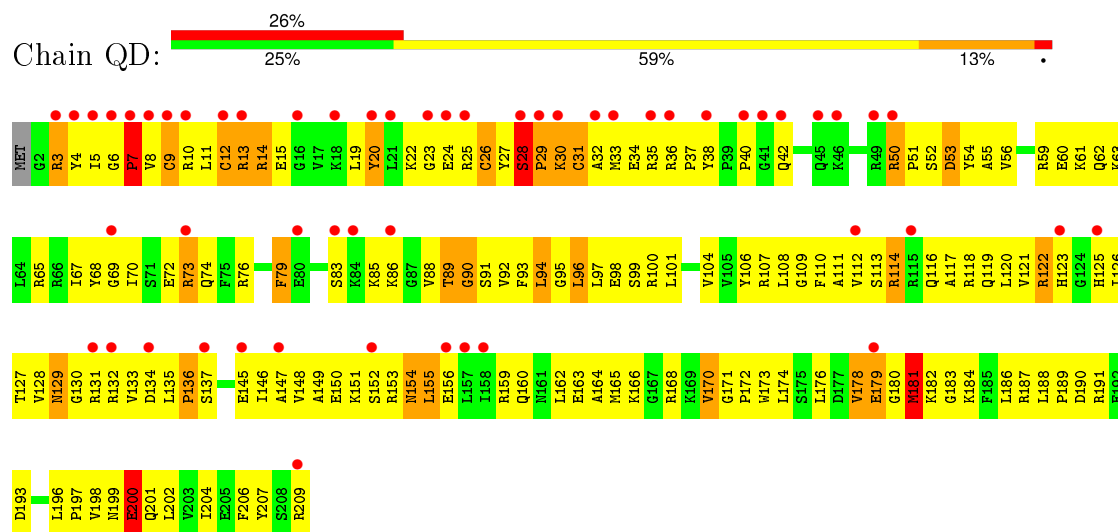
- Molecule 3: 30S ribosomal protein S3



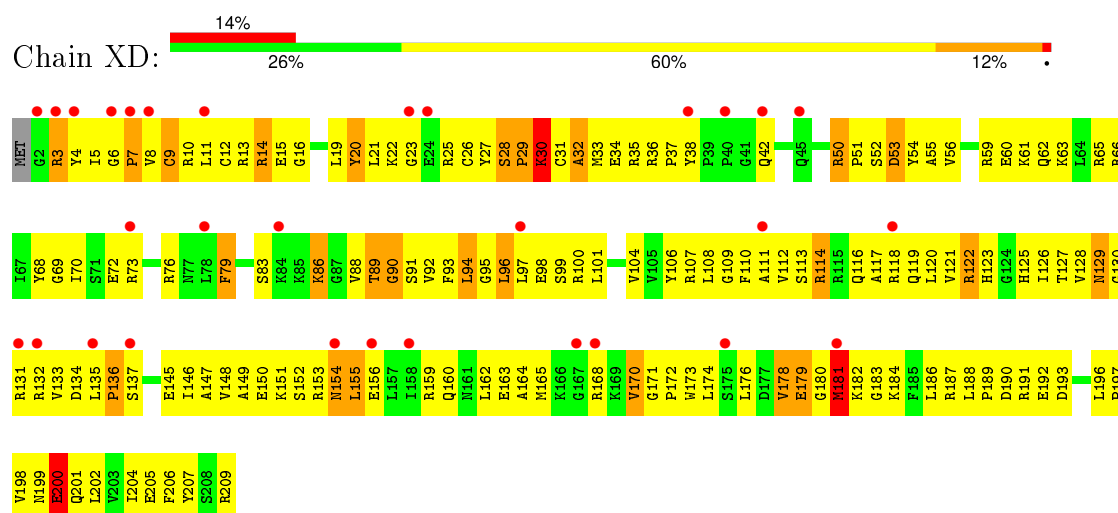
• Molecule 3: 30S ribosomal protein S3



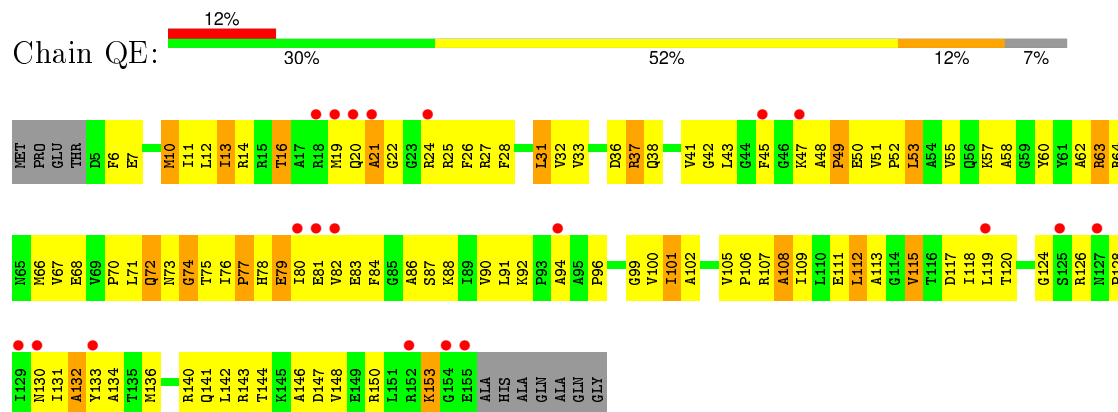
• Molecule 4: 30S ribosomal protein S4



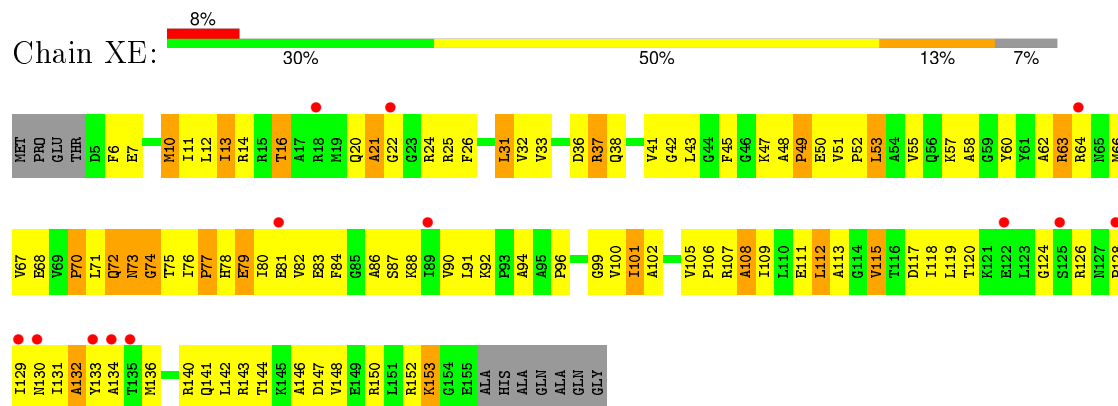
• Molecule 4: 30S ribosomal protein S4



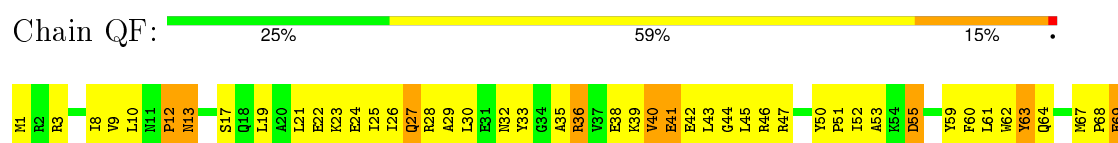
• Molecule 5: 30S ribosomal protein S5



• Molecule 5: 30S ribosomal protein S5

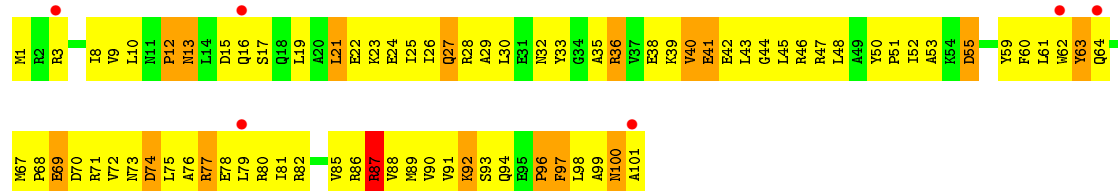


• Molecule 6: 30S ribosomal protein S6

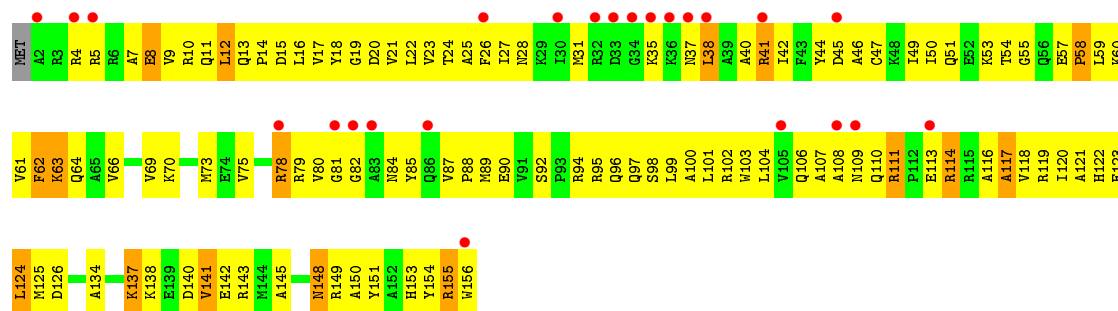




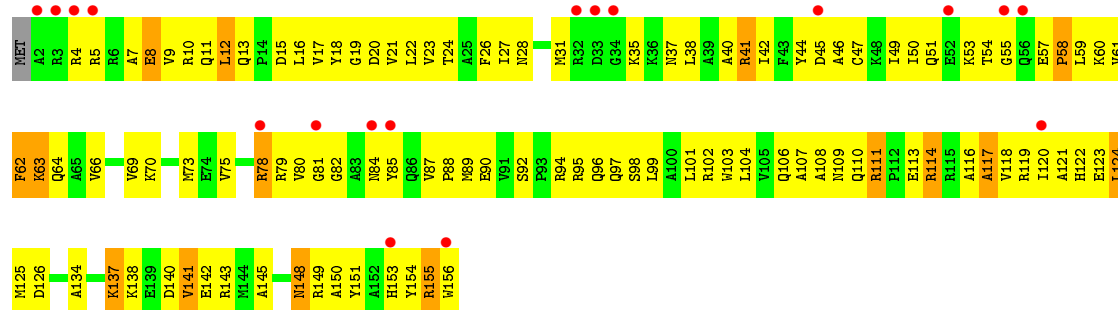
• Molecule 6: 30S ribosomal protein S6



• Molecule 7: 30S ribosomal protein S7



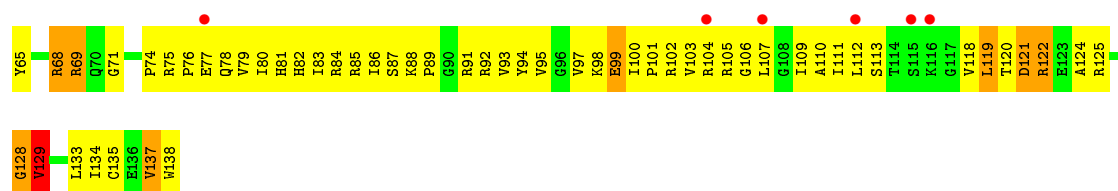
• Molecule 7: 30S ribosomal protein S7



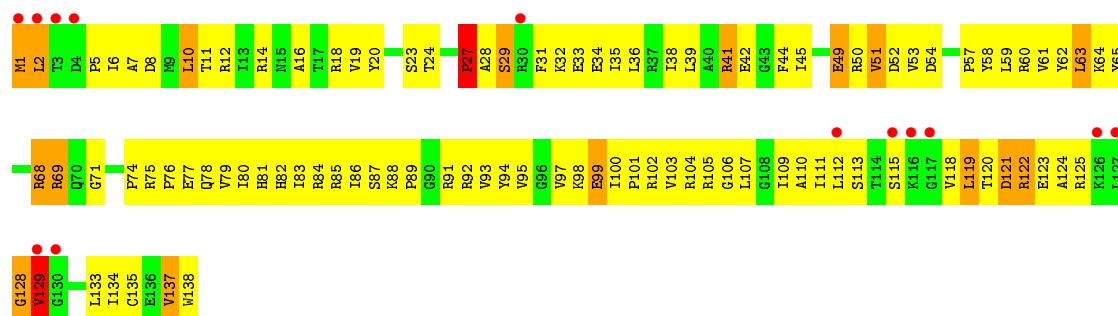
• Molecule 8: 30S ribosomal protein S8



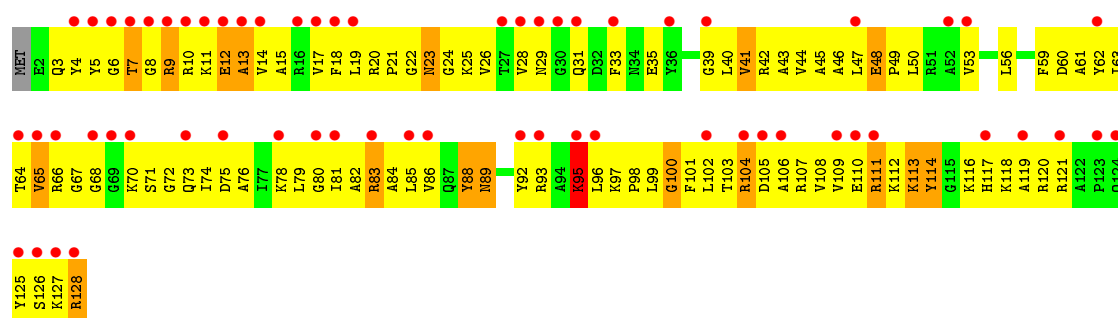




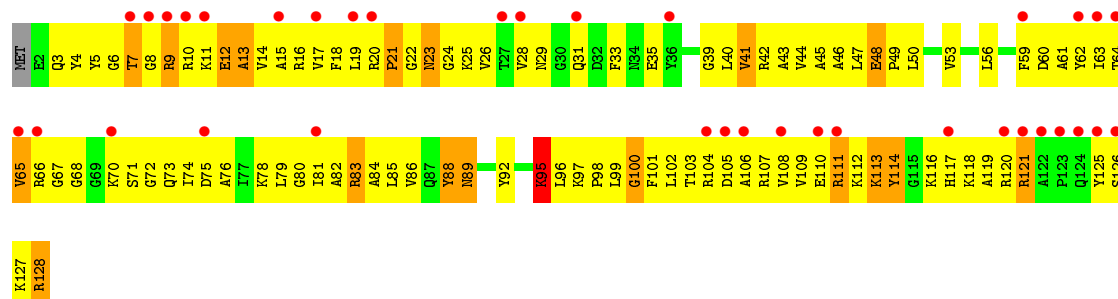
• Molecule 8: 30S ribosomal protein S8



• Molecule 9: 30S ribosomal protein S9

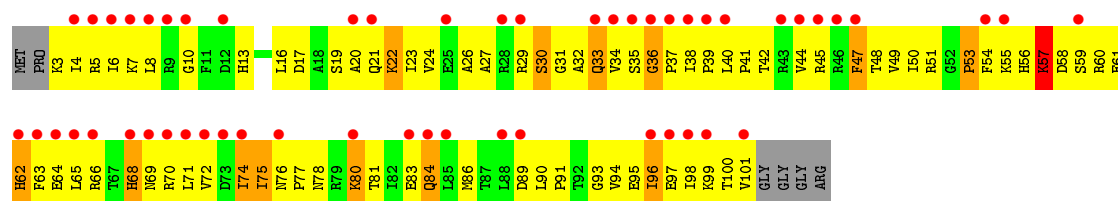


• Molecule 9: 30S ribosomal protein S9

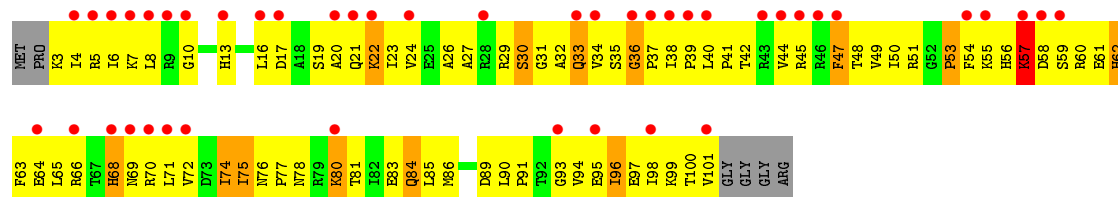


• Molecule 10: 30S ribosomal protein S10

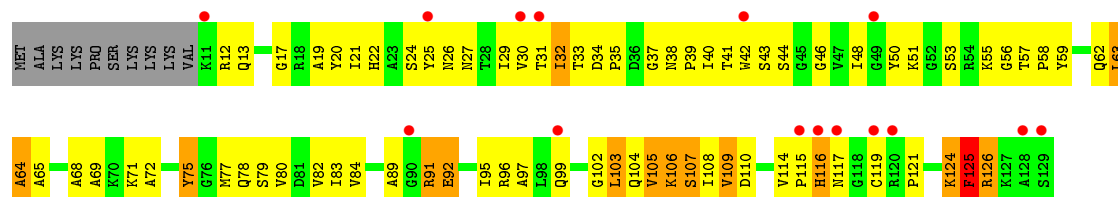




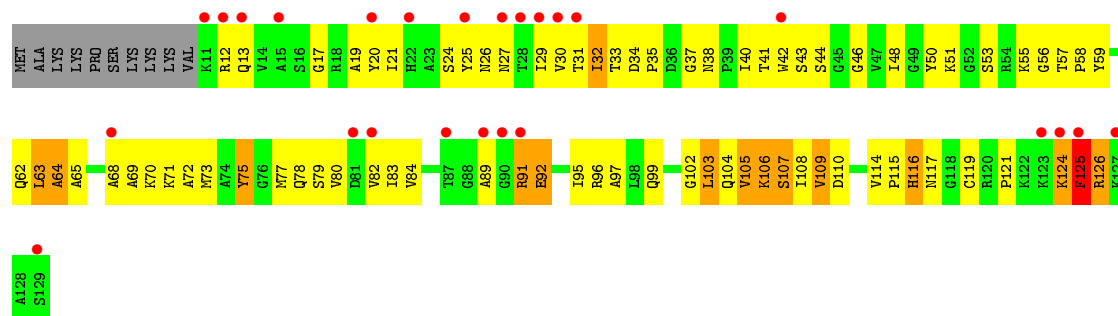
• Molecule 10: 30S ribosomal protein S10



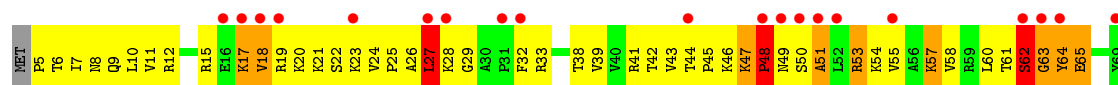
• Molecule 11: 30S ribosomal protein S11

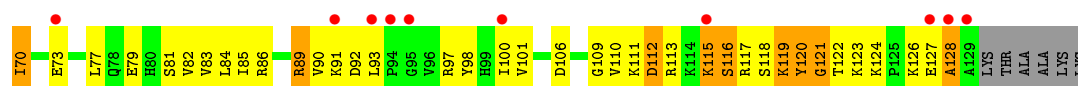


• Molecule 11: 30S ribosomal protein S11



• Molecule 12: 30S ribosomal protein S12

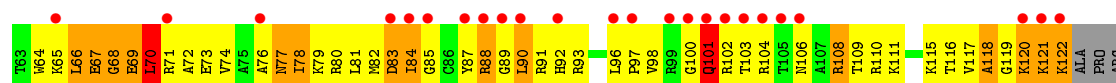




• Molecule 12: 30S ribosomal protein S12

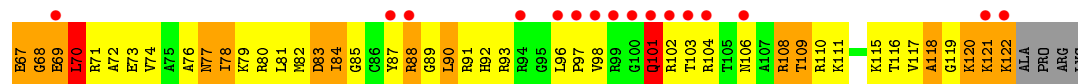
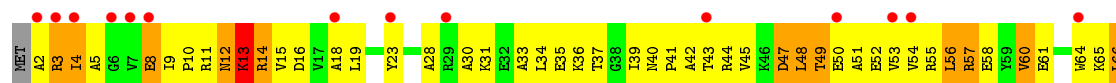


• Molecule 13: 30S ribosomal protein S13

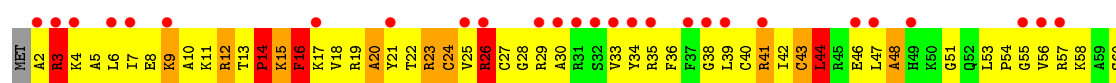
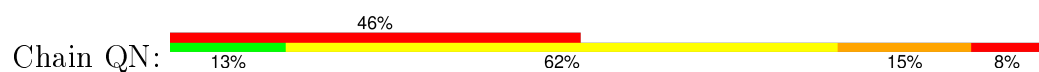


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• Molecule 13: 30S ribosomal protein S13

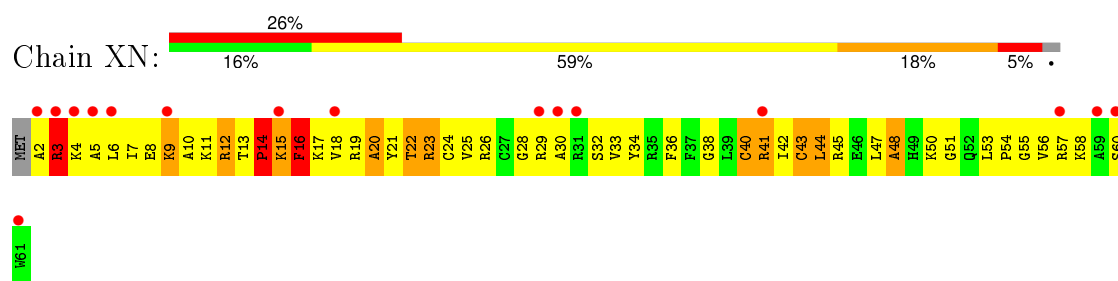


• Molecule 14: 30S ribosomal protein S14

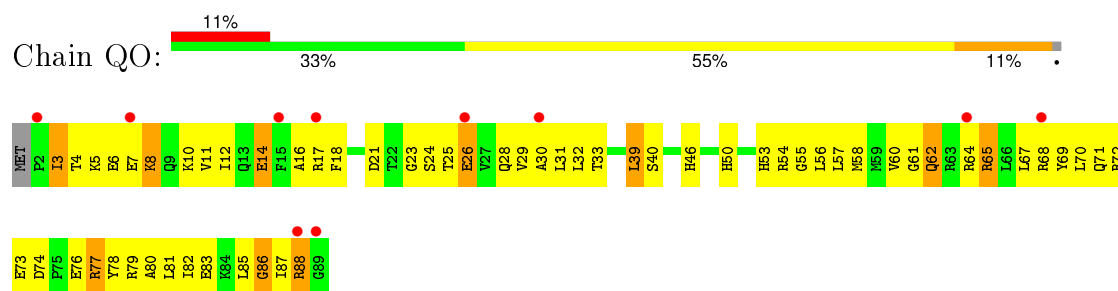


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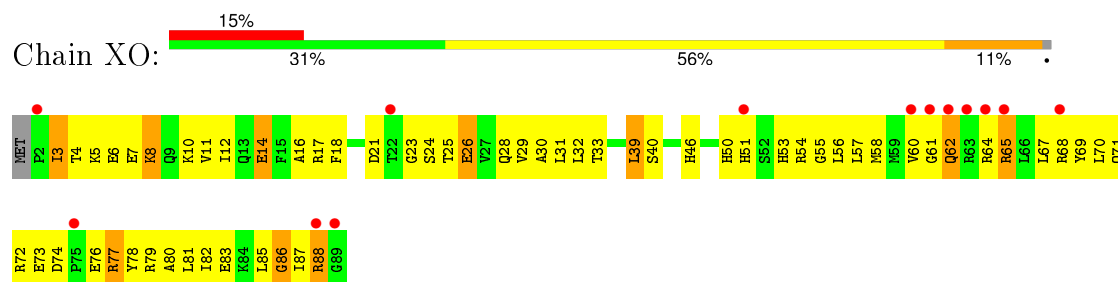
• Molecule 14: 30S ribosomal protein S14



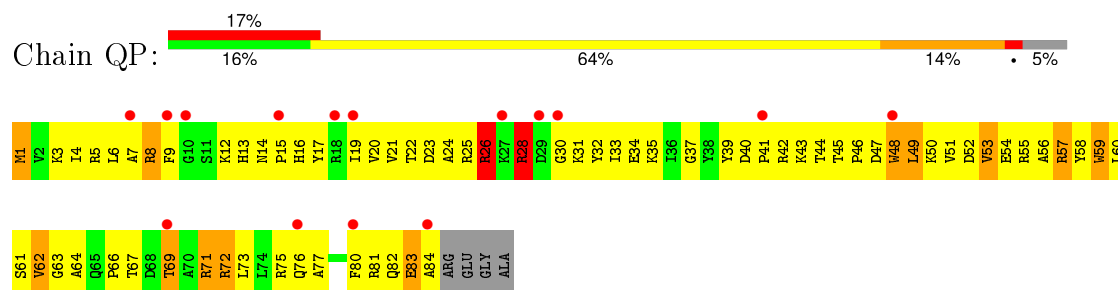
- Molecule 15: 30S ribosomal protein S15



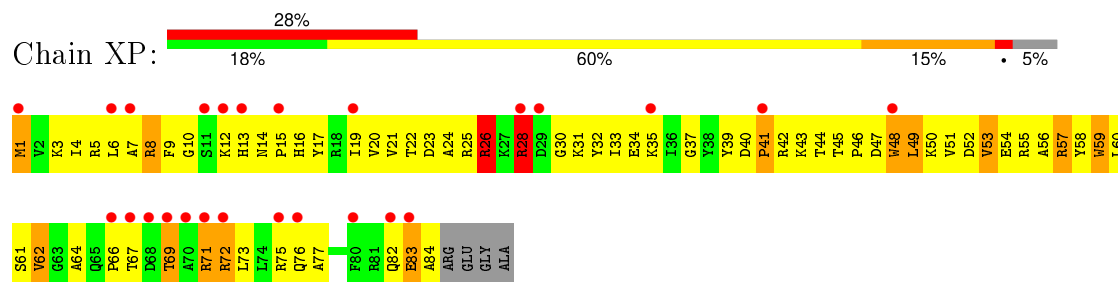
- Molecule 15: 30S ribosomal protein S15



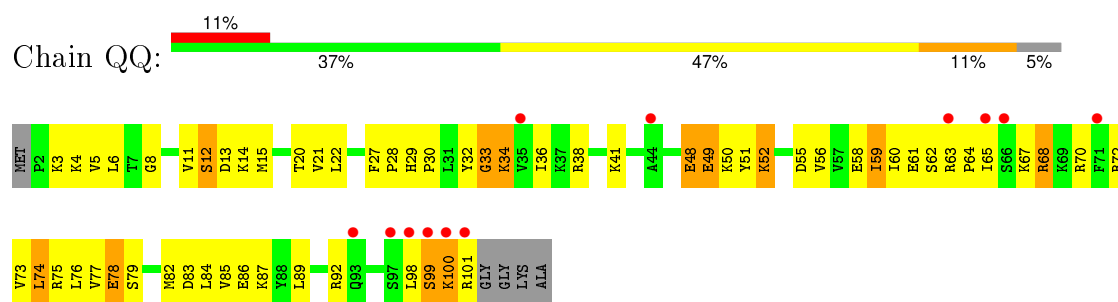
- Molecule 16: 30S ribosomal protein S16



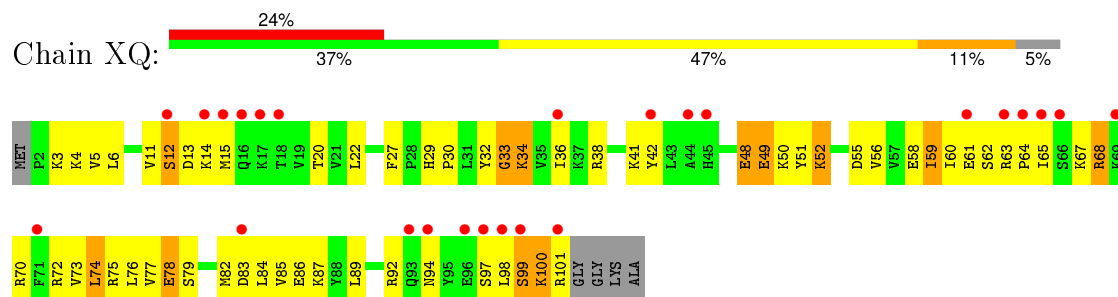
- Molecule 16: 30S ribosomal protein S16



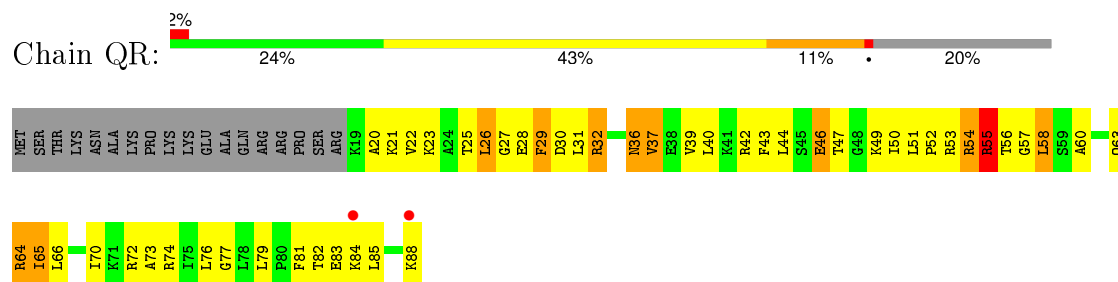
- Molecule 17: 30S ribosomal protein S17



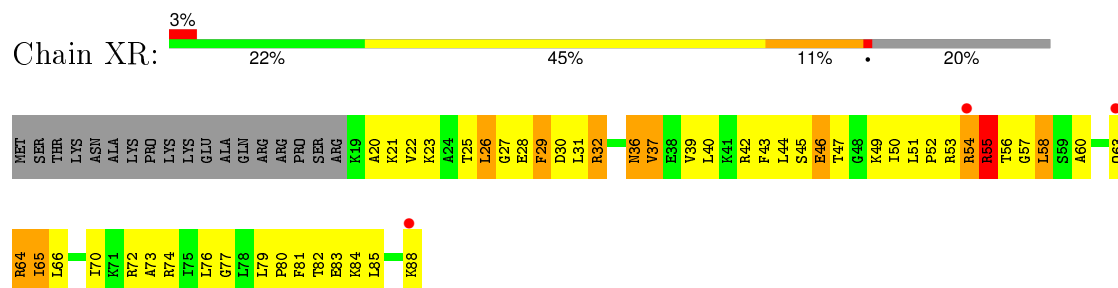
• Molecule 17: 30S ribosomal protein S17



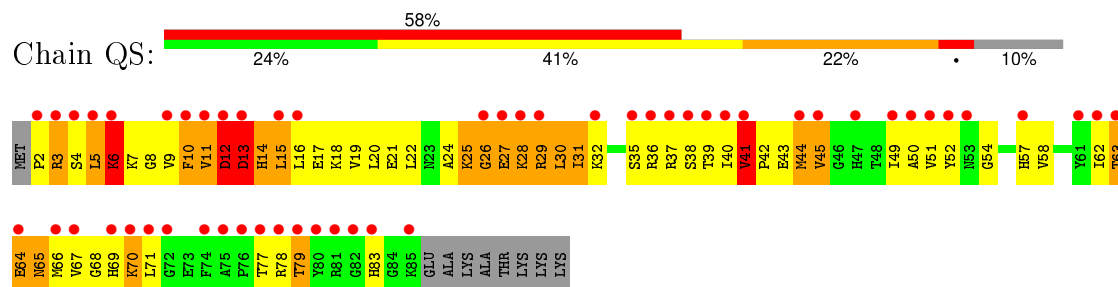
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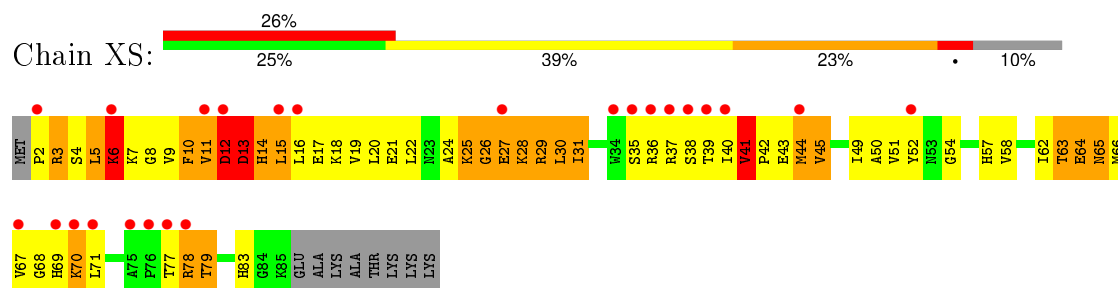
• Molecule 18: 30S ribosomal protein S18



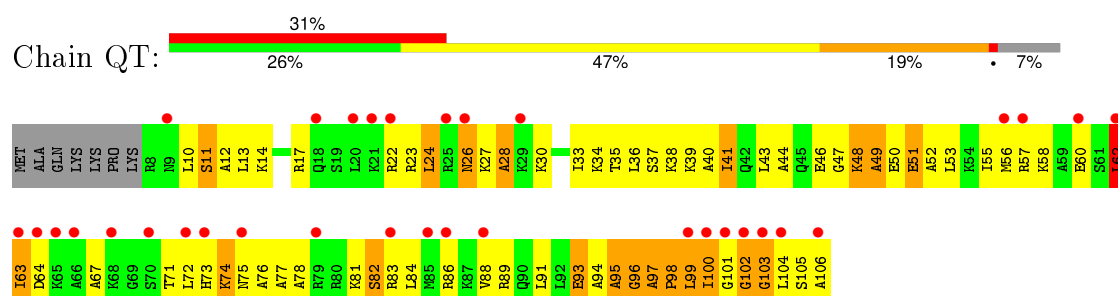
• Molecule 19: 30S ribosomal protein S19



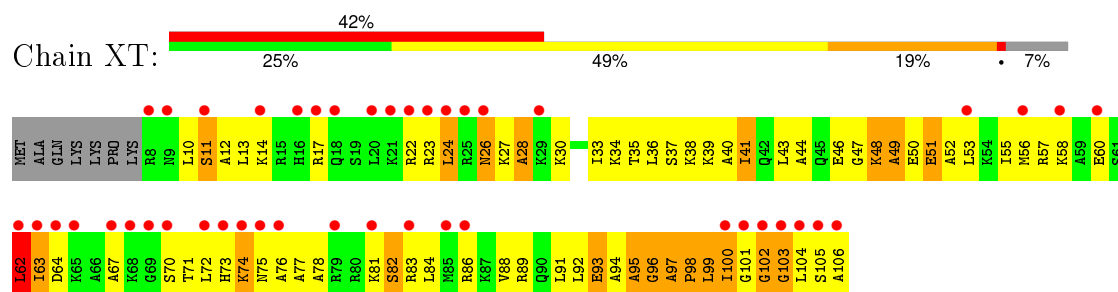
- Molecule 19: 30S ribosomal protein S19



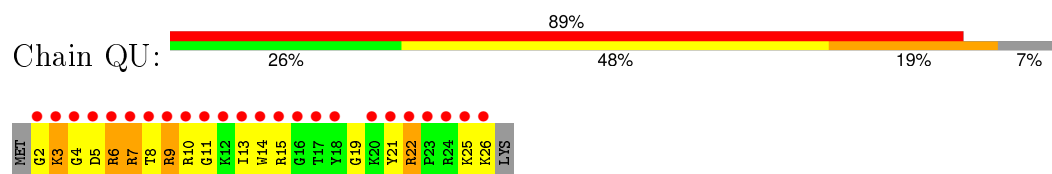
- Molecule 20: 30S ribosomal protein S20



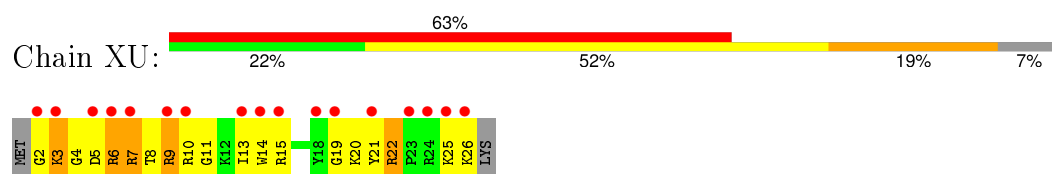
- Molecule 20: 30S ribosomal protein S20



- Molecule 21: 30S ribosomal protein S21

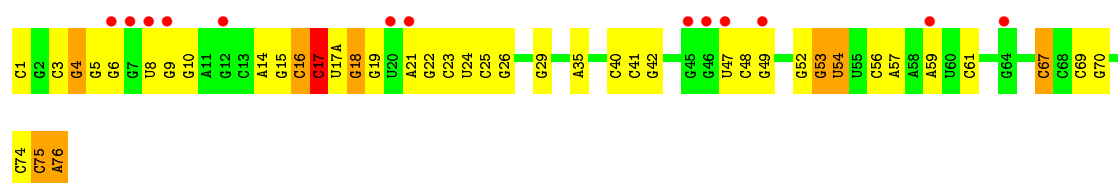


- Molecule 21: 30S ribosomal protein S21



- Molecule 22: P-site tRNA fMet





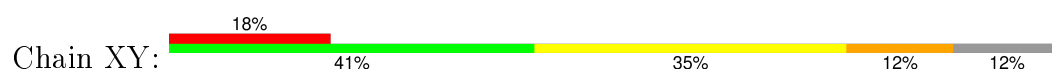
- Molecule 22: P-site tRNA fMet



- Molecule 23: messenger RNA



- Molecule 23: messenger RNA



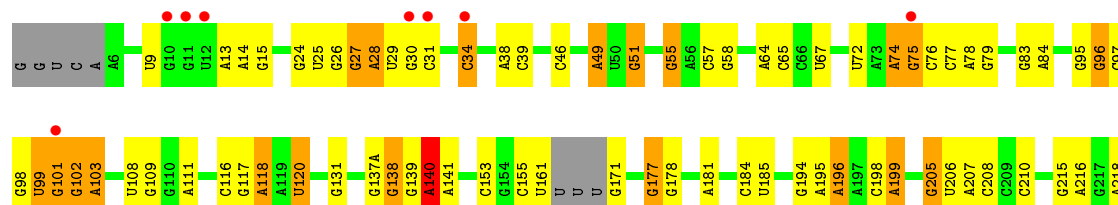
- Molecule 24: A-site ASL Pro



- Molecule 24: A-site ASL Pro



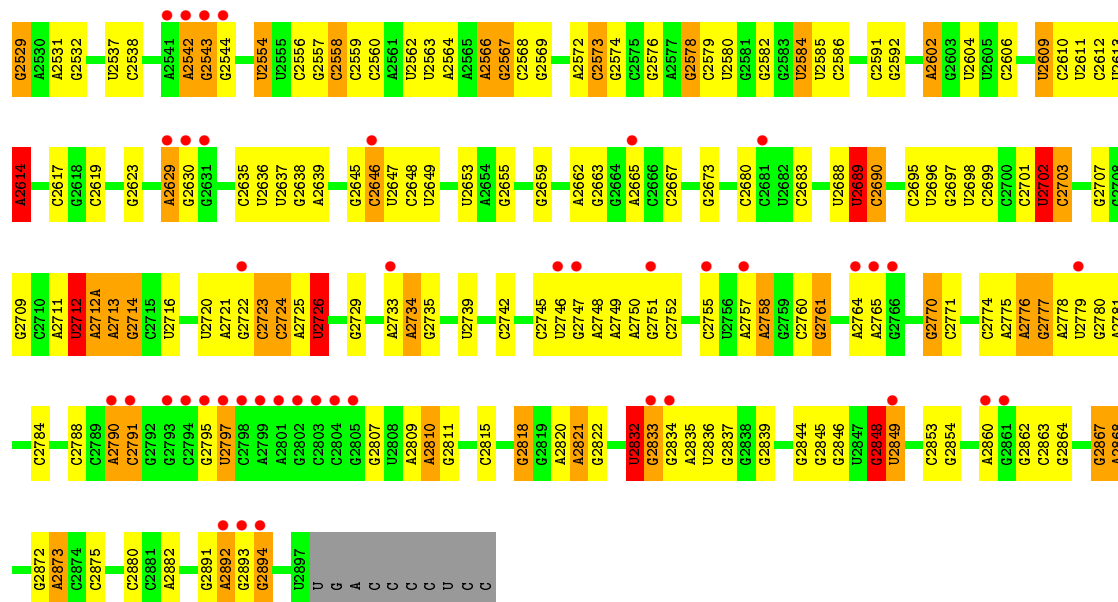
- Molecule 25: 23S rRNA



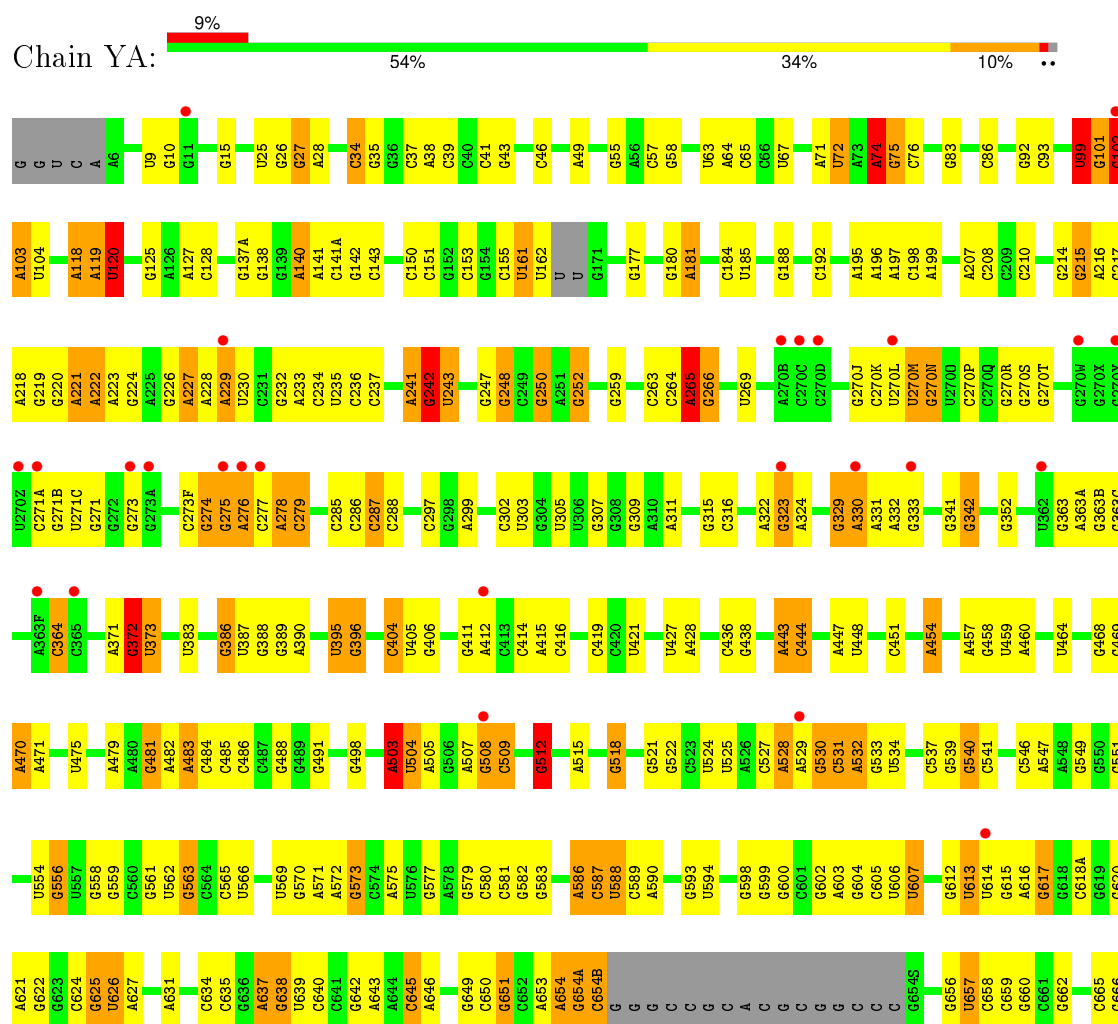




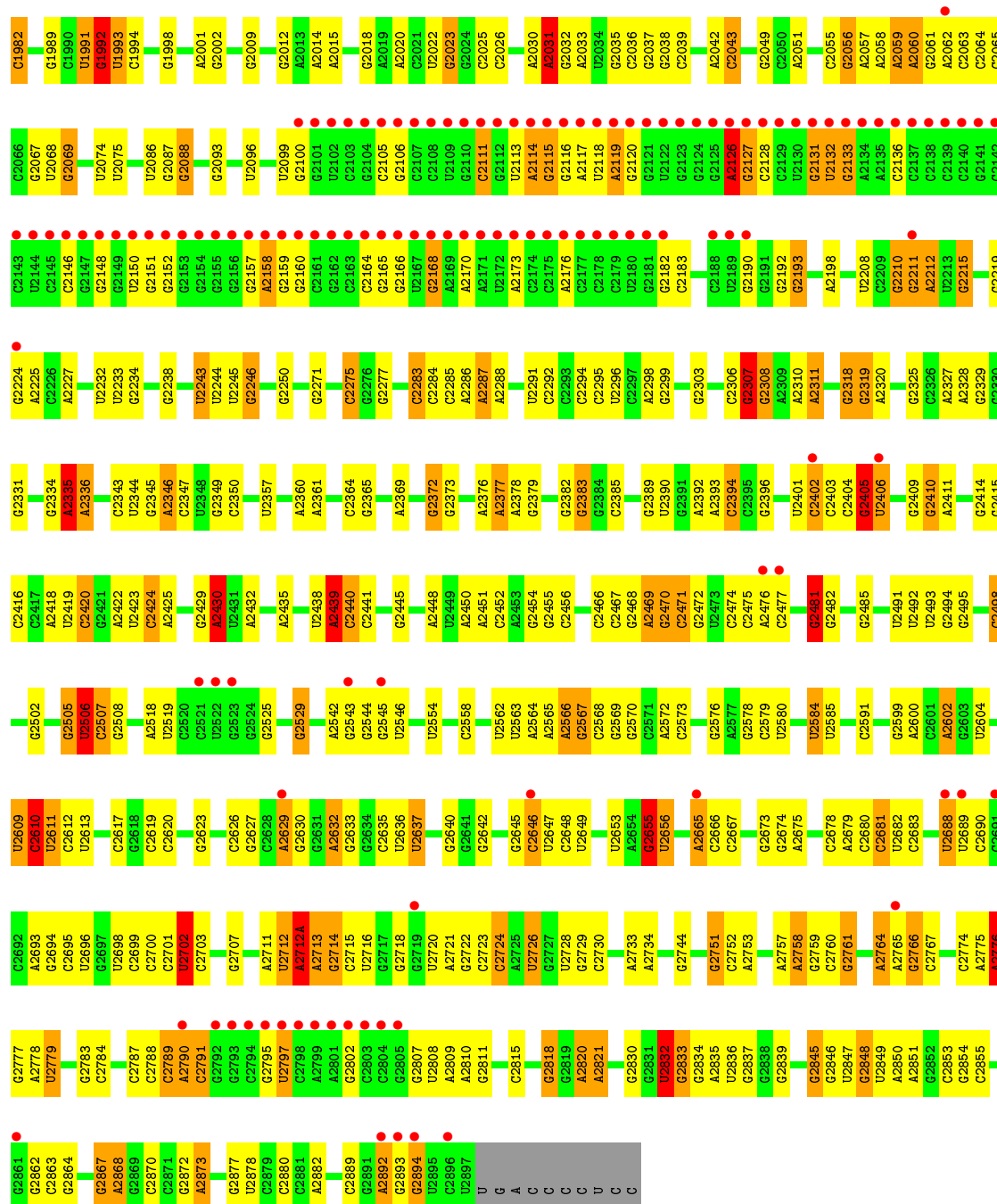




• Molecule 25: 23S rRNA

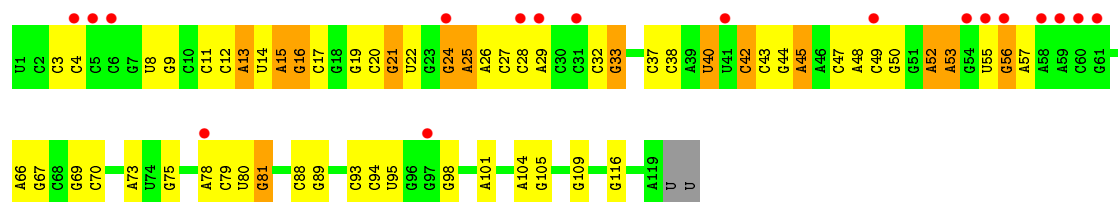


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C1795	C1588	G1704	C1588	U1335	G1239	G1138	U1066	C986	C884	U787	G669
U1796	C1589	G1705	C1589	U1336	G1240	U1141	A1087	A990	C885	A788	G669
C1797	C1590	U1706	C1590	G1337	A1241	U1142	A1069	C991	C886	A789	G674
U1798	C1592	G1707	C1592	U1338	A1242	A1424A	A1070	C992	C887	C790	A675
G1799	A1587	G1708	A1587	G1339	G1244	C1153	G1071	C993	C888	C791	A675
C1800	C1598	U1709	C1598	U1340	U1245	G1154	C1072	C994	C889	C792	A676
G1801	C1599	C1710	C1599	U1341	G1250	G1155	A1073	A996	C890	C795	G686
A1802	C1600	G1717	C1600	G1342	C1251	A1155	G1074	C995	C891	C796	G702
A1803	A1603	G1718	A1603	A1349	C1252	C1161	G1075	C997	A896	C797	G703
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A1812	A1608	G1728	A1608	A1353	G1256	G1163	A1077	G1003	C898	A802	G704
G1813	A1609	U1729	A1609	G1354	C1257	G1164	U1078	G1003	A899	G805	G717
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A1821	A1637	G1742	A1637	A1365	U1267	G1172	A1085	U1012	A910	U813	G726
G1824	C1640	G1743	C1640	A1366	A1268	A1174	G1087	C1013	C915	C818	G727
A1825	G1647	A1749	G1647	G1368	U1269	U1175	A1088	U1014	C916	C819	G728
A1826	C1648	G1750	C1648	G1370	G1271	A1177	G1089	G1015	A917	G729	G730
U1831	G1653	C1751	G1653	U1371	U1272	C1178	U1090	G1016	A918	U827	A734
G1832	A1654	C1752	A1654	A1373	U1273	C1179	U1091	U1019	G919	U828	G742
A1835	G1657	G1753	G1657	G1379	U1279	C1180	A1095	A1021	G921	C831	G743
G1836	C1658	A1755	C1658	A1379	G1280	G1186	U1096	G1022	G928	A841	A746
C1837	U1659	G1756	U1659	A1384	U1282	U1187	U1097	U1023	G932	C842	U747
U1842	A1667	A1762	A1667	G1385	A1287	U1188	A1098	U1024	U941	C846	G748
A1848	A1668	G1763	A1668	A1386	U1291	G1190	G1109	U1025	G942	U847	A751
G1852	A1669	G1764	A1669	C1387	U1292	C1196	U1101	A1027	G943	C848	A752
U1854	G1674	U1769	G1674	G1388	C1293	C1195	C1102	U1028	C944	A849	C753
U1856	C1675	G1770	C1675	U1390	U1298	C1196	A1103	A1029	A945	C850	C754
C1857	A1676	C1771	A1676	U1391	U1300	C1200	C1104	G1030	G946	U851	C755
G1859	A1677	A1772	A1677	U1394	A1301	C1201	G1106	U1033	G952	C856	C756
A1860	G1678	G1773	G1678	A1395	A1302	G1202	U1107	A1045	A953	C857	A761
U1868	A1681	U1778	A1681	U1396	U1308	A1203	C1108	A1046	G957	U858	A764
A1869	U1688	A1779	U1688	U1397	A1309	A1204	C1109	G1047	A958	C859	A764
U1871	A1689	G1781	A1689	C1398	U1313	U1205	G1112	A1048	U958	U860	G769
C1872	G1693	C1782	G1693	G1399	C1314	G1206	A1111	C1049	A959	A861	G770
A1874	C1694	A1783	C1694	G1400	U1319	U1211	G1113	A1050	C961	C862	G771
G1875	A1695	U1785	A1695	G1401	C1320	G1212	U1114	A1054	G974	C864	G771
A1876	G1696	A1786	G1696	G1402	C1321	C1217	G1122	G1055	C974	C865	A774
C1877	G1697	G1787	G1697	U1403	A1322	C1218	G1125	G1056	C975	A866	G775
G1882	A1698	U1788	A1698	C1404	U1329	G1219	A1126	G1057	G976	U870	G776
A1883	A1700	C1789	A1700	C1405	C1330	C1221	U1130	U1060	G978	A872	G780
U1884	C1699	A1790	C1699	U1406	C1331	C1225	G1131	U1061	A980	A878	A782
G1889	A1701	G1791	A1701	C1407	C1332	G1228	C1135	G1063	A983	C881	A783
A1891	C1702	U1791	C1702	C1411	G1333	G1228	C1136	C1064	A984	C882	G785
U1951	G1951	A1951	G1951	U1415	G1500	G1500	G1500	G1500	G1500	G1500	G1500
A1952	C1943	A1762	A1952	G1462	C1462	C1462	C1462	C1462	C1462	C1462	C1462
G1953	C1944	G1763	C1944	G1463	C1463	C1463	C1463	C1463	C1463	C1463	C1463
U1954	G1945	G1764	G1945	G1464	C1464	C1464	C1464	C1464	C1464	C1464	C1464
U1955	G1946	U1769	G1946	G1465	C1465	C1465	C1465	C1465	C1465	C1465	C1465
C1957	A1947	G1770	A1947	G1466	C1466	C1466	C1466	C1466	C1466	C1466	C1466
G1958	A1948	C1771	A1948	G1467	C1467	C1467	C1467	C1467	C1467	C1467	C1467
A1959	C1952	A1772	C1952	C1471	C1471	C1471	C1471	C1471	C1471	C1471	C1471
U1960	G1858	G1773	G1858	C1474	C1474	C1474	C1474	C1474	C1474	C1474	C1474
U1963	A1859	U1778	A1859	U1394	U1394	U1394	U1394	U1394	U1394	U1394	U1394
G1964	U1864	A1780	G1964	A1395	A1395	A1395	A1395	A1395	A1395	A1395	A1395
C1965	G1869	G1781	C1965	U1396	U1396	U1396	U1396	U1396	U1396	U1396	U1396
A1966	C1870	C1782	A1966	U1397	U1397	U1397	U1397	U1397	U1397	U1397	U1397
C1967	A1871	A1783	C1967	C1398	C1398	C1398	C1398	C1398	C1398	C1398	C1398
G1968	G1872	G1784	G1968	G1400	G1400	G1400	G1400	G1400	G1400	G1400	G1400
A1969	G1878	A1785	A1969	G1401	G1401	G1401	G1401	G1401	G1401	G1401	G1401
U1970	A1882	A1786	U1970	G1402	G1402	G1402	G1402	G1402	G1402	G1402	G1402
A1971	C1883	U1771	A1971	C1403	C1403	C1403	C1403	C1403	C1403	C1403	C1403
U1972	G1884	C1788	U1972	C1404	C1404	C1404	C1404	C1404	C1404	C1404	C1404
G1973	A1884	A1789	G1973	C1405	C1405	C1405	C1405	C1405	C1405	C1405	C1405
U1980	G1888	C1790	U1980	C1411	C1411	C1411	C1411	C1411	C1411	C1411	C1411
A1981	A1889	A1791	A1981	U1415	U1415	U1415	U1415	U1415	U1415	U1415	U1415



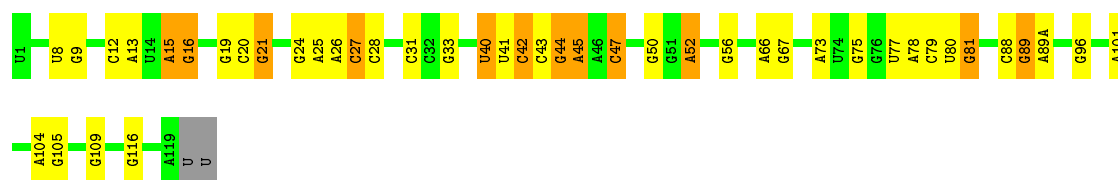
• Molecule 26: 5S rRNA

Chain RB: 15% 49% 38% 11%



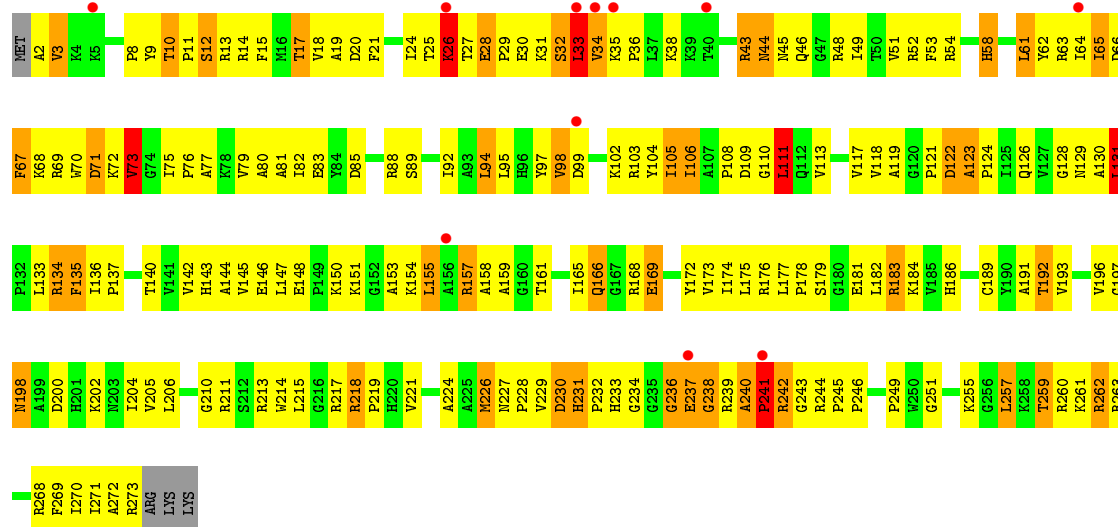
• Molecule 26: 5S rRNA

Chain YB:



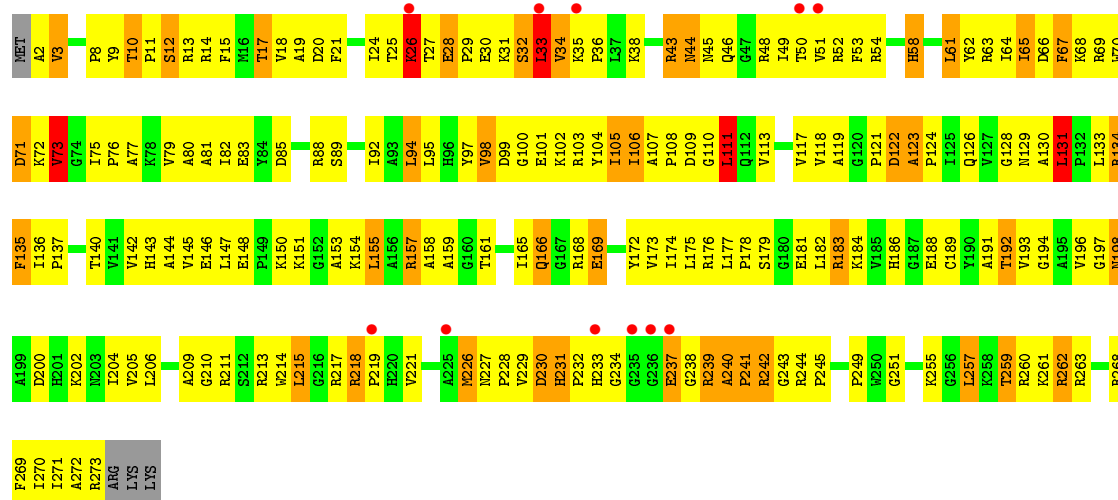
- Molecule 27: 50S ribosomal protein L2

Chain RD:



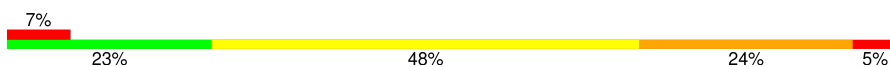
- Molecule 27: 50S ribosomal protein L2

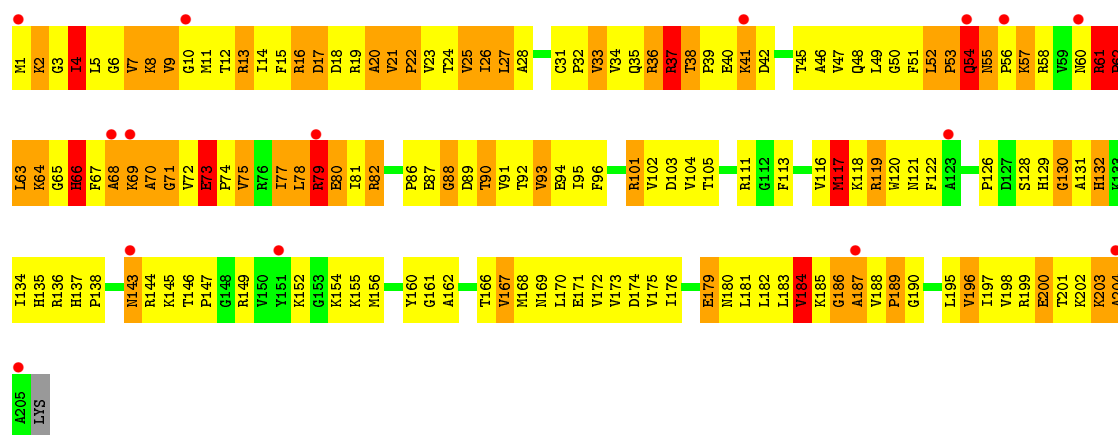
Chain YD:



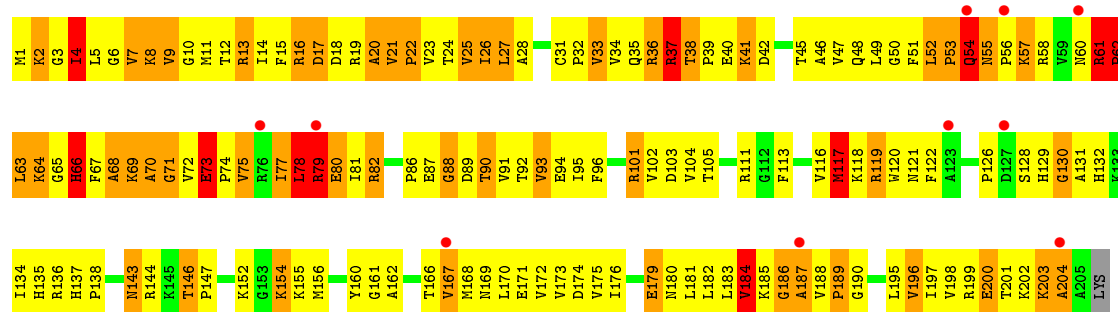
- Molecule 28: 50S ribosomal protein L3

Chain RE:

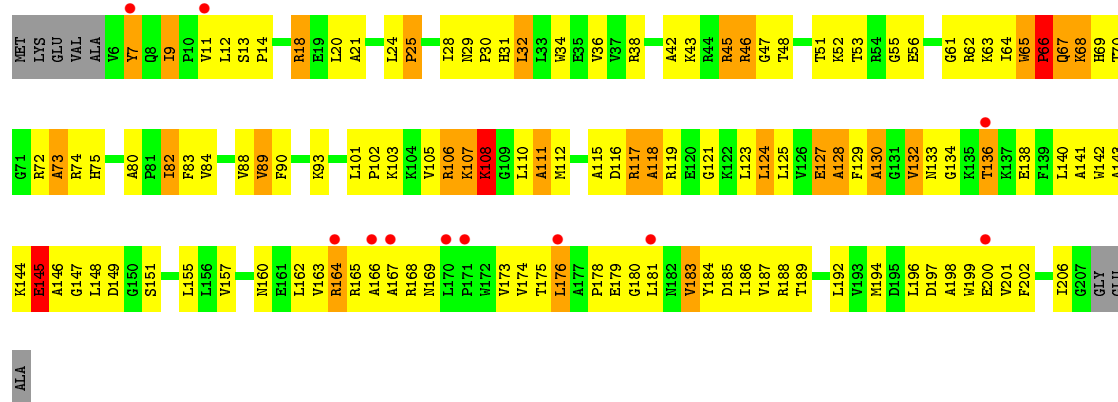




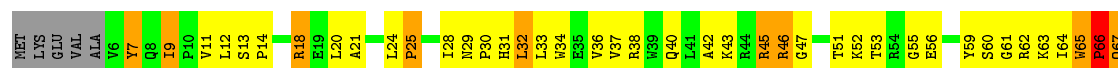
• Molecule 28: 50S ribosomal protein L3



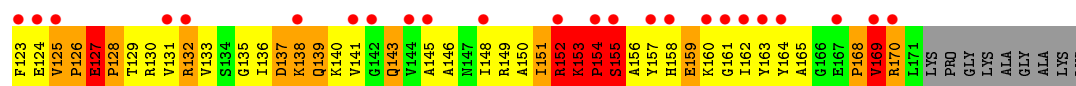
• Molecule 29: 50S ribosomal protein L4



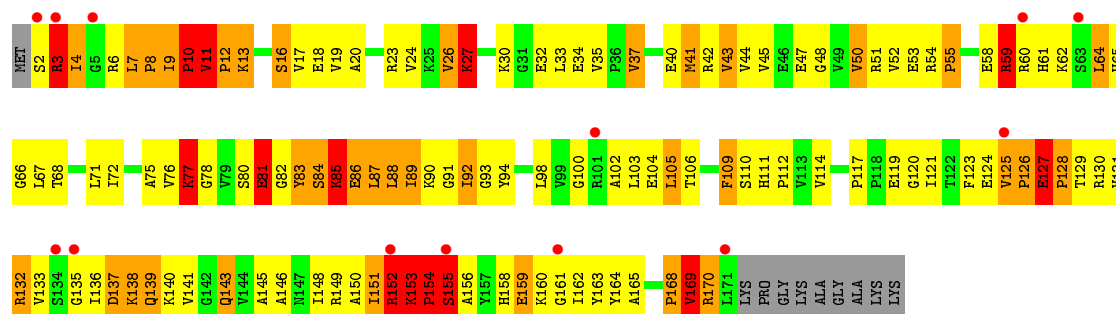
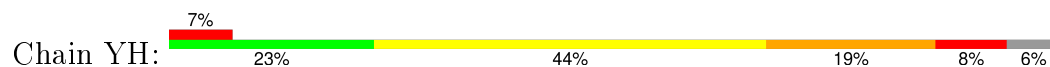
• Molecule 29: 50S ribosomal protein L4



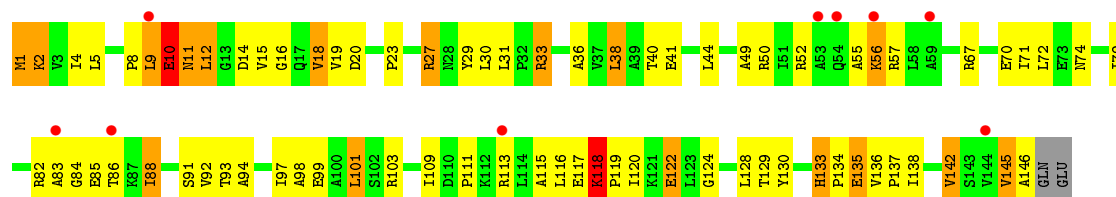




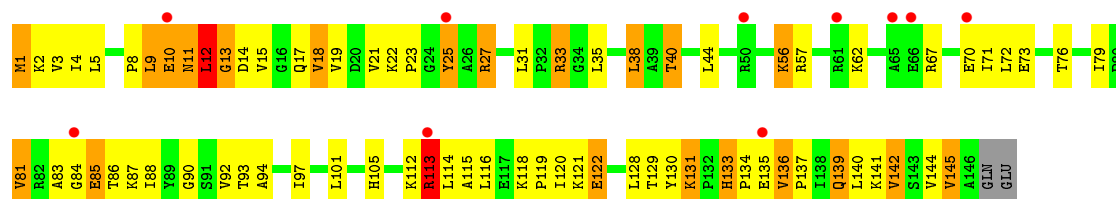
• Molecule 31: 50S ribosomal protein L6



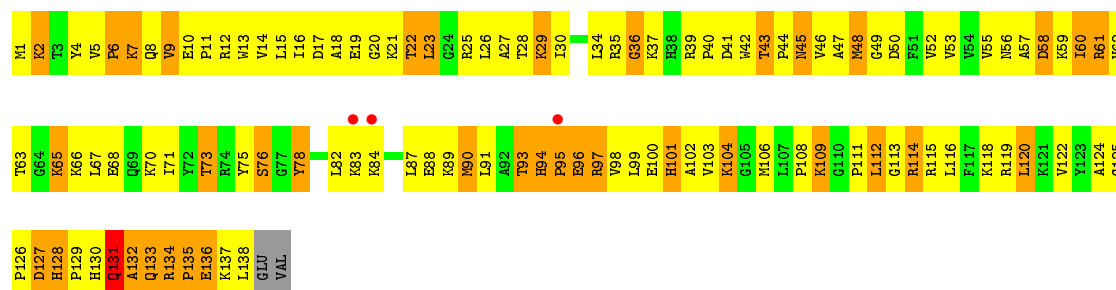
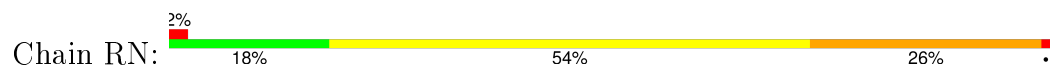
• Molecule 32: 50S ribosomal protein L9



• Molecule 32: 50S ribosomal protein L9

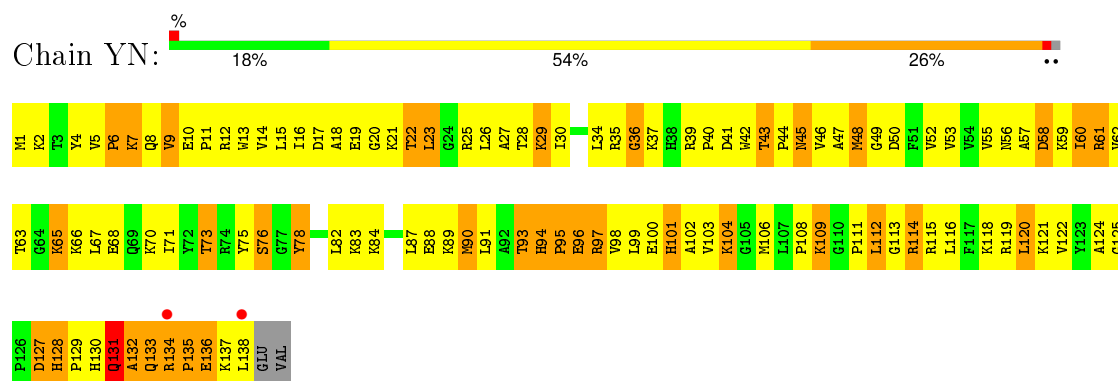


• Molecule 33: 50S ribosomal protein L11

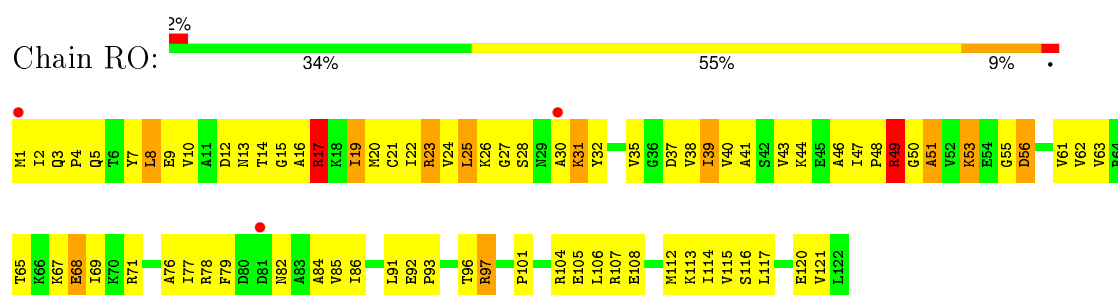




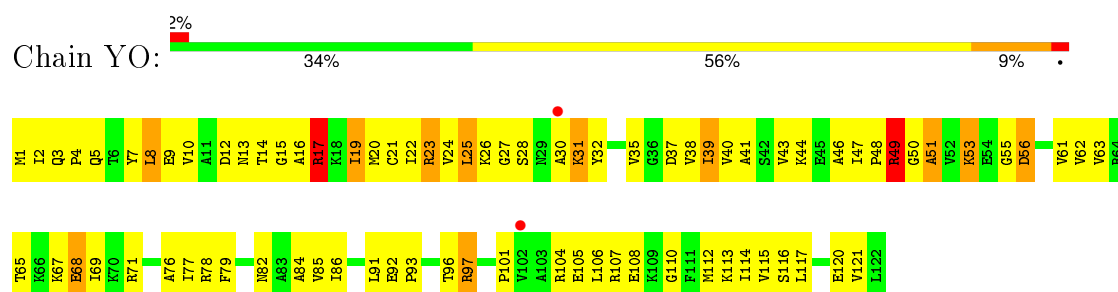
- Molecule 33: 50S ribosomal protein L11



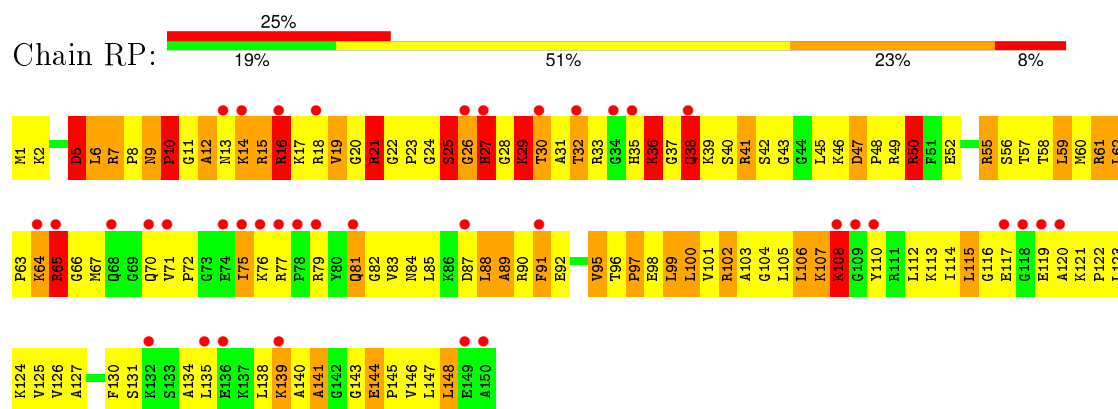
- Molecule 34: 50S ribosomal protein L13



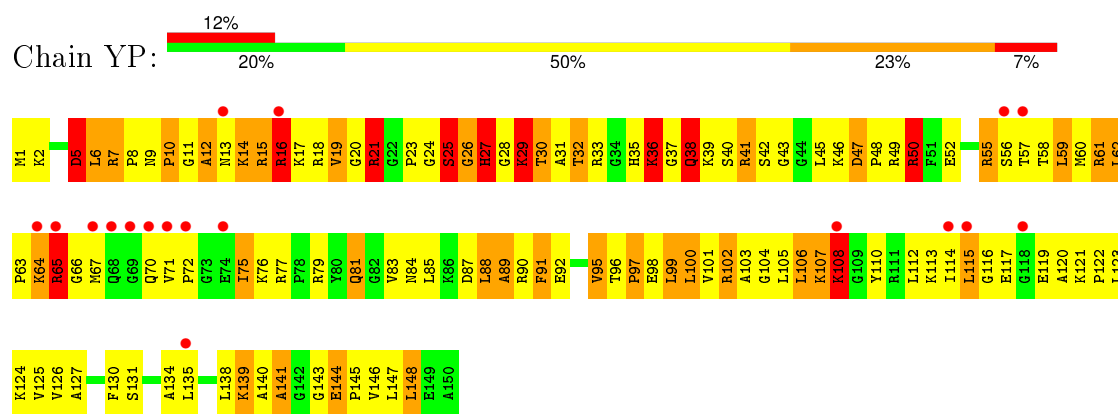
- Molecule 34: 50S ribosomal protein L13



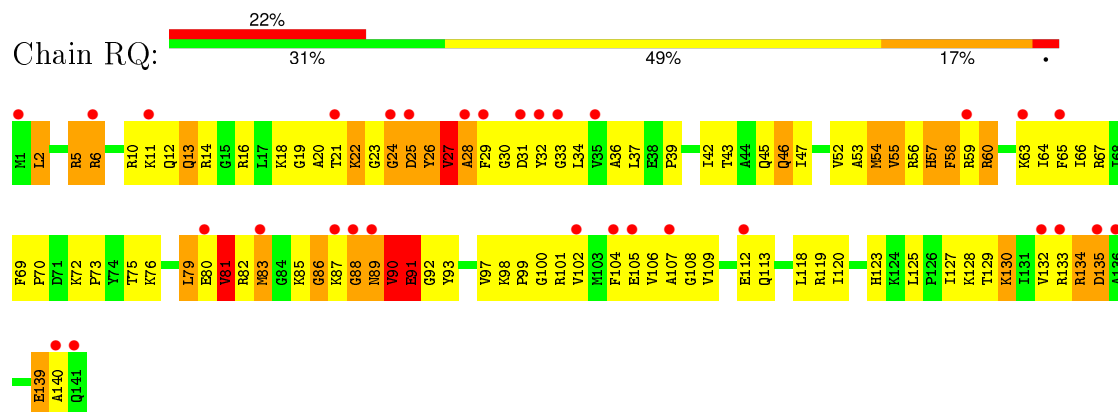
- Molecule 35: 50S ribosomal protein L14



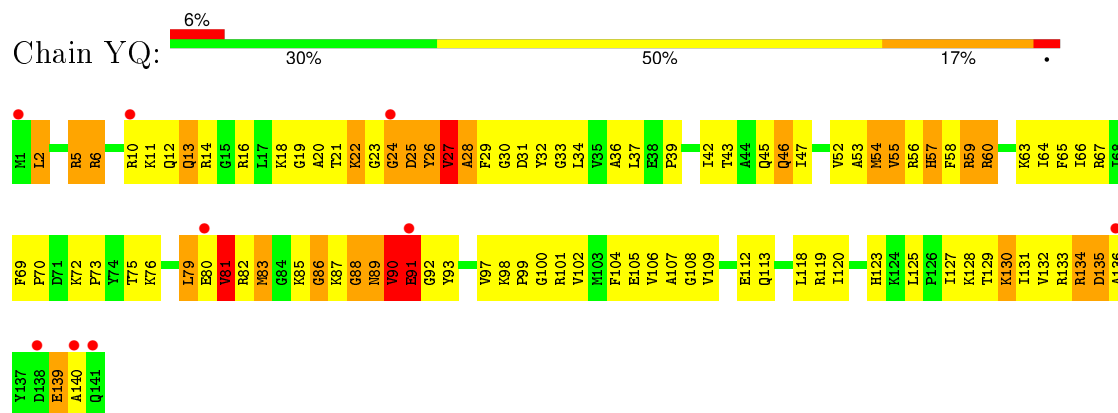
- Molecule 35: 50S ribosomal protein L14



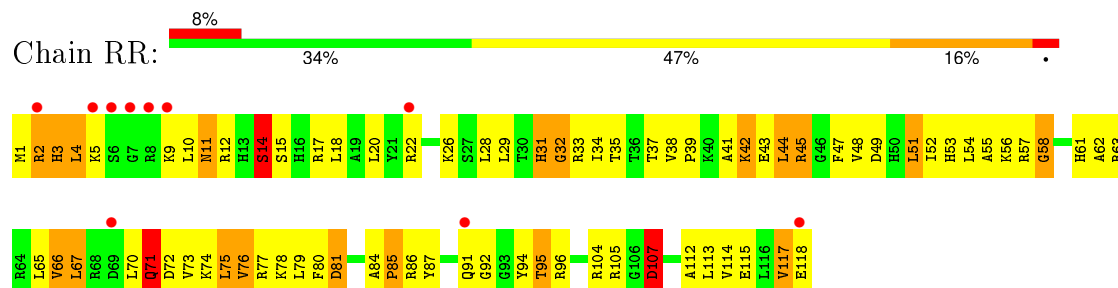
• Molecule 36: 50S ribosomal protein L15



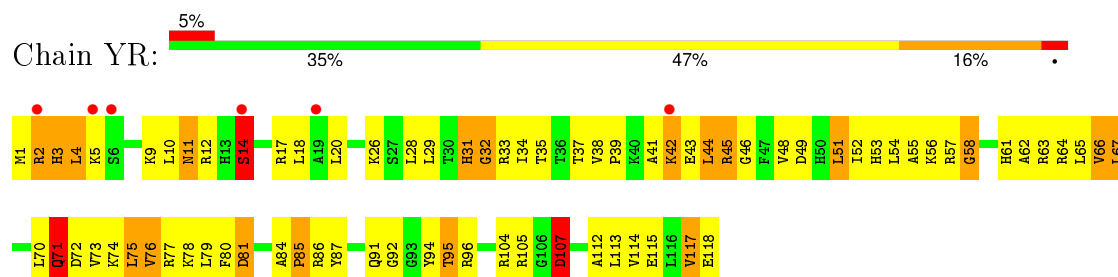
• Molecule 36: 50S ribosomal protein L15



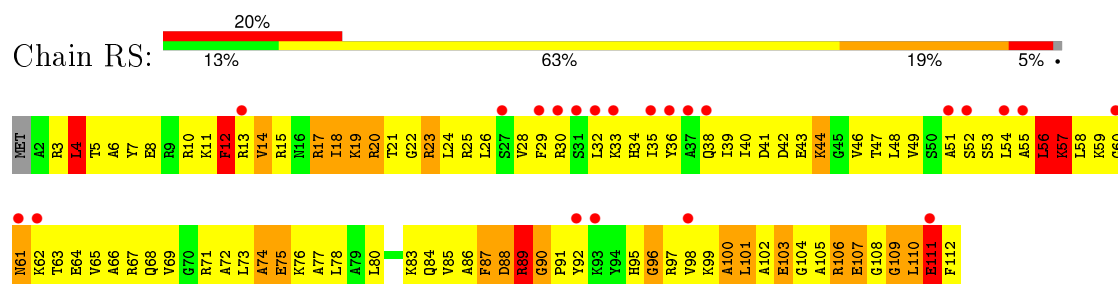
• Molecule 37: 50S ribosomal protein L16



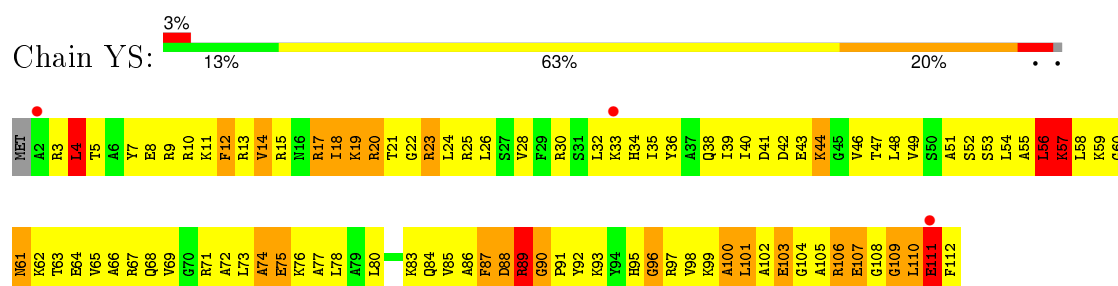
- Molecule 37: 50S ribosomal protein L16



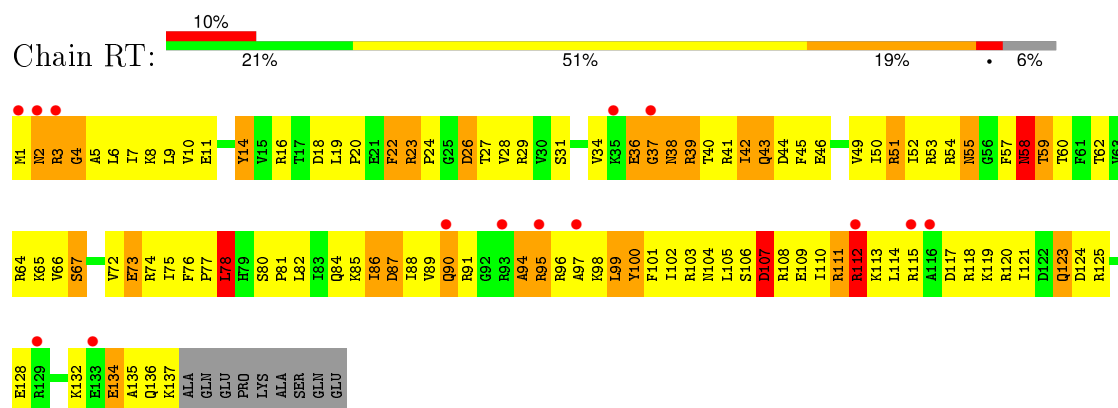
- Molecule 38: 50S ribosomal protein L17



- Molecule 38: 50S ribosomal protein L17

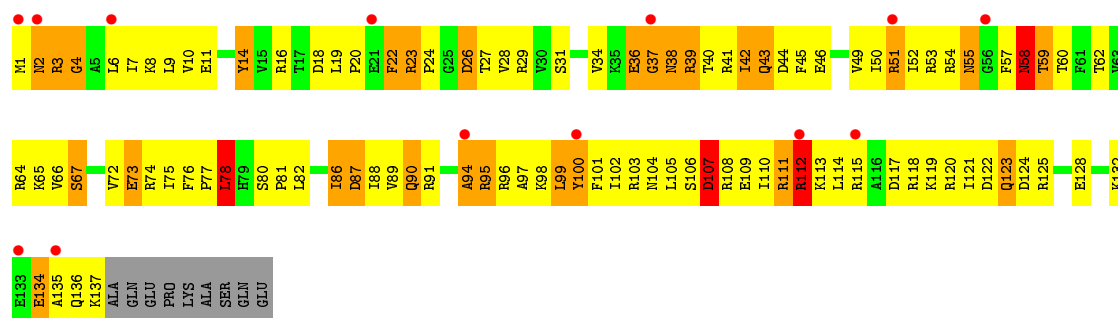


- Molecule 39: 50S ribosomal protein L18



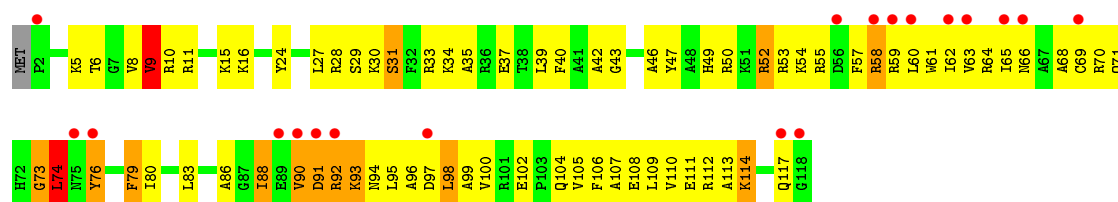
- Molecule 39: 50S ribosomal protein L18





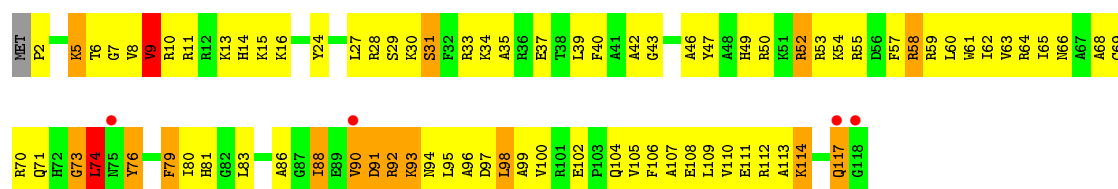
- Molecule 40: 50S ribosomal protein L19

Chain RU: 16% 35% 52% 11% ..



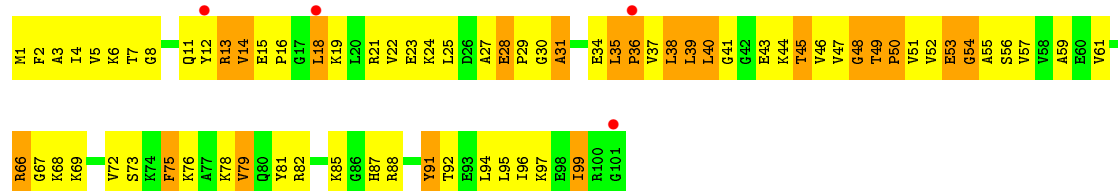
- Molecule 40: 50S ribosomal protein L19

Chain YU: 3% 31% 54% 13% ..



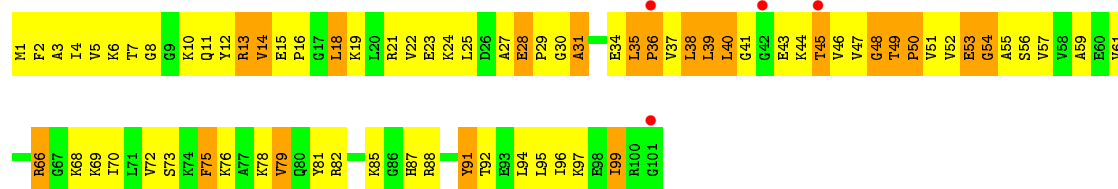
- Molecule 41: 50S ribosomal protein L20

Chain RV: 4% 28% 51% 21%

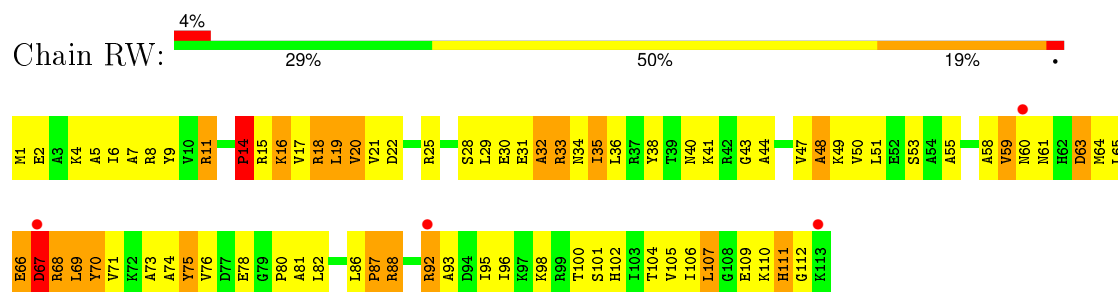


- Molecule 41: 50S ribosomal protein L20

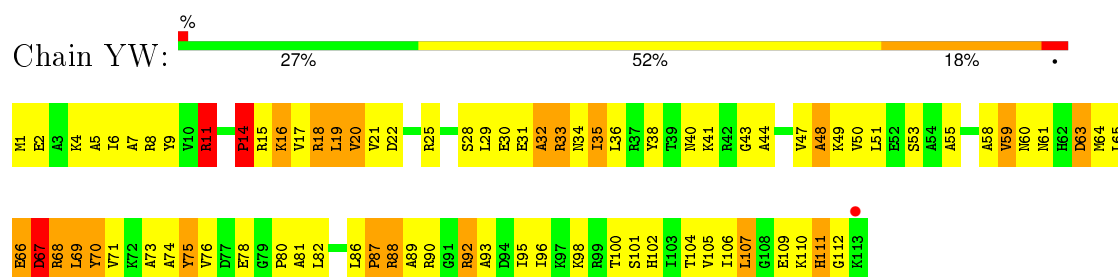
Chain YV: 4% 27% 52% 21%



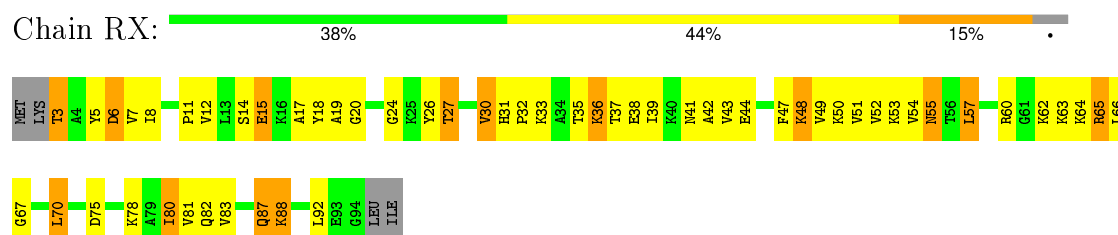
- Molecule 42: 50S ribosomal protein L21



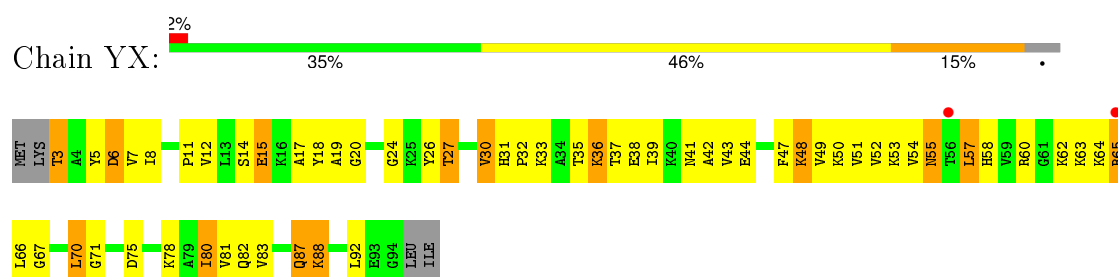
- Molecule 42: 50S ribosomal protein L21



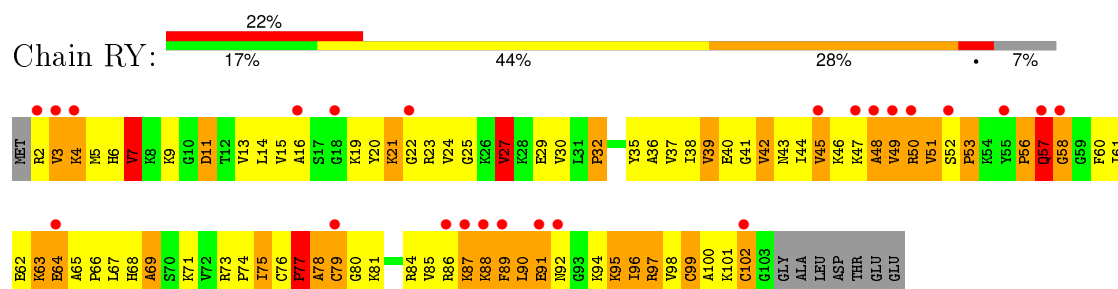
- Molecule 43: 50S ribosomal protein L22



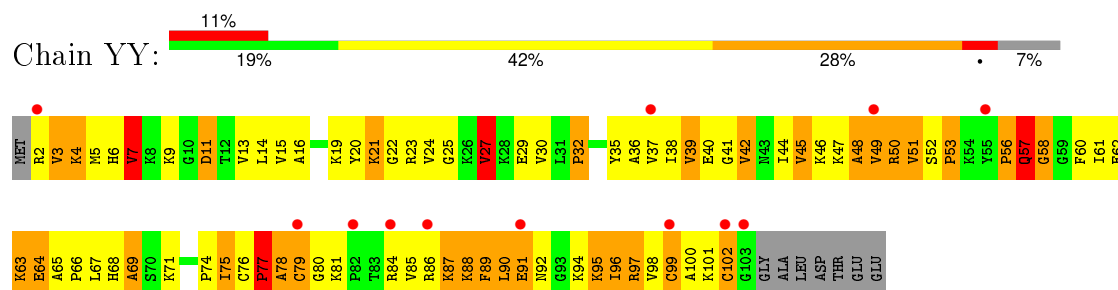
- Molecule 43: 50S ribosomal protein L22



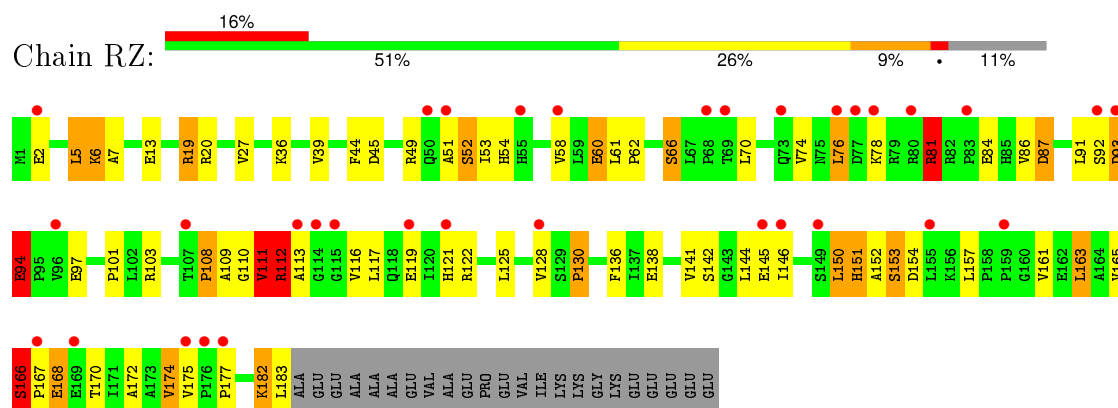
- Molecule 44: 50S ribosomal protein L23



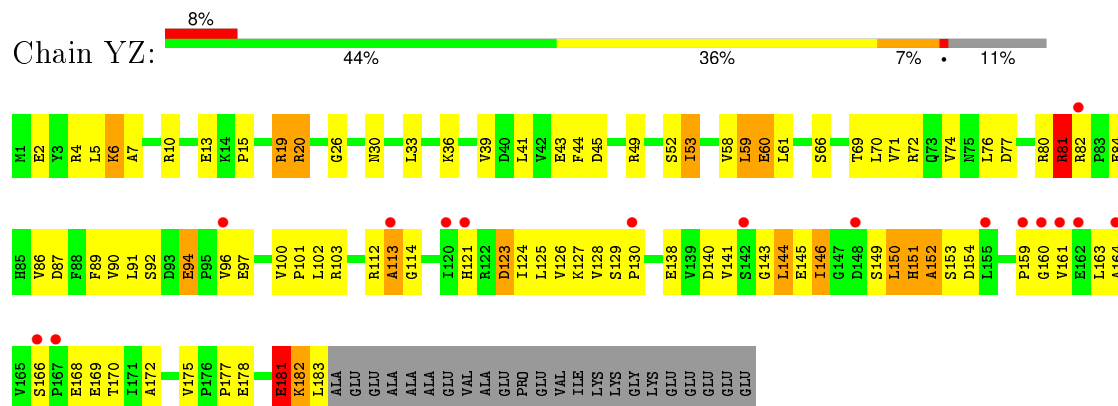
- Molecule 44: 50S ribosomal protein L23



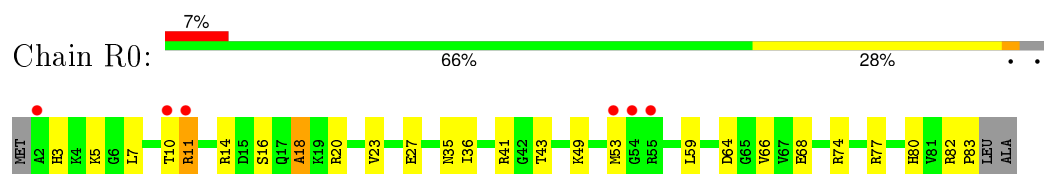
- Molecule 45: 50S ribosomal protein L24



- Molecule 45: 50S ribosomal protein L24

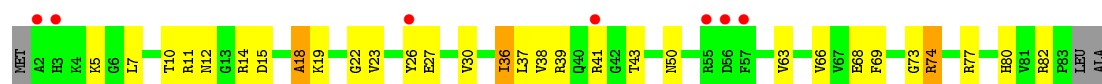


- Molecule 46: 50S ribosomal protein L25

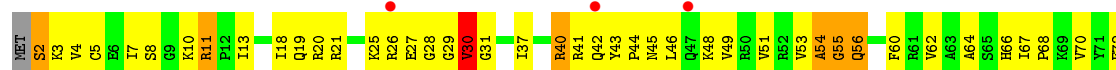


- Molecule 46: 50S ribosomal protein L25





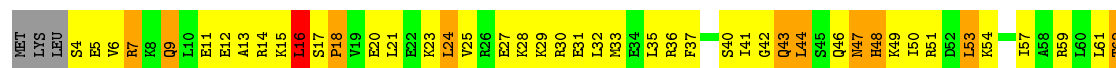
- Molecule 47: 50S ribosomal protein L27



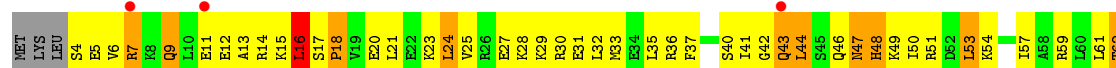
- Molecule 47: 50S ribosomal protein L27



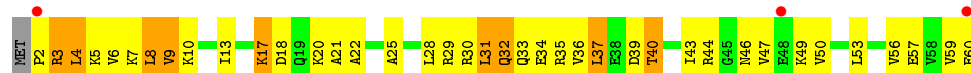
- Molecule 48: 50S ribosomal protein L28



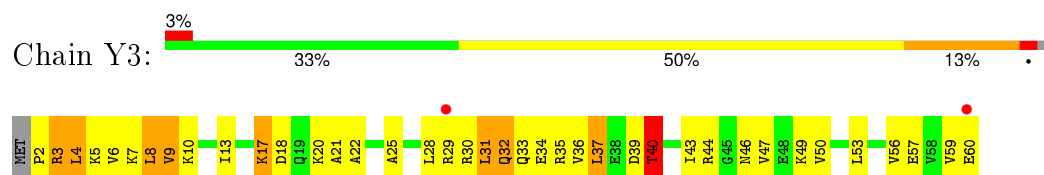
- Molecule 48: 50S ribosomal protein L28



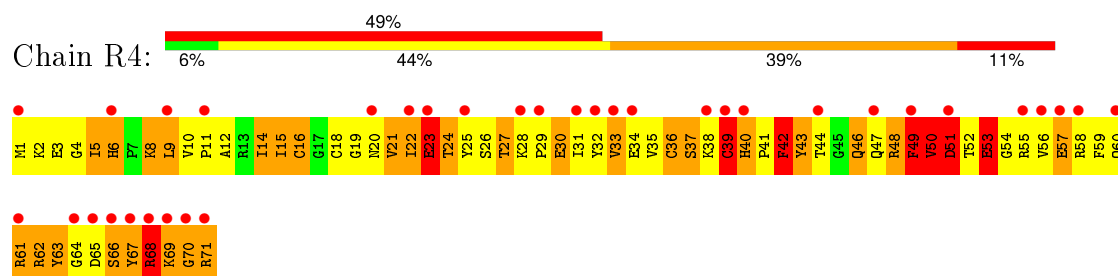
- Molecule 49: 50S ribosomal protein L29



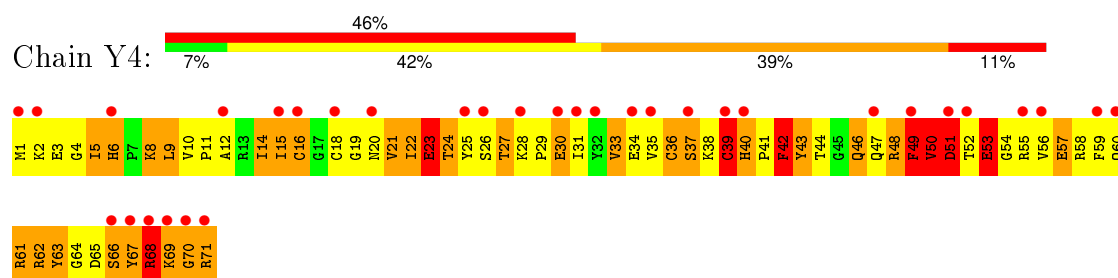
- Molecule 49: 50S ribosomal protein L29



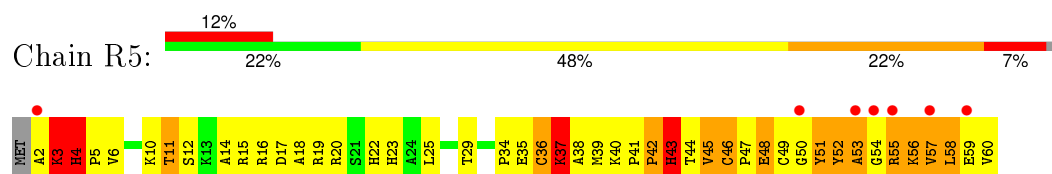
- Molecule 50: 50S ribosomal protein L30



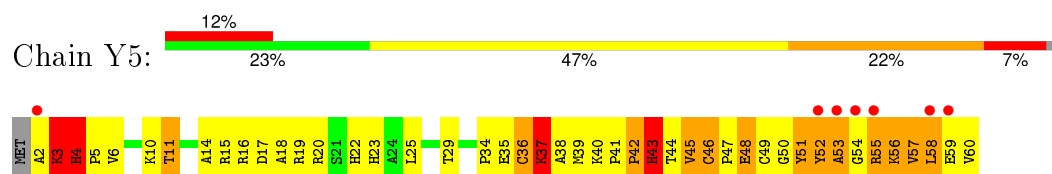
- Molecule 50: 50S ribosomal protein L30



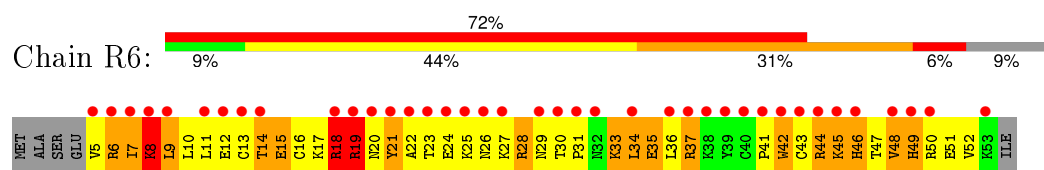
- Molecule 51: 50S ribosomal protein L32



- Molecule 51: 50S ribosomal protein L32

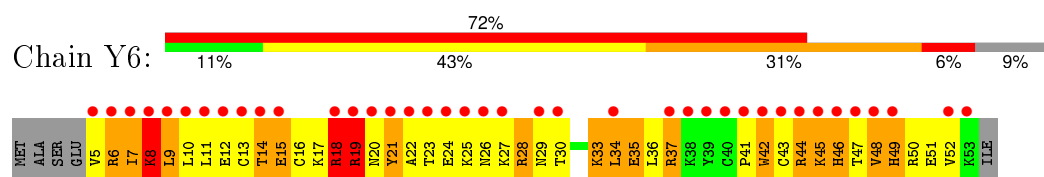


- Molecule 52: 50S ribosomal protein L33

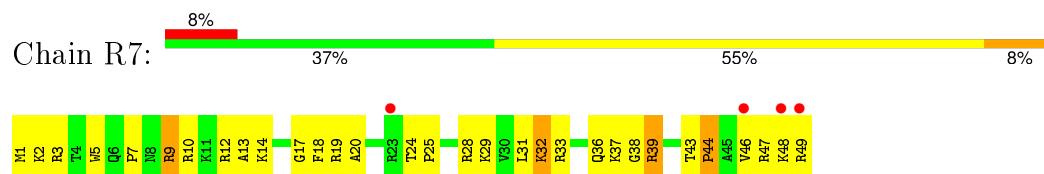


- Molecule 52: 50S ribosomal protein L33

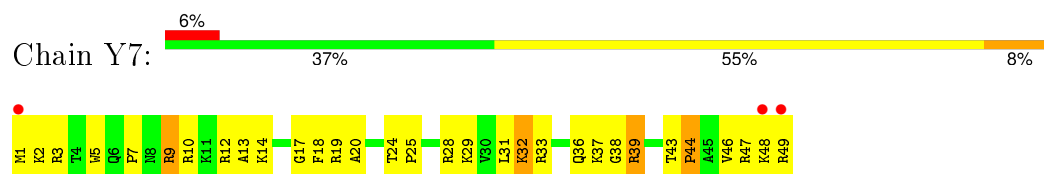




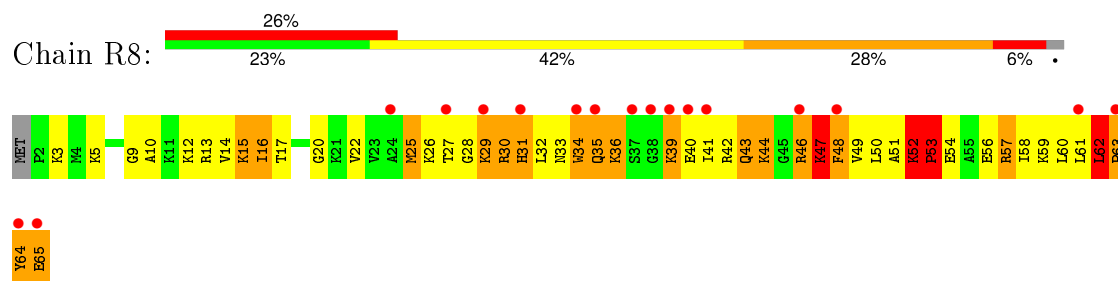
- Molecule 53: 50S ribosomal protein L34



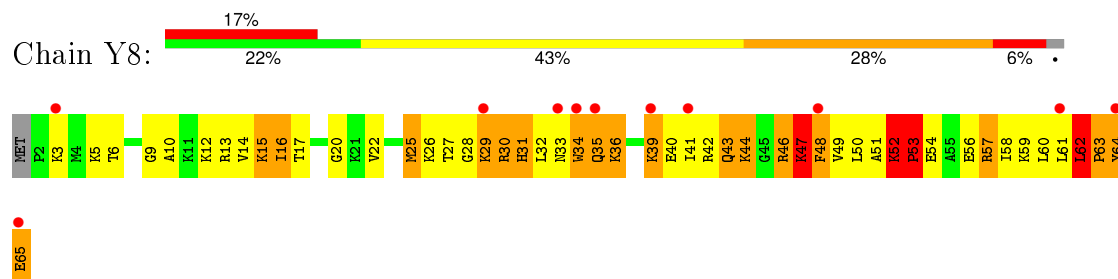
- Molecule 53: 50S ribosomal protein L34



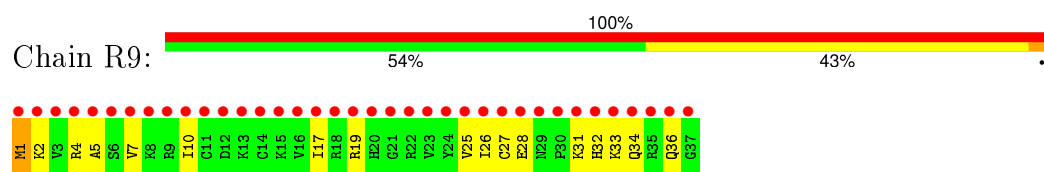
- Molecule 54: 50S ribosomal protein L35



- Molecule 54: 50S ribosomal protein L35

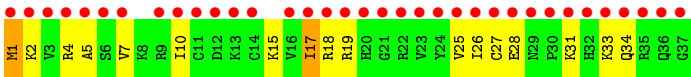


- Molecule 55: 50S ribosomal protein L36



- Molecule 55: 50S ribosomal protein L36





- Molecule 56: tRNA acceptor end mimic



- Molecule 56: tRNA acceptor end mimic



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	209.21Å 448.45Å 619.86Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	189.60 – 3.14 189.60 – 3.09	Depositor EDS
% Data completeness (in resolution range)	99.6 (189.60-3.14) 99.5 (189.60-3.09)	Depositor EDS
$R_{merge}$	0.27	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.51 (at 3.07Å)	Xtriage
Refinement program	PHENIX (phenix.refine: 1.8.2_1309)	Depositor
R, $R_{free}$	0.230 , 0.262 0.239 , 0.265	Depositor DCC
$R_{free}$ test set	46777 reflections (4.90%)	DCC
Wilson B-factor (Å <sup>2</sup> )	54.4	Xtriage
Anisotropy	0.278	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.29 , 65.6	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.44$ , $\langle L^2 \rangle = 0.27$	Xtriage
Outliers	0 of 1047220 reflections	Xtriage
$F_o, F_c$ correlation	0.79	EDS
Total number of atoms	291998	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	69.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.57% of the height of the origin peak. No significant pseudotranslation is detected.*

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

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

## 5 Model quality ⓘ

### 5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: 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	0.37	0/36098	0.89	48/56341 (0.1%)
1	XA	0.37	0/36101	0.89	50/56346 (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	0.41	0/1733	0.68	1/2318 (0.0%)
4	XD	0.44	0/1733	0.68	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	0.61	0/1709
7	XG	0.37	0/1276	0.60	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	0.46	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	0.42	0/501	0.68	0/664
14	XN	0.52	0/501	0.67	0/664
15	QO	0.39	0/745	0.67	0/992
15	XO	0.39	0/745	0.67	0/992
16	QP	0.36	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	0.37	0/847	0.68	0/1131
17	XQ	0.37	0/847	0.68	0/1131
18	QR	0.39	0/579	0.72	0/768
18	XR	0.39	0/579	0.72	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	0.33	0/765	0.70	0/1007
20	XT	0.34	0/765	0.69	0/1007
21	QU	0.37	0/221	0.63	0/288
21	XU	0.37	0/221	0.63	0/288
22	QV	0.39	1/1836 (0.1%)	0.81	3/2859 (0.1%)
22	XV	0.42	1/1836 (0.1%)	0.84	4/2859 (0.1%)
23	QY	0.24	0/333	0.81	0/517
23	XY	0.24	0/333	0.74	0/517
24	QX	0.65	0/189	1.41	5/292 (1.7%)
24	XX	0.39	0/189	1.08	2/292 (0.7%)
25	RA	0.39	0/69521	0.88	70/108529 (0.1%)
25	YA	0.43	1/69543 (0.0%)	0.92	116/108563 (0.1%)
26	RB	0.32	0/2878	0.84	0/4490
26	YB	0.36	0/2878	0.88	1/4490 (0.0%)
27	RD	0.60	2/2165 (0.1%)	0.90	4/2919 (0.1%)
27	YD	0.56	0/2165	0.90	4/2919 (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	3/1802 (0.2%)
31	YH	0.45	0/1332	0.85	4/1802 (0.2%)
32	RI	0.28	0/1151	0.56	0/1558
32	YI	0.27	0/1151	0.58	0/1558
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	0.54	0/943	0.71	0/1269
34	YO	0.53	0/943	0.71	0/1269
35	RP	0.50	0/1162	0.95	3/1544 (0.2%)
35	YP	0.50	0/1162	0.95	3/1544 (0.2%)
36	RQ	0.54	0/1143	0.91	3/1527 (0.2%)
36	YQ	0.54	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	0.83	1/1187 (0.1%)
39	RT	0.47	0/1155	0.73	2/1542 (0.1%)
39	YT	0.46	0/1155	0.73	2/1542 (0.1%)
40	RU	0.48	0/982	0.78	0/1306
40	YU	0.48	0/982	0.77	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	0.77	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	0.27	0/1493	0.52	0/2026
45	YZ	0.28	0/1493	0.54	0/2026
46	R0	0.30	0/657	0.54	0/874
46	Y0	0.34	0/657	0.53	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	0.51	0/583	0.83	1/771 (0.1%)
48	Y2	0.50	0/583	0.83	1/771 (0.1%)
49	R3	0.47	0/474	0.72	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	R9	0.35	0/310	0.59	0/407
55	Y9	0.37	0/310	0.61	0/407
56	Z6	0.79	0/40	1.81	1/60 (1.7%)
56	Z8	0.77	0/40	1.81	1/60 (1.7%)
All	All	0.41	5/316375 (0.0%)	0.86	364/472993 (0.1%)

All (5) bond length outliers are listed below:

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	QV	1	C	OP3-P	-10.56	1.48	1.61
22	XV	1	C	OP3-P	-10.53	1.48	1.61
27	RD	236	GLY	C-N	8.57	1.53	1.34
25	YA	774	A	N9-C4	-5.56	1.34	1.37
27	RD	241	PRO	N-CD	5.19	1.55	1.47

All (364) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	XL	47	LYS	C-N-CD	-20.45	75.61	120.60
12	QL	47	LYS	C-N-CD	-20.44	75.62	120.60
25	YA	2506	U	N3-C2-O2	-10.56	114.81	122.20
28	YE	21	VAL	C-N-CD	-10.11	98.35	120.60
28	RE	21	VAL	C-N-CD	-10.09	98.41	120.60
1	XA	254	G	O5'-P-OP1	-9.84	96.84	105.70
25	RA	2506	U	N3-C2-O2	-9.83	115.32	122.20
25	YA	528	A	N1-C2-N3	8.94	133.77	129.30
12	QL	47	LYS	C-N-CA	8.82	159.05	122.00
12	XL	47	LYS	C-N-CA	8.79	158.91	122.00
25	RA	2506	U	N1-C2-O2	8.71	128.90	122.80
36	YQ	81	VAL	CB-CA-C	-8.70	94.88	111.40
25	YA	528	A	C2-N3-C4	-8.67	106.27	110.60
36	RQ	81	VAL	CB-CA-C	-8.63	94.99	111.40
25	YA	1899	G	N3-C2-N2	8.52	125.86	119.90
25	YA	1929	G	C4-C5-N7	8.43	114.17	110.80
1	QA	1158	C	C2-N1-C1'	8.27	127.89	118.80
1	QA	254	G	O5'-P-OP1	-8.26	98.27	105.70
25	YA	1899	G	N1-C2-N2	-8.24	108.79	116.20
25	RA	2614	A	C6-N1-C2	-8.11	113.73	118.60
1	QA	1301	U	C2-N1-C1'	8.09	127.41	117.70
25	RA	1786	A	N7-C8-N9	8.09	117.84	113.80
1	QA	1158	C	N1-C2-O2	7.96	123.68	118.90
25	YA	2506	U	N1-C2-O2	7.95	128.36	122.80
47	R1	79	GLY	N-CA-C	-7.82	93.55	113.10
47	Y1	79	GLY	N-CA-C	-7.80	93.60	113.10
25	YA	1396	U	N1-C2-O2	7.72	128.20	122.80
1	XA	1301	U	C2-N1-C1'	7.71	126.95	117.70
25	YA	761	A	N1-C6-N6	7.67	123.20	118.60
1	XA	960	U	N1-C2-O2	7.64	128.15	122.80
25	YA	265	A	O4'-C1'-N9	7.55	114.24	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	960	U	C2-N1-C1'	7.45	126.64	117.70
25	RA	774	A	C2-N3-C4	-7.40	106.90	110.60
1	XA	328	C	C2-N1-C1'	7.36	126.90	118.80
25	YA	774	A	C2-N3-C4	-7.36	106.92	110.60
1	QA	1301	U	N1-C2-O2	7.34	127.94	122.80
35	RP	59	LEU	N-CA-C	-7.27	91.36	111.00
35	YP	59	LEU	N-CA-C	-7.27	91.36	111.00
25	RA	1396	U	C2-N1-C1'	7.27	126.42	117.70
1	QA	372	C	C2-N1-C1'	7.26	126.78	118.80
22	XV	17	C	C2-N1-C1'	7.24	126.76	118.80
25	YA	1929	G	C5-C6-O6	-7.22	124.27	128.60
1	QA	372	C	N1-C2-O2	7.18	123.21	118.90
25	YA	1396	U	N3-C2-O2	-7.16	117.19	122.20
24	QX	7	G	N7-C8-N9	7.10	116.65	113.10
25	YA	2712(A)	A	N7-C8-N9	7.08	117.34	113.80
25	RA	1396	U	N1-C2-O2	7.08	127.76	122.80
1	XA	1158	C	C2-N1-C1'	7.08	126.58	118.80
25	YA	1950	G	C4-N9-C1'	7.06	135.68	126.50
36	YQ	81	VAL	N-CA-C	7.04	130.01	111.00
25	YA	654	A	C8-N9-C4	-7.03	102.99	105.80
25	RA	1396	U	N3-C2-O2	-7.02	117.28	122.20
36	RQ	81	VAL	N-CA-C	7.01	129.93	111.00
1	XA	960	U	N3-C2-O2	-6.95	117.33	122.20
22	XV	17	C	N1-C2-O2	6.93	123.06	118.90
25	RA	1786	A	C5-N7-C8	-6.91	100.44	103.90
22	QV	17	C	C2-N1-C1'	6.84	126.32	118.80
24	XX	3	G	P-O3'-C3'	6.83	127.90	119.70
25	RA	676	A	O4'-C1'-N9	6.83	113.66	108.20
1	XA	1065	U	P-O3'-C3'	6.81	127.87	119.70
25	YA	1130	U	P-O3'-C3'	6.81	127.87	119.70
25	YA	654(B)	C	C6-N1-C2	-6.77	117.59	120.30
56	Z6	74	C	N1-C2-O2	6.74	122.94	118.90
56	Z8	74	C	N1-C2-O2	6.74	122.94	118.90
1	XA	1301	U	N1-C2-O2	6.74	127.52	122.80
25	RA	2614	A	N1-C2-N3	6.70	132.65	129.30
1	XA	372	C	C2-N1-C1'	6.67	126.14	118.80
1	QA	1322	C	C2-N1-C1'	6.65	126.11	118.80
25	RA	1130	U	P-O3'-C3'	6.65	127.68	119.70
25	RA	205	G	P-O3'-C3'	6.60	127.62	119.70
1	XA	328	C	N1-C2-O2	6.59	122.85	118.90
1	QA	1301	U	N3-C2-O2	-6.56	117.61	122.20
27	YD	131	LEU	CA-CB-CG	6.55	130.36	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	RD	131	LEU	CA-CB-CG	6.52	130.31	115.30
25	YA	676	A	C2-N3-C4	-6.50	107.35	110.60
25	RA	2506	U	C2-N1-C1'	6.49	125.49	117.70
25	YA	1396	U	C2-N1-C1'	6.48	125.47	117.70
25	YA	774	A	N3-C4-C5	6.47	131.33	126.80
25	RA	1899	G	N3-C2-N2	6.46	124.42	119.90
25	RA	242	G	P-O3'-C3'	6.44	127.42	119.70
1	XA	1200	C	C5-C6-N1	6.43	124.22	121.00
12	XL	48	PRO	CA-N-CD	-6.42	102.51	111.50
12	QL	48	PRO	CA-N-CD	-6.42	102.52	111.50
25	YA	1313	U	C2-N1-C1'	6.41	125.39	117.70
25	YA	1021	A	C2-N3-C4	-6.41	107.40	110.60
25	YA	1950	G	O4'-C1'-N9	6.40	113.32	108.20
25	YA	74	A	P-O3'-C3'	6.37	127.35	119.70
25	YA	2031	A	O4'-C1'-N9	6.36	113.29	108.20
25	YA	654(A)	G	O5'-P-OP2	-6.36	99.98	105.70
25	RA	1543	A	O4'-C1'-N9	6.36	113.29	108.20
25	YA	2430	A	N1-C2-N3	6.35	132.48	129.30
25	RA	2060	A	P-O3'-C3'	6.35	127.32	119.70
25	YA	676	A	C5-N7-C8	-6.32	100.74	103.90
1	XA	1200	C	C2-N3-C4	6.27	123.04	119.90
1	QA	1158	C	N3-C2-O2	-6.27	117.51	121.90
1	XA	792	A	P-O3'-C3'	6.26	127.22	119.70
25	YA	1786	A	N7-C8-N9	6.26	116.93	113.80
1	QA	974	A	O4'-C1'-N9	6.26	113.20	108.20
25	YA	1929	G	C6-C5-N7	-6.24	126.66	130.40
1	QA	328	C	N1-C2-O2	6.24	122.64	118.90
25	YA	1929	G	OP1-P-O3'	6.24	118.92	105.20
4	QD	28	SER	C-N-CD	6.23	141.49	128.40
25	RA	2702	U	C2-N1-C1'	6.23	125.17	117.70
25	RA	2053	G	C5-N7-C8	-6.22	101.19	104.30
25	YA	1929	G	N9-C4-C5	-6.22	102.91	105.40
25	RA	205	G	OP2-P-O3'	6.21	118.87	105.20
1	XA	1200	C	P-O3'-C3'	6.19	127.12	119.70
1	XA	1301	U	N3-C2-O2	-6.18	117.88	122.20
25	RA	1899	G	N1-C2-N2	-6.15	110.67	116.20
1	XA	539	A	O5'-P-OP1	-6.13	100.19	105.70
25	YA	1332	G	C6-C5-N7	-6.12	126.73	130.40
1	XA	1065	U	OP2-P-O3'	6.08	118.58	105.20
1	QA	792	A	P-O3'-C3'	6.06	126.97	119.70
37	RR	9	LYS	N-CA-C	-6.04	94.69	111.00
22	XV	17	C	N3-C2-O2	-6.04	117.67	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	1200	C	P-O3'-C3'	6.02	126.92	119.70
37	YR	9	LYS	N-CA-C	-6.01	94.76	111.00
25	YA	1313	U	C5-C6-N1	6.01	125.71	122.70
27	YD	240	ALA	C-N-CD	6.01	141.03	128.40
22	QV	17	C	N1-C2-O2	5.98	122.49	118.90
25	YA	242	G	P-O3'-C3'	5.97	126.86	119.70
25	YA	774	A	N3-C4-N9	-5.96	122.64	127.40
1	XA	792	A	N1-C6-N6	5.95	122.17	118.60
1	XA	971	G	O4'-C1'-N9	5.95	112.96	108.20
1	XA	372	C	C6-N1-C1'	-5.94	113.67	120.80
1	QA	812	C	P-O3'-C3'	5.94	126.83	119.70
27	RD	240	ALA	C-N-CD	5.93	140.86	128.40
1	XA	328	C	C6-N1-C2	-5.93	117.93	120.30
1	QA	372	C	C6-N1-C1'	-5.92	113.69	120.80
25	YA	783	A	N7-C8-N9	5.92	116.76	113.80
25	RA	2702	U	C5-C6-N1	5.91	125.65	122.70
25	YA	1786	A	C5-N7-C8	-5.90	100.95	103.90
31	RH	125	VAL	C-N-CD	-5.89	107.64	120.60
31	YH	125	VAL	C-N-CD	-5.89	107.64	120.60
25	YA	530	G	N1-C6-O6	-5.89	116.37	119.90
1	QA	190	G	P-O3'-C3'	5.88	126.76	119.70
25	YA	761	A	C5-C6-N6	-5.88	119.00	123.70
12	XL	119	LYS	N-CA-C	-5.87	95.15	111.00
25	YA	783	A	C5-N7-C8	-5.83	100.98	103.90
25	YA	1992	G	P-O3'-C3'	5.83	126.70	119.70
25	YA	2702	U	C2-N1-C1'	5.83	124.70	117.70
12	QL	119	LYS	N-CA-C	-5.83	95.26	111.00
28	RE	58	ARG	N-CA-C	-5.82	95.28	111.00
28	YE	58	ARG	N-CA-C	-5.82	95.29	111.00
25	RA	1929	G	OP1-P-O3'	5.82	118.00	105.20
25	RA	1786	A	C8-N9-C4	-5.82	103.47	105.80
35	YP	26	GLY	N-CA-C	-5.81	98.57	113.10
25	YA	676	A	O4'-C1'-N9	5.78	112.83	108.20
35	RP	26	GLY	N-CA-C	-5.78	98.66	113.10
25	YA	1929	G	N1-C6-O6	5.77	123.36	119.90
48	Y2	16	LEU	N-CA-C	-5.77	95.42	111.00
48	R2	16	LEU	N-CA-C	-5.75	95.47	111.00
1	QA	1301	U	C6-N1-C1'	-5.75	113.15	121.20
25	YA	1204	A	O4'-C1'-N9	5.74	112.79	108.20
1	XA	1302	U	C2-N1-C1'	5.73	124.58	117.70
1	QA	190	G	OP2-P-O3'	5.72	117.78	105.20
19	XS	6	LYS	N-CA-C	-5.72	95.56	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	1950	G	O4'-C1'-N9	5.71	112.77	108.20
25	RA	774	A	N3-C4-N9	-5.71	122.83	127.40
1	XA	372	C	N1-C2-O2	5.70	122.32	118.90
1	QA	1158	C	C6-N1-C1'	-5.70	113.97	120.80
1	XA	913	A	P-O3'-C3'	5.69	126.53	119.70
25	YA	2430	A	C2-N3-C4	-5.69	107.76	110.60
25	RA	1694	C	P-O3'-C3'	5.68	126.52	119.70
25	YA	860	U	N3-C2-O2	-5.68	118.22	122.20
25	YA	1970	A	O5'-P-OP2	-5.68	100.59	105.70
25	YA	2832	U	P-O3'-C3'	5.67	126.51	119.70
25	YA	1528	A	N7-C8-N9	5.67	116.63	113.80
19	QS	6	LYS	N-CA-C	-5.66	95.71	111.00
25	YA	1950	G	C8-N9-C1'	-5.64	119.66	127.00
25	RA	140	A	N7-C8-N9	5.64	116.62	113.80
25	YA	530	G	N3-C2-N2	5.64	123.85	119.90
25	YA	783	A	C8-N9-C4	-5.63	103.55	105.80
25	RA	530	G	O4'-C1'-N9	5.62	112.69	108.20
25	RA	1899	G	C6-C5-N7	-5.62	127.03	130.40
1	QA	913	A	P-O3'-C3'	5.60	126.42	119.70
25	YA	120	U	N3-C2-O2	-5.59	118.29	122.20
25	YA	654	A	N7-C8-N9	5.59	116.60	113.80
1	XA	1054	C	C2-N1-C1'	5.57	124.93	118.80
1	XA	1503	A	P-O3'-C3'	5.57	126.38	119.70
25	RA	828	U	N3-C2-O2	-5.56	118.31	122.20
50	R4	39	CYS	N-CA-C	-5.56	95.99	111.00
25	YA	2688	U	N3-C2-O2	-5.56	118.31	122.20
33	RN	114	ARG	N-CA-C	-5.55	96.00	111.00
50	Y4	39	CYS	N-CA-C	-5.55	96.01	111.00
24	QX	6	C	P-O3'-C3'	5.55	126.36	119.70
25	YA	1950	G	N3-C2-N2	5.55	123.78	119.90
4	XD	14	ARG	C-N-CA	-5.55	107.83	121.70
25	RA	372	G	OP2-P-O3'	5.54	117.40	105.20
25	YA	1332	G	C4-C5-N7	5.54	113.02	110.80
25	RA	1654	A	O5'-P-OP1	-5.54	100.72	105.70
1	QA	328	C	P-O3'-C3'	5.53	126.34	119.70
1	QA	1065	U	P-O3'-C3'	5.53	126.33	119.70
25	YA	2335	A	O4'-C1'-N9	5.53	112.62	108.20
1	XA	115	G	P-O3'-C3'	5.53	126.33	119.70
1	QA	533	A	P-O3'-C3'	5.52	126.32	119.70
25	RA	2420	C	O5'-P-OP1	-5.51	100.74	105.70
25	YA	2584	U	N3-C2-O2	-5.51	118.34	122.20
33	YN	114	ARG	N-CA-C	-5.51	96.13	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	328	C	N3-C2-O2	-5.50	118.05	121.90
25	YA	1314	C	C2-N1-C1'	5.50	124.85	118.80
1	XA	410	G	P-O3'-C3'	5.49	126.29	119.70
25	RA	2848	G	P-O3'-C3'	5.48	126.28	119.70
25	YA	99	U	P-O3'-C3'	5.48	126.28	119.70
25	YA	1955	U	P-O3'-C3'	5.48	126.27	119.70
1	XA	1158	C	N1-C2-O2	5.48	122.19	118.90
25	YA	74	A	C2-N3-C4	-5.48	107.86	110.60
1	XA	792	A	C6-C5-N7	-5.47	128.47	132.30
25	RA	227	A	P-O3'-C3'	5.47	126.27	119.70
27	RD	251	GLY	N-CA-C	5.47	126.78	113.10
31	YH	127	GLU	N-CA-C	-5.47	96.24	111.00
31	RH	127	GLU	N-CA-C	-5.46	96.25	111.00
25	RA	2053	G	C8-N9-C1'	5.46	134.10	127.00
25	YA	654(B)	C	C5-C6-N1	5.46	123.73	121.00
27	YD	251	GLY	N-CA-C	5.45	126.73	113.10
25	YA	2439	A	P-O3'-C3'	5.45	126.24	119.70
1	QA	1027	C	OP1-P-O3'	5.45	117.18	105.20
24	XX	3	G	OP2-P-O3'	5.44	117.17	105.20
25	YA	945	A	C6-C5-N7	-5.44	128.49	132.30
35	RP	25	SER	N-CA-C	-5.44	96.31	111.00
24	QX	7	G	C5-N7-C8	-5.44	101.58	104.30
25	RA	2335	A	O4'-C1'-N9	5.44	112.55	108.20
25	YA	1558	A	P-O3'-C3'	5.44	126.22	119.70
1	QA	687	A	P-O3'-C3'	5.43	126.22	119.70
1	QA	1158	C	C6-N1-C2	-5.43	118.13	120.30
25	RA	372	G	C4-N9-C1'	-5.43	119.44	126.50
25	YA	140	A	N7-C8-N9	5.43	116.51	113.80
25	YA	674	G	N9-C4-C5	-5.42	103.23	105.40
1	XA	687	A	P-O3'-C3'	5.42	126.21	119.70
1	XA	753	A	P-O3'-C3'	5.42	126.20	119.70
25	RA	1313	U	C2-N1-C1'	5.41	124.19	117.70
25	YA	2655	G	P-O3'-C3'	5.41	126.20	119.70
35	YP	25	SER	N-CA-C	-5.41	96.38	111.00
1	QA	372	C	C5-C6-N1	5.41	123.70	121.00
1	XA	703	G	C4-N9-C1'	5.40	133.53	126.50
25	YA	503	A	P-O3'-C3'	5.38	126.15	119.70
25	YA	2681	C	P-O3'-C3'	5.38	126.15	119.70
25	YA	860	U	C4-C5-C6	5.38	122.92	119.70
25	RA	2832	U	P-O3'-C3'	5.37	126.14	119.70
27	YD	111	LEU	CA-CB-CG	5.37	127.65	115.30
31	YH	100	GLY	N-CA-C	-5.36	99.69	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	XV	17	C	C6-N1-C2	-5.36	118.16	120.30
25	YA	1936	A	N9-C4-C5	-5.36	103.66	105.80
25	RA	1799	G	P-O3'-C3'	5.36	126.13	119.70
25	YA	654	A	N9-C4-C5	5.34	107.94	105.80
25	RA	1332	G	C2-N3-C4	-5.34	109.23	111.90
25	RA	2584	U	C2-N1-C1'	5.34	124.11	117.70
25	RA	1786	A	C6-C5-N7	-5.34	128.56	132.30
25	RA	774	A	N3-C4-C5	5.33	130.53	126.80
27	RD	111	LEU	CA-CB-CG	5.33	127.57	115.30
31	RH	100	GLY	N-CA-C	-5.33	99.78	113.10
25	RA	140	A	C8-N9-C4	-5.33	103.67	105.80
25	RA	1899	G	N3-C4-N9	5.32	129.19	126.00
1	XA	1336	C	C6-N1-C2	-5.31	118.17	120.30
1	XA	812	C	P-O3'-C3'	5.31	126.07	119.70
25	YA	512	G	O4'-C1'-N9	5.31	112.45	108.20
54	Y8	36	LYS	N-CA-C	-5.31	96.67	111.00
25	YA	2318	G	O4'-C1'-N9	5.30	112.44	108.20
25	RA	2198	A	P-O3'-C3'	5.30	126.06	119.70
25	RA	1653	G	P-O3'-C3'	5.30	126.06	119.70
25	YA	945	A	C4-C5-N7	5.30	113.35	110.70
54	R8	36	LYS	N-CA-C	-5.29	96.73	111.00
25	YA	859	G	P-O3'-C3'	5.28	126.04	119.70
25	YA	2610	C	P-O3'-C3'	5.28	126.04	119.70
1	XA	690	G	O4'-C1'-N9	5.28	112.43	108.20
25	YA	2439	A	C8-N9-C4	-5.28	103.69	105.80
25	RA	404	C	P-O3'-C3'	5.28	126.04	119.70
25	YA	2307	G	O4'-C1'-N9	5.28	112.42	108.20
1	QA	328	C	C2-N1-C1'	5.28	124.61	118.80
1	XA	243	A	P-O3'-C3'	5.28	126.03	119.70
25	RA	372	G	O4'-C1'-N9	5.26	112.41	108.20
25	YA	1950	G	N7-C8-N9	5.26	115.73	113.10
25	YA	917	A	C2-N3-C4	-5.26	107.97	110.60
1	QA	353	A	OP2-P-O3'	5.25	116.75	105.20
25	YA	1950	G	C6-C5-N7	-5.25	127.25	130.40
1	QA	1528	U	P-O3'-C3'	5.24	125.99	119.70
25	RA	2689	U	P-O3'-C3'	5.24	125.99	119.70
1	XA	345	C	P-O3'-C3'	5.24	125.99	119.70
38	RS	110	LEU	CA-CB-CG	5.24	127.35	115.30
25	YA	372	G	O4'-C1'-N9	5.22	112.38	108.20
25	YA	945	A	N1-C6-N6	5.22	121.73	118.60
36	YQ	5	ARG	N-CA-C	-5.22	96.90	111.00
25	YA	2506	U	C2-N1-C1'	5.22	123.96	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	115	G	P-O3'-C3'	5.22	125.96	119.70
1	QA	1201	A	P-O3'-C3'	5.21	125.96	119.70
25	YA	383	U	O4'-C1'-N1	5.21	112.37	108.20
1	XA	1347	G	OP2-P-O3'	5.21	116.66	105.20
1	QA	429	U	OP1-P-O3'	5.20	116.65	105.20
1	QA	890	G	O4'-C1'-N9	5.20	112.36	108.20
1	QA	960	U	C2-N1-C1'	5.20	123.94	117.70
25	RA	1992	G	P-O3'-C3'	5.20	125.94	119.70
19	XS	79	THR	N-CA-C	-5.19	96.98	111.00
36	RQ	5	ARG	N-CA-C	-5.19	96.99	111.00
38	YS	110	LEU	CA-CB-CG	5.18	127.22	115.30
25	YA	1022	G	P-O3'-C3'	5.18	125.91	119.70
1	QA	243	A	P-O3'-C3'	5.18	125.91	119.70
25	RA	2447	G	C8-N9-C1'	5.18	133.73	127.00
24	QX	7	G	C6-N1-C2	5.17	128.20	125.10
1	XA	1301	U	C6-N1-C1'	-5.17	113.96	121.20
25	RA	1558	A	P-O3'-C3'	5.17	125.90	119.70
25	YA	2751	G	C8-N9-C4	-5.17	104.33	106.40
19	QS	79	THR	N-CA-C	-5.16	97.07	111.00
25	YA	2712(A)	A	C8-N9-C4	-5.15	103.74	105.80
25	YA	2726	U	O4'-C1'-N1	5.15	112.32	108.20
25	RA	2712	U	C2-N1-C1'	5.14	123.87	117.70
25	YA	860	U	C2-N1-C1'	5.14	123.87	117.70
25	YA	1012	U	OP2-P-O3'	5.14	116.51	105.20
25	YA	404	C	P-O3'-C3'	5.13	125.86	119.70
1	QA	723	U	C2-N1-C1'	5.12	123.85	117.70
1	QA	1200	C	OP2-P-O3'	5.12	116.47	105.20
25	YA	676	A	N7-C8-N9	5.12	116.36	113.80
1	QA	1027	C	P-O3'-C3'	5.12	125.85	119.70
1	QA	1065	U	OP2-P-O3'	5.12	116.46	105.20
25	YA	2481	G	P-O3'-C3'	5.12	125.84	119.70
25	YA	1899	G	C6-C5-N7	-5.11	127.33	130.40
1	XA	1336	C	C2-N1-C1'	5.11	124.42	118.80
1	QA	1374	A	N1-C2-N3	5.11	131.85	129.30
25	RA	1925	C	N1-C2-O2	-5.11	115.84	118.90
25	RA	1914	C	C2-N1-C1'	5.10	124.41	118.80
1	XA	1158	C	C6-N1-C2	-5.10	118.26	120.30
25	YA	2420	C	O5'-P-OP1	-5.09	101.12	105.70
39	YT	123	GLN	N-CA-C	-5.09	97.25	111.00
1	QA	449	C	N3-C2-O2	-5.09	118.34	121.90
26	YB	81	G	O4'-C1'-N9	5.08	112.26	108.20
25	RA	265	A	O4'-C1'-N9	5.08	112.26	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1535	U	C2-N1-C1'	5.07	123.79	117.70
25	YA	102	G	P-O3'-C3'	5.07	125.79	119.70
25	YA	856	C	C6-N1-C2	-5.07	118.27	120.30
25	YA	1005	C	N1-C2-O2	5.07	121.94	118.90
25	YA	2776	A	P-O3'-C3'	5.07	125.78	119.70
25	RA	2490	G	C4-N9-C1'	5.07	133.09	126.50
39	RT	123	GLN	N-CA-C	-5.07	97.32	111.00
25	YA	2751	G	N7-C8-N9	5.06	115.63	113.10
1	QA	1322	C	C6-N1-C1'	-5.06	114.73	120.80
1	XA	328	C	P-O3'-C3'	5.06	125.77	119.70
1	XA	1322	C	C2-N1-C1'	5.06	124.36	118.80
39	YT	59	THR	N-CA-C	-5.05	97.35	111.00
25	RA	2726	U	C2-N1-C1'	5.05	123.76	117.70
39	RT	59	THR	N-CA-C	-5.05	97.36	111.00
25	YA	2405	G	P-O3'-C3'	5.04	125.75	119.70
25	RA	1528	A	O4'-C1'-N9	5.04	112.23	108.20
25	YA	120	U	C4-C5-C6	5.04	122.72	119.70
25	YA	1929	G	C5-N7-C8	-5.04	101.78	104.30
25	YA	2126	A	P-O3'-C3'	5.04	125.75	119.70
25	YA	1528	A	O4'-C1'-N9	5.04	112.23	108.20
25	YA	2640	G	C8-N9-C4	-5.04	104.39	106.40
1	QA	189	U	P-O3'-C3'	5.03	125.74	119.70
25	RA	2307	G	O4'-C1'-N9	5.03	112.23	108.20
1	XA	960	U	C5-C6-N1	5.03	125.22	122.70
1	XA	530	G	P-O3'-C3'	5.03	125.73	119.70
25	RA	846	C	P-O3'-C3'	5.02	125.73	119.70
1	XA	1054	C	C6-N1-C1'	-5.02	114.77	120.80
1	QA	701	C	OP2-P-O3'	5.02	116.24	105.20
22	QV	17	C	C6-N1-C1'	-5.01	114.78	120.80
25	RA	2126	A	P-O3'-C3'	5.01	125.72	119.70
25	YA	654	A	C4-C5-C6	5.01	119.51	117.00
24	QX	7	G	C4-C5-N7	5.01	112.81	110.80
25	RA	222	A	P-O3'-C3'	5.01	125.71	119.70
31	YH	127	GLU	C-N-CD	-5.01	109.58	120.60
1	XA	1151	A	O4'-C1'-N9	5.01	112.20	108.20
25	RA	1314	C	N1-C2-O2	5.00	121.90	118.90
1	QA	960	U	N1-C2-O2	5.00	126.30	122.80
1	QA	1322	C	N1-C2-O2	5.00	121.90	118.90
25	RA	828	U	N1-C2-O2	5.00	126.30	122.80

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	16278	576	0
1	XA	32249	0	16279	575	1
2	QB	1924	0	1975	287	0
2	XB	1924	0	1975	293	0
3	QC	1605	0	1668	212	0
3	XC	1605	0	1668	215	2
4	QD	1703	0	1765	261	0
4	XD	1703	0	1764	217	0
5	QE	1155	0	1213	140	0
5	XE	1155	0	1213	141	0
6	QF	843	0	857	97	0
6	XF	843	0	857	101	0
7	QG	1257	0	1296	148	0
7	XG	1257	0	1296	143	0
8	QH	1116	0	1175	148	0
8	XH	1116	0	1177	154	0
9	QI	1010	0	1037	145	0
9	XI	1010	0	1037	153	0
10	QJ	801	0	849	152	0
10	XJ	801	0	849	141	0
11	QK	885	0	904	103	2
11	XK	885	0	904	109	0
12	QL	975	0	1062	107	0
12	XL	975	0	1062	110	0
13	QM	964	0	1034	163	0
13	XM	964	0	1034	150	0
14	QN	492	0	529	100	0
14	XN	492	0	529	94	0
15	QO	734	0	771	73	0
15	XO	734	0	771	72	0
16	QP	705	0	725	115	0
16	XP	705	0	725	113	0
17	QQ	834	0	904	85	0
17	XQ	834	0	904	78	0
18	QR	574	0	644	66	0
18	XR	574	0	644	69	0
19	QS	674	0	699	103	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
19	XS	674	0	699	136	0
20	QT	763	0	860	108	0
20	XT	763	0	861	103	0
21	QU	217	0	234	27	0
21	XU	217	0	234	28	0
22	QV	1644	0	836	22	0
22	XV	1644	0	836	15	0
23	QY	323	0	165	2	0
23	XY	323	0	165	6	0
24	QX	170	0	88	2	0
24	XX	170	0	88	1	0
25	RA	62071	0	31288	992	0
25	YA	62091	0	31296	935	0
26	RB	2573	0	1306	62	0
26	YB	2573	0	1306	26	0
27	RD	2115	0	2195	319	0
27	YD	2115	0	2195	332	0
28	RE	1568	0	1634	270	0
28	YE	1568	0	1634	265	0
29	RF	1585	0	1632	181	0
29	YF	1585	0	1632	180	0
30	RG	1474	0	1535	211	0
30	YG	1474	0	1535	193	0
31	RH	1307	0	1382	225	0
31	YH	1307	0	1382	221	0
32	RI	1136	0	1223	42	1
32	YI	1136	0	1223	40	0
33	RN	1104	0	1180	191	0
33	YN	1104	0	1180	183	0
34	RO	933	0	996	123	0
34	YO	933	0	996	123	0
35	RP	1145	0	1228	250	0
35	YP	1145	0	1228	245	0
36	RQ	1122	0	1179	159	0
36	YQ	1122	0	1179	158	0
37	RR	968	0	1033	113	0
37	YR	968	0	1033	113	0
38	RS	882	0	943	165	0
38	YS	882	0	943	159	0
39	RT	1141	0	1202	154	0
39	YT	1141	0	1202	153	0
40	RU	964	0	1022	131	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
40	YU	964	0	1022	137	0
41	RV	779	0	852	129	0
41	YV	779	0	852	136	3
42	RW	900	0	964	99	0
42	YW	900	0	964	100	0
43	RX	725	0	778	69	0
43	YX	725	0	778	74	0
44	RY	785	0	878	163	0
44	YY	785	0	878	151	0
45	RZ	1461	0	1493	46	0
45	YZ	1461	0	1493	57	0
46	R0	648	0	672	20	0
46	Y0	648	0	672	28	0
47	R1	763	0	848	146	0
47	Y1	763	0	848	142	0
48	R2	581	0	629	81	0
48	Y2	581	0	629	77	0
49	R3	469	0	518	41	0
49	Y3	469	0	518	41	0
50	R4	581	0	574	153	0
50	Y4	581	0	574	164	0
51	R5	459	0	480	77	0
51	Y5	459	0	480	75	3
52	R6	424	0	450	92	0
52	Y6	424	0	450	89	0
53	R7	430	0	480	43	0
53	Y7	430	0	480	44	0
54	R8	517	0	582	106	0
54	Y8	517	0	582	103	0
55	R9	307	0	338	18	0
55	Y9	307	0	338	18	0
56	Z6	74	0	51	6	0
56	Z8	74	0	51	7	0
57	QA	69	0	0	0	0
57	QF	1	0	0	0	0
57	QH	1	0	0	0	0
57	QM	1	0	0	0	0
57	QV	1	0	0	0	0
57	R0	1	0	0	0	0
57	R5	1	0	0	0	0
57	RA	240	0	0	0	0
57	RB	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
57	RD	1	0	0	0	0
57	RE	2	0	0	0	0
57	RF	1	0	0	0	0
57	RP	1	0	0	0	0
57	RR	2	0	0	0	0
57	XA	74	0	0	0	0
57	XV	2	0	0	0	0
57	XX	1	0	0	0	0
57	Y0	1	0	0	0	0
57	Y5	1	0	0	0	0
57	Y7	1	0	0	0	0
57	YA	265	0	0	0	0
57	YB	3	0	0	0	0
57	YE	2	0	0	0	0
57	YP	1	0	0	0	0
57	YQ	1	0	0	0	0
58	QA	42	0	45	3	0
58	XA	42	0	45	1	0
59	QD	1	0	0	0	0
59	QN	1	0	0	0	0
59	XD	1	0	0	0	0
59	XN	1	0	0	0	0
All	All	291998	0	198367	14453	6

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 30.

All (14453) 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:YN:32:SER:CB	14:YN:41:ARG:HB3	1.23	1.55
14:YN:32:SER:HB3	14:YN:41:ARG:CB	1.28	1.54
31:RH:127:GLU:CG	31:RH:128:PRO:HD3	1.35	1.53
31:YH:127:GLU:CG	31:YH:128:PRO:HD3	1.35	1.52
4:XD:22:LYS:CG	4:XD:26:CYS:SG	2.01	1.49
10:QJ:49:VAL:HG21	14:QN:41:ARG:CB	1.49	1.42
4:XD:22:LYS:HB2	4:XD:26:CYS:SG	1.57	1.42
4:XD:22:LYS:CB	4:XD:26:CYS:SG	2.10	1.40
10:QJ:49:VAL:CG2	14:QN:41:ARG:CB	2.04	1.35
47:R1:81:LYS:HA	47:R1:81:LYS:NZ	1.43	1.34
47:Y1:81:LYS:HA	47:Y1:81:LYS:NZ	1.42	1.34

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:22:LYS:HG3	4:QD:26:CYS:SG	1.70	1.31
10:QJ:49:VAL:CG2	14:QN:41:ARG:HB2	1.62	1.29
47:Y1:81:LYS:HE2	47:Y1:81:LYS:N	1.50	1.26
4:XD:22:LYS:HG3	4:XD:26:CYS:SG	1.64	1.26
47:R1:81:LYS:N	47:R1:81:LYS:HE2	1.50	1.26
14:QN:25:VAL:HG23	14:QN:38:GLY:O	1.37	1.25
14:YN:40:CYS:SG	14:YN:43:CYS:N	2.11	1.23
36:RQ:59:ARG:O	36:RQ:60:ARG:HD2	1.38	1.22
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	1.20
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	1.17
4:XD:12:CYS:HA	4:XD:19:LEU:CD2	1.75	1.17
47:Y1:82:LEU:HD12	47:Y1:82:LEU:C	1.66	1.16
44:YY:95:LYS:HB3	44:YY:100:ALA:HA	1.20	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	1.15
14:YN:42:ILE:O	14:YN:43:CYS:O	1.65	1.15
10:QJ:49:VAL:CG2	14:QN:41:ARG:HB3	1.71	1.14
19:QS:5:LEU:HD22	50:R4:67:TYR:CE2	1.83	1.14
35:RP:50:ARG:HB3	35:RP:50:ARG:HH21	1.13	1.14
19:QS:41:VAL:HB	19:QS:42:PRO:HA	1.25	1.14
2:XB:101:MET:HA	2:XB:108:ILE:HG13	1.25	1.13
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
4:XD:11:LEU:HD22	4:XD:66:ARG:HD3	1.28	1.13
14:YN:32:SER:CB	14:YN:41:ARG:CB	1.97	1.12
35:YP:50:ARG:HB3	35:YP:50:ARG:HH21	1.13	1.12
47:Y1:82:LEU:CD1	47:Y1:83:GLU:O	1.97	1.12
4:QD:12:CYS:HA	4:QD:19:LEU:HD21	1.24	1.12
28:YE:179:GLU:HB3	28:YE:181:LEU:HD23	1.31	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
29:RF:101:LEU:HD12	29:RF:102:PRO:HD2	1.21	1.11
40:YU:8:VAL:HG23	40:YU:11:ARG:HH21	1.14	1.11
27:YD:44:ASN:HB2	27:YD:48:ARG:O	1.51	1.11
47:Y1:82:LEU:HD12	47:Y1:83:GLU:N	1.66	1.11
31:YH:132:ARG:HB2	31:YH:132:ARG:HH11	1.10	1.11
27:RD:44:ASN:HB2	27:RD:48:ARG:O	1.50	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R1:82:LEU:HD12	47:R1:83:GLU:N	1.66	1.10
28:RE:179:GLU:HB3	28:RE:181:LEU:HD23	1.32	1.10
44:RY:76:CYS:HB3	44:RY:96:ILE:HD13	1.17	1.10
31:RH:86:GLU:HG3	31:RH:165:ALA:H	1.06	1.10
29:YF:101:LEU:HD12	29:YF:102:PRO:HD2	1.21	1.10
4:QD:22:LYS:CG	4:QD:26:CYS:SG	2.38	1.10
19:XS:5:LEU:HD11	50:Y4:66:SER:HB2	1.31	1.10
28:YE:50:GLY:HA2	28:YE:77:ILE:HA	1.31	1.10
10:XJ:6:ILE:HG22	10:XJ:98:ILE:HG13	1.30	1.09
19:XS:41:VAL:HB	19:XS:42:PRO:HA	1.26	1.08
31:YH:152:ARG:HG3	31:YH:153:LYS:HE2	1.33	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
15:XO:87:ILE:HG22	15:XO:88:ARG:H	1.18	1.08
11:QK:79:SER:HB2	11:QK:106:LYS:HD2	1.35	1.08
2:XB:80:ILE:HD11	2:XB:208:ILE:HG23	1.34	1.08
3:XC:15:THR:HG23	3:XC:181:ASN:HA	1.35	1.08
33:YN:134:ARG:H	33:YN:135:PRO:HD3	1.11	1.08
31:YH:86:GLU:HG3	31:YH:165:ALA:H	1.05	1.08
27:YD:131:LEU:HB2	27:YD:136:ILE:HD11	1.35	1.08
35:RP:126:VAL:HG12	35:RP:147:LEU:HD21	1.30	1.07
27:RD:131:LEU:HB2	27:RD:136:ILE:HD11	1.35	1.07
47:Y1:81:LYS:HZ3	47:Y1:81:LYS:CA	1.65	1.07
31:RH:152:ARG:HG3	31:RH:153:LYS:HE2	1.33	1.07
35:YP:126:VAL:HG12	35:YP:147:LEU:HD21	1.30	1.07
50:R4:71:ARG:HH11	50:R4:71:ARG:HG3	1.13	1.07
28:RE:50:GLY:HA2	28:RE:77:ILE:HA	1.31	1.07
15:QO:87:ILE:HG22	15:QO:88:ARG:H	1.18	1.07
47:Y1:82:LEU:CD1	47:Y1:83:GLU:N	2.18	1.06
3:QC:79:ARG:HE	11:XK:99:GLN:NE2	1.53	1.06
10:QJ:49:VAL:HG21	14:QN:41:ARG:HB3	1.24	1.06
35:RP:59:LEU:HA	35:RP:61:ARG:NH2	1.69	1.06
10:QJ:49:VAL:CG1	14:QN:41:ARG:HD2	1.85	1.06
50:Y4:71:ARG:HG3	50:Y4:71:ARG:HH11	1.13	1.06
31:YH:153:LYS:HB3	31:YH:154:PRO:HD2	1.07	1.06
54:Y8:52:LYS:H	54:Y8:53:PRO:CD	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
28:RE:63:LEU:HD12	28:RE:64:LYS:H	1.18	1.06
47:R1:82:LEU:CD1	47:R1:83:GLU:N	2.18	1.06
4:XD:12:CYS:HA	4:XD:19:LEU:HD21	1.08	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:46:ARG:HH11	29:RF:46:ARG:HG2	1.20	1.06
11:QK:51:LYS:HA	11:QK:55:LYS:HD3	1.36	1.06
13:QM:88:ARG:HB3	13:QM:88:ARG:HH11	1.19	1.05
2:XB:178:ARG:HH21	8:XH:74:PRO:HB3	1.20	1.05
28:YE:63:LEU:HD12	28:YE:64:LYS:H	1.18	1.05
13:XM:88:ARG:HH11	13:XM:88:ARG:HB3	1.19	1.05
13:QM:49:THR:HG22	13:QM:51:ALA:H	1.22	1.05
35:YP:19:VAL:HG22	35:YP:20:GLY:H	1.15	1.05
11:XK:51:LYS:HA	11:XK:55:LYS:HD3	1.36	1.05
13:QM:77:ASN:HA	50:R4:71:ARG:NH2	1.71	1.05
28:YE:21:VAL:HB	28:YE:22:PRO:HB3	1.37	1.05
13:XM:3:ARG:HA	13:XM:9:ILE:HG21	1.34	1.05
5:QE:11:ILE:HD11	5:QE:31:LEU:HD12	1.38	1.05
47:R1:81:LYS:CA	47:R1:81:LYS:HZ3	1.70	1.05
1:QA:1054:C:OP2	1:QA:1197:G:OP2	1.74	1.05
33:RN:134:ARG:H	33:RN:135:PRO:HD3	1.11	1.05
13:QM:3:ARG:HA	13:QM:9:ILE:HG21	1.35	1.05
31:RH:127:GLU:CB	31:RH:128:PRO:CD	2.35	1.04
36:RQ:59:ARG:O	36:RQ:60:ARG:CD	2.05	1.04
11:XK:79:SER:HB2	11:XK:106:LYS:HD2	1.35	1.04
40:RU:90:VAL:HG12	40:RU:91:ASP:H	1.18	1.04
25:YA:518:G:H4'	42:YW:18:ARG:HH12	1.14	1.04
41:YV:49:THR:HB	41:YV:50:PRO:HD2	1.39	1.04
25:RA:518:G:H4'	42:RW:18:ARG:HH12	1.23	1.04
25:YA:2701:C:H3'	25:YA:2702:U:H5''	1.38	1.04
2:QB:80:ILE:HD11	2:QB:208:ILE:HG23	1.34	1.04
37:RR:67:LEU:HD13	37:RR:76:VAL:HG21	1.39	1.04
40:YU:90:VAL:HG12	40:YU:91:ASP:H	1.18	1.04
2:QB:4:GLU:HG2	2:QB:5:ILE:H	1.19	1.04
38:RS:106:ARG:HA	38:RS:110:LEU:HD11	1.39	1.04
31:YH:127:GLU:CG	31:YH:128:PRO:CD	2.31	1.03
36:RQ:81:VAL:O	36:RQ:82:ARG:CD	2.06	1.03
2:XB:4:GLU:HG2	2:XB:5:ILE:H	1.19	1.03
14:XN:22:THR:O	14:XN:23:ARG:HB2	1.56	1.03
2:QB:18:GLY:H	2:QB:42:ILE:HG22	1.21	1.03
10:QJ:49:VAL:CG1	14:QN:41:ARG:HB2	1.88	1.03
4:QD:12:CYS:HA	4:QD:19:LEU:CD2	1.87	1.03
38:RS:83:LYS:O	38:RS:109:GLY:HA3	1.57	1.03
8:XH:29:SER:HB3	8:XH:32:LYS:HG3	1.39	1.03
31:YH:127:GLU:CB	31:YH:128:PRO:CD	2.35	1.03
38:YS:83:LYS:O	38:YS:109:GLY:HA3	1.57	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:35:LYS:HG2	27:RD:64:ILE:N	1.72	1.03
38:YS:106:ARG:HA	38:YS:110:LEU:HD11	1.39	1.03
54:R8:52:LYS:H	54:R8:53:PRO:CD	1.69	1.03
27:YD:35:LYS:HG2	27:YD:64:ILE:N	1.73	1.02
34:YO:53:LYS:HD2	34:YO:53:LYS:H	1.23	1.02
36:RQ:80:GLU:O	36:RQ:81:VAL:HG13	1.60	1.02
36:YQ:81:VAL:O	36:YQ:82:ARG:CD	2.06	1.02
36:YQ:65:PHE:O	36:YQ:66:ILE:HG12	1.59	1.02
36:YQ:12:GLN:HG2	36:YQ:73:PRO:HD2	1.42	1.02
29:YF:67:GLN:O	29:YF:68:LYS:HB2	1.56	1.02
29:RF:67:GLN:O	29:RF:67:GLN:HG3	1.58	1.02
2:XB:18:GLY:H	2:XB:42:ILE:HG22	1.21	1.02
29:RF:67:GLN:O	29:RF:68:LYS:HB2	1.56	1.02
29:YF:46:ARG:HG2	29:YF:46:ARG:HH11	1.20	1.02
36:RQ:12:GLN:HG2	36:RQ:73:PRO:HD2	1.42	1.02
31:RH:153:LYS:HB3	31:RH:154:PRO:HD2	1.06	1.02
34:RO:53:LYS:H	34:RO:53:LYS:HD2	1.23	1.02
5:XE:11:ILE:HD11	5:XE:31:LEU:HD12	1.38	1.02
44:YY:97:ARG:HH21	44:YY:98:VAL:HB	1.26	1.01
30:YG:13:GLU:O	30:YG:14:GLU:HB2	1.60	1.01
25:RA:2701:C:H3'	25:RA:2702:U:H5''	1.42	1.01
29:RF:185:ASP:HA	29:RF:188:ARG:HD3	1.41	1.01
7:QG:78:ARG:HG3	7:QG:79:ARG:H	1.24	1.01
13:XM:49:THR:HG22	13:XM:51:ALA:H	1.22	1.01
19:QS:41:VAL:HB	19:QS:42:PRO:CA	1.91	1.01
29:YF:67:GLN:O	29:YF:67:GLN:HG3	1.58	1.01
10:QJ:49:VAL:HG13	14:QN:41:ARG:CD	1.90	1.01
13:QM:77:ASN:HA	50:R4:71:ARG:HH22	1.25	1.01
38:RS:26:LEU:HD12	38:RS:39:ILE:HD11	1.40	1.01
19:XS:41:VAL:HB	19:XS:42:PRO:CA	1.91	1.00
19:QS:5:LEU:CD2	50:R4:67:TYR:CE2	2.44	1.00
37:YR:67:LEU:HD13	37:YR:76:VAL:HG21	1.39	1.00
41:RV:49:THR:HB	41:RV:50:PRO:HD2	1.39	1.00
33:YN:96:GLU:HG2	33:YN:97:ARG:H	1.26	1.00
27:RD:227:ASN:HB3	27:RD:228:PRO:HD2	1.44	1.00
44:RY:97:ARG:HH21	44:RY:98:VAL:HB	1.26	1.00
50:R4:56:VAL:HA	50:R4:60:GLN:HB2	1.43	1.00
36:RQ:81:VAL:O	36:RQ:82:ARG:NE	1.94	1.00
36:YQ:80:GLU:O	36:YQ:81:VAL:HG13	1.59	1.00
36:RQ:65:PHE:O	36:RQ:66:ILE:HG12	1.59	1.00
37:YR:54:LEU:HD23	37:YR:66:VAL:HG23	1.44	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
48:R2:50:ILE:HD12	48:R2:51:ARG:N	1.76	1.00
8:QH:29:SER:HB3	8:QH:32:LYS:HG3	1.39	1.00
2:QB:178:ARG:HH21	8:QH:74:PRO:HB3	1.22	1.00
29:YF:185:ASP:HA	29:YF:188:ARG:HD3	1.41	1.00
31:RH:153:LYS:HB3	31:RH:154:PRO:CD	1.92	0.99
25:YA:270(T):G:H5"	47:Y1:97:LEU:HD22	1.41	0.99
31:RH:77:LYS:HZ3	31:RH:77:LYS:HB3	1.22	0.99
38:RS:83:LYS:NZ	38:RS:109:GLY:HA2	1.78	0.99
28:RE:201:THR:HG22	28:RE:203:LYS:H	1.26	0.99
38:YS:26:LEU:HD12	38:YS:39:ILE:HD11	1.40	0.99
31:YH:153:LYS:HB3	31:YH:154:PRO:CD	1.92	0.99
28:YE:201:THR:HG22	28:YE:203:LYS:H	1.26	0.99
31:RH:127:GLU:CG	31:RH:128:PRO:CD	2.31	0.99
3:QC:95:THR:HG22	3:QC:96:GLY:H	1.27	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
36:YQ:81:VAL:O	36:YQ:82:ARG:NE	1.94	0.99
8:QH:23:SER:HA	8:QH:63:LEU:HD22	1.45	0.99
8:QH:84:ARG:HH12	8:QH:86:ILE:HD13	1.28	0.99
35:RP:50:ARG:CB	35:RP:50:ARG:HH21	1.76	0.98
10:QJ:6:ILE:HD11	10:QJ:72:VAL:HB	1.44	0.98
10:XJ:6:ILE:HD11	10:XJ:72:VAL:HB	1.44	0.98
3:QC:181:ASN:HD21	3:QC:204:LEU:HD12	1.27	0.98
35:RP:105:LEU:O	35:RP:106:LEU:HB2	1.61	0.98
35:YP:50:ARG:HH21	35:YP:50:ARG:CB	1.76	0.98
7:XG:78:ARG:HG3	7:XG:79:ARG:H	1.24	0.98
42:RW:86:LEU:HD12	42:RW:87:PRO:HD2	1.45	0.98
30:RG:13:GLU:O	30:RG:14:GLU:HB2	1.60	0.98
2:QB:196:LEU:HD12	2:QB:197:VAL:HG23	1.45	0.98
4:XD:20:TYR:CD2	4:XD:27:TYR:CE2	2.51	0.98
36:RQ:79:LEU:HD22	36:RQ:79:LEU:O	1.64	0.98
31:YH:86:GLU:HG3	31:YH:165:ALA:N	1.79	0.98
4:QD:94:LEU:HD12	4:QD:94:LEU:H	1.28	0.98
27:RD:44:ASN:HB3	27:RD:49:ILE:HA	1.46	0.97
3:QC:16:ARG:HD2	3:QC:54:ARG:HH21	1.28	0.97
3:QC:19:GLU:HA	3:QC:54:ARG:HH12	1.29	0.97
36:YQ:79:LEU:HD13	36:YQ:79:LEU:O	1.63	0.97
8:XH:84:ARG:HH12	8:XH:86:ILE:HD13	1.28	0.97
28:RE:20:ALA:O	28:RE:21:VAL:HG22	1.64	0.97
48:Y2:50:ILE:HD12	48:Y2:51:ARG:H	1.24	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:YT:62:THR:HG22	39:YT:75:ILE:HG12	1.46	0.97
4:QD:29:PRO:HG2	4:QD:30:LYS:CD	1.94	0.97
52:Y6:41:PRO:HG2	52:Y6:45:LYS:H	1.30	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
48:R2:50:ILE:HD12	48:R2:51:ARG:H	1.24	0.97
38:YS:83:LYS:NZ	38:YS:109:GLY:HA2	1.78	0.97
36:YQ:79:LEU:HD22	36:YQ:79:LEU:O	1.64	0.97
3:XC:181:ASN:HD21	3:XC:204:LEU:HD12	1.27	0.97
33:RN:96:GLU:HG2	33:RN:97:ARG:H	1.26	0.97
7:XG:62:PHE:HA	7:XG:124:LEU:HD21	1.47	0.97
36:RQ:79:LEU:HD13	36:RQ:79:LEU:O	1.63	0.96
25:RA:1019:U:HO2'	25:RA:1021:A:H2	1.11	0.96
42:YW:86:LEU:HD12	42:YW:87:PRO:HD2	1.45	0.96
10:QJ:49:VAL:HG22	14:QN:41:ARG:CB	1.92	0.96
8:XH:23:SER:HA	8:XH:63:LEU:HD22	1.45	0.96
52:R6:7:ILE:HG13	52:R6:8:LYS:H	1.25	0.96
51:Y5:58:LEU:HD13	51:Y5:60:VAL:HG12	1.48	0.96
30:RG:112:PRO:HB3	50:R4:37:SER:HB2	1.47	0.96
25:YA:674:G:H1'	29:YF:74:ARG:HD3	1.46	0.96
4:QD:30:LYS:HG3	4:QD:35:ARG:NE	1.80	0.96
2:QB:8:LYS:HD3	2:QB:8:LYS:H	1.30	0.96
2:XB:7:VAL:HG21	2:XB:217:ARG:HH11	1.31	0.96
44:YY:84:ARG:HH12	44:YY:97:ARG:HB2	1.28	0.96
52:R6:47:THR:HG22	52:R6:48:VAL:HG12	1.45	0.96
2:QB:7:VAL:HG21	2:QB:217:ARG:HH11	1.31	0.96
4:XD:30:LYS:C	4:XD:32:ALA:H	1.62	0.96
4:QD:30:LYS:CB	4:QD:35:ARG:HG3	1.96	0.96
30:YG:112:PRO:HB3	50:Y4:37:SER:HB2	1.47	0.96
25:YA:1359:A:N6	25:YA:1372:U:O4	1.99	0.96
25:YA:1454:U:H5'	37:YR:63:ARG:HE	1.25	0.96
10:XJ:32:ALA:HB3	10:XJ:76:ASN:HB2	1.48	0.96
28:YE:20:ALA:O	28:YE:21:VAL:HG22	1.65	0.96
51:Y5:56:LYS:H	51:Y5:56:LYS:HD2	1.30	0.96
7:QG:62:PHE:HA	7:QG:124:LEU:HD21	1.47	0.96
1:XA:1286:A:H5''	21:XU:26:LYS:HD2	1.46	0.96
3:XC:95:THR:HG22	3:XC:96:GLY:H	1.27	0.96
3:XC:19:GLU:HA	3:XC:54:ARG:HH12	1.29	0.95
29:YF:101:LEU:HD12	29:YF:102:PRO:CD	1.96	0.95
37:RR:54:LEU:HD23	37:RR:66:VAL:HG23	1.44	0.95
16:QP:4:ILE:HD11	16:QP:64:ALA:HB1	1.46	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:QJ:32:ALA:HB3	10:QJ:76:ASN:HB2	1.47	0.95
10:QJ:75:ILE:HG13	10:QJ:76:ASN:H	1.31	0.95
12:QL:6:THR:H	12:QL:9:GLN:HE21	1.15	0.95
44:RY:84:ARG:HH12	44:RY:97:ARG:HB2	1.28	0.95
29:YF:103:LYS:HA	29:YF:106:ARG:HG3	1.48	0.95
3:XC:16:ARG:HD2	3:XC:54:ARG:HH21	1.28	0.95
13:XM:57:ARG:HB2	13:XM:57:ARG:HH11	1.32	0.95
50:Y4:56:VAL:HA	50:Y4:60:GLN:HB2	1.44	0.95
27:YD:227:ASN:HB3	27:YD:228:PRO:HD2	1.44	0.95
4:XD:22:LYS:CD	4:XD:26:CYS:SG	2.54	0.95
4:QD:28:SER:HB2	4:QD:29:PRO:HD3	1.49	0.95
4:XD:94:LEU:HD12	4:XD:94:LEU:H	1.28	0.95
35:YP:62:LEU:HD22	35:YP:62:LEU:N	1.82	0.95
47:Y1:81:LYS:N	47:Y1:81:LYS:CE	2.30	0.95
29:RF:101:LEU:HD12	29:RF:102:PRO:CD	1.96	0.95
6:XF:86:ARG:O	6:XF:87:ARG:HG2	1.66	0.95
41:YV:99:ILE:HD13	41:YV:99:ILE:H	1.32	0.95
2:XB:196:LEU:HD12	2:XB:197:VAL:HG23	1.45	0.95
47:Y1:81:LYS:CA	47:Y1:81:LYS:CE	2.45	0.94
31:RH:86:GLU:HG3	31:RH:165:ALA:N	1.79	0.94
48:R2:13:ALA:HA	48:R2:16:LEU:HD23	1.48	0.94
28:YE:78:LEU:HG	28:YE:79:ARG:HE	1.30	0.94
31:YH:153:LYS:CB	31:YH:154:PRO:HD2	1.98	0.94
48:Y2:13:ALA:HA	48:Y2:16:LEU:HD23	1.48	0.94
16:XP:4:ILE:HD11	16:XP:64:ALA:HB1	1.46	0.94
35:RP:62:LEU:HD22	35:RP:62:LEU:N	1.82	0.94
25:RA:1454:U:H5'	37:RR:63:ARG:HE	1.31	0.94
44:RY:51:VAL:HG13	44:RY:52:SER:H	1.31	0.94
34:RO:2:ILE:HD11	34:RO:82:ASN:HD22	1.33	0.94
6:QF:86:ARG:O	6:QF:87:ARG:HG2	1.66	0.94
47:R1:81:LYS:CA	47:R1:81:LYS:CE	2.45	0.94
3:XC:11:ARG:HB3	3:XC:15:THR:HB	1.48	0.94
10:XJ:75:ILE:HG13	10:XJ:76:ASN:H	1.31	0.94
44:YY:51:VAL:HG13	44:YY:52:SER:H	1.31	0.94
27:RD:28:GLU:HB2	27:RD:29:PRO:CD	1.98	0.94
3:QC:16:ARG:HH11	3:QC:16:ARG:HB2	1.30	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
27:RD:108:PRO:HB3	27:RD:143:HIS:HE1	1.32	0.94
41:YV:35:LEU:HD21	41:YV:57:VAL:HG22	1.47	0.94
47:R1:81:LYS:CE	47:R1:81:LYS:N	2.30	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:8:LYS:H	2:XB:8:LYS:HD3	1.31	0.94
39:RT:62:THR:HG22	39:RT:75:ILE:HG12	1.46	0.94
27:YD:28:GLU:HB2	27:YD:29:PRO:CD	1.98	0.94
39:RT:11:GLU:CD	39:RT:11:GLU:H	1.71	0.94
7:QG:15:ASP:HB3	7:QG:20:ASP:H	1.31	0.94
43:RX:57:LEU:CD1	43:RX:78:LYS:HB2	1.98	0.94
35:RP:1:MET:HE2	35:RP:5:ASP:HB3	1.50	0.94
31:YH:77:LYS:NZ	31:YH:77:LYS:HB3	1.82	0.94
31:YH:77:LYS:HZ3	31:YH:77:LYS:HB3	1.31	0.93
52:R6:41:PRO:HG2	52:R6:45:LYS:H	1.29	0.93
13:QM:90:LEU:HA	13:QM:93:ARG:HD2	1.50	0.93
38:RS:59:LYS:HG2	38:RS:60:GLY:H	1.31	0.93
31:YH:127:GLU:HB3	31:YH:128:PRO:CD	1.99	0.93
39:YT:11:GLU:H	39:YT:11:GLU:CD	1.71	0.93
51:R5:56:LYS:H	51:R5:56:LYS:HD2	1.31	0.93
3:XC:70:VAL:HG12	3:XC:72:LYS:H	1.34	0.93
33:RN:134:ARG:H	33:RN:135:PRO:CD	1.81	0.93
52:Y6:47:THR:HG22	52:Y6:48:VAL:HG12	1.45	0.93
19:QS:40:ILE:HG12	19:QS:41:VAL:HG22	1.51	0.93
33:YN:134:ARG:H	33:YN:135:PRO:CD	1.81	0.93
36:RQ:59:ARG:O	36:RQ:60:ARG:CG	2.17	0.93
20:QT:49:ALA:HB1	20:QT:99:LEU:HB2	1.51	0.93
4:XD:12:CYS:CA	4:XD:19:LEU:HD21	1.98	0.93
41:RV:99:ILE:H	41:RV:99:ILE:HD13	1.31	0.93
51:R5:58:LEU:HD13	51:R5:60:VAL:HG12	1.48	0.93
13:QM:57:ARG:HH11	13:QM:57:ARG:HB2	1.32	0.93
6:XF:24:GLU:HA	6:XF:27:GLN:HG3	1.49	0.93
14:XN:43:CYS:O	14:XN:45:ARG:N	2.01	0.93
31:RH:127:GLU:HB3	31:RH:128:PRO:CD	1.99	0.93
36:RQ:34:LEU:HD11	36:RQ:129:THR:HB	1.50	0.93
27:YD:108:PRO:HB3	27:YD:143:HIS:CE1	2.05	0.93
27:YD:108:PRO:HB3	27:YD:143:HIS:HE1	1.32	0.93
43:YX:57:LEU:CD1	43:YX:78:LYS:HB2	1.98	0.93
37:YR:33:ARG:NH2	51:Y5:55:ARG:HG2	1.84	0.92
17:XQ:4:LYS:HE3	17:XQ:6:LEU:HD21	1.51	0.92
5:QE:53:LEU:HD12	5:QE:53:LEU:H	1.34	0.92
25:YA:676:A:H8	25:YA:2069:G:H21	1.13	0.92
10:XJ:8:LEU:HD11	10:XJ:23:ILE:HD12	1.49	0.92
35:YP:65:ARG:HG3	35:YP:65:ARG:HH11	1.35	0.92
28:YE:14:ILE:HG12	28:YE:15:PHE:H	1.33	0.92
15:XO:82:ILE:HD11	15:XO:88:ARG:HG3	1.51	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:147:LEU:HD13	27:RD:155:LEU:HD11	1.52	0.92
27:RD:183:ARG:HH11	27:RD:183:ARG:HG2	1.34	0.92
38:YS:59:LYS:HG2	38:YS:60:GLY:H	1.31	0.92
5:XE:53:LEU:HD12	5:XE:53:LEU:H	1.34	0.92
25:YA:2712:U:HO2'	25:YA:2712(A):A:H8	0.94	0.92
14:XN:32:SER:CB	14:XN:41:ARG:HB2	2.00	0.92
19:XS:40:ILE:HG12	19:XS:41:VAL:HG22	1.51	0.92
25:YA:2015:A:H1'	51:Y5:2:ALA:HA	1.51	0.92
14:XN:32:SER:OG	14:XN:41:ARG:HB2	1.70	0.92
29:RF:103:LYS:HA	29:RF:106:ARG:HG3	1.49	0.92
8:QH:6:ILE:HB	8:QH:85:ARG:NH1	1.85	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
8:XH:6:ILE:HB	8:XH:85:ARG:NH1	1.85	0.92
4:QD:30:LYS:HB3	4:QD:35:ARG:HG3	1.52	0.92
27:RD:108:PRO:HB3	27:RD:143:HIS:CE1	2.05	0.92
7:XG:15:ASP:HB3	7:XG:20:ASP:H	1.31	0.92
5:XE:101:ILE:HD11	5:XE:119:LEU:HD23	1.51	0.92
19:XS:68:GLY:HA3	50:Y4:68:ARG:HB2	1.51	0.91
2:QB:32:ILE:HD11	2:QB:40:HIS:HB3	1.52	0.91
41:RV:24:LYS:HA	41:RV:92:THR:HG23	1.52	0.91
4:QD:9:CYS:SG	4:QD:31:CYS:O	2.28	0.91
38:YS:67:ARG:NH1	38:YS:67:ARG:HB2	1.85	0.91
17:QQ:4:LYS:HE3	17:QQ:6:LEU:HD21	1.51	0.91
47:Y1:81:LYS:HA	47:Y1:81:LYS:CE	2.00	0.91
40:YU:92:ARG:HG2	40:YU:92:ARG:O	1.69	0.91
36:YQ:34:LEU:HD11	36:YQ:129:THR:HB	1.50	0.91
3:XC:20:SER:HB2	3:XC:40:ARG:HH22	1.34	0.91
6:QF:24:GLU:HA	6:QF:27:GLN:HG3	1.49	0.91
47:R1:81:LYS:CE	47:R1:81:LYS:HA	2.01	0.91
3:QC:70:VAL:HG12	3:QC:72:LYS:H	1.34	0.91
3:QC:11:ARG:HB3	3:QC:15:THR:HB	1.48	0.91
15:QO:82:ILE:HD11	15:QO:88:ARG:HG3	1.51	0.91
44:YY:30:VAL:HG22	44:YY:37:VAL:HG12	1.53	0.91
31:RH:77:LYS:NZ	31:RH:77:LYS:HB3	1.82	0.91
8:QH:6:ILE:HD12	8:QH:6:ILE:H	1.35	0.91
30:YG:37:VAL:HG22	30:YG:159:VAL:HA	1.52	0.91
37:RR:33:ARG:NH2	51:R5:55:ARG:HG2	1.85	0.91
5:QE:100:VAL:HG22	5:QE:118:ILE:HG22	1.52	0.91
5:QE:101:ILE:HD11	5:QE:119:LEU:HD23	1.52	0.91
30:RG:101:ILE:HG13	30:RG:102:PHE:N	1.86	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:10:THR:HG23	27:YD:13:ARG:HB3	1.51	0.91
10:QJ:8:LEU:HD11	10:QJ:23:ILE:HD12	1.50	0.91
2:XB:33:TYR:HB2	2:XB:43:ASP:HB2	1.53	0.91
47:Y1:80:LEU:O	47:Y1:81:LYS:HB2	1.71	0.91
4:QD:29:PRO:HG2	4:QD:30:LYS:CE	2.01	0.91
25:YA:483:A:H4'	44:YY:49:VAL:HA	1.52	0.91
2:QB:33:TYR:HB2	2:QB:43:ASP:HB2	1.53	0.91
28:RE:14:ILE:HG12	28:RE:15:PHE:H	1.33	0.91
2:QB:77:ALA:HB2	2:QB:211:ILE:HD13	1.53	0.91
3:QC:20:SER:HB2	3:QC:40:ARG:HH22	1.34	0.91
29:RF:7:TYR:HB3	29:RF:21:ALA:HB1	1.53	0.91
4:XD:170:VAL:HG22	4:XD:171:GLY:H	1.34	0.91
25:RA:242:G:H5'	54:R8:62:LEU:HD22	1.52	0.91
4:QD:29:PRO:HG2	4:QD:30:LYS:HD3	1.48	0.91
35:YP:1:MET:HE2	35:YP:5:ASP:HB3	1.51	0.91
4:QD:170:VAL:HG22	4:QD:171:GLY:H	1.34	0.91
25:YA:242:G:H5'	54:Y8:62:LEU:HD22	1.53	0.90
13:XM:90:LEU:HA	13:XM:93:ARG:HD2	1.50	0.90
22:QV:75:C:OP1	25:RA:2602:A:OP1	1.89	0.90
34:YO:2:ILE:HD11	34:YO:82:ASN:HD22	1.33	0.90
1:XA:973:G:OP1	10:XJ:57:LYS:NZ	2.03	0.90
11:XK:99:GLN:HG2	11:XK:105:VAL:HG21	1.53	0.90
8:XH:6:ILE:HD12	8:XH:6:ILE:H	1.34	0.90
20:XT:49:ALA:HB1	20:XT:99:LEU:HB2	1.51	0.90
38:RS:67:ARG:HB2	38:RS:67:ARG:NH1	1.85	0.90
12:QL:10:LEU:HD13	17:QQ:32:TYR:CE2	2.06	0.90
25:RA:2015:A:H1'	51:R5:2:ALA:HA	1.51	0.90
27:RD:10:THR:HG23	27:RD:13:ARG:HB3	1.51	0.90
44:YY:38:ILE:HG22	44:YY:66:PRO:HA	1.54	0.90
41:YV:24:LYS:HA	41:YV:92:THR:HG23	1.52	0.90
31:RH:4:ILE:HG13	31:RH:6:ARG:CZ	2.01	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
5:XE:100:VAL:HG22	5:XE:118:ILE:HG22	1.52	0.90
35:RP:58:THR:O	35:RP:61:ARG:NE	2.05	0.90
51:Y5:3:LYS:HA	51:Y5:3:LYS:HE3	1.54	0.90
31:YH:26:VAL:HG13	31:YH:27:LYS:H	1.35	0.90
48:Y2:65:ASN:HB3	48:Y2:69:ARG:HH12	1.34	0.90
31:YH:4:ILE:HG13	31:YH:6:ARG:CZ	2.01	0.90
36:RQ:59:ARG:O	36:RQ:60:ARG:HG3	1.72	0.90
14:XN:22:THR:O	14:XN:23:ARG:CB	2.16	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:R2:65:ASN:HB3	48:R2:69:ARG:HH12	1.34	0.90
42:YW:65:LEU:HD12	42:YW:68:ARG:HH11	1.36	0.90
27:YD:147:LEU:HD13	27:YD:155:LEU:HD11	1.51	0.90
27:YD:69:ARG:HH21	27:YD:130:ALA:HB2	1.37	0.89
27:RD:69:ARG:HH21	27:RD:130:ALA:HB2	1.37	0.89
47:R1:81:LYS:CA	47:R1:81:LYS:NZ	2.31	0.89
27:YD:44:ASN:H	27:YD:44:ASN:HD22	1.19	0.89
54:Y8:52:LYS:H	54:Y8:53:PRO:HD3	1.35	0.89
40:RU:92:ARG:O	40:RU:92:ARG:HG2	1.69	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
19:XS:64:GLU:O	19:XS:67:VAL:HG23	1.73	0.89
31:RH:10:PRO:HD2	31:RH:50:VAL:O	1.72	0.89
31:RH:26:VAL:HG13	31:RH:27:LYS:H	1.36	0.89
30:YG:116:ASP:O	30:YG:117:PHE:HB3	1.72	0.89
4:QD:27:TYR:OH	6:XF:15:ASP:OD2	1.89	0.89
27:YD:183:ARG:HG2	27:YD:183:ARG:HH11	1.34	0.89
35:YP:88:LEU:HD12	35:YP:95:VAL:HG11	1.52	0.89
54:Y8:59:LYS:NZ	54:Y8:59:LYS:HB2	1.88	0.89
44:RY:76:CYS:SG	44:RY:77:PRO:HD2	2.13	0.89
35:YP:58:THR:O	35:YP:61:ARG:NE	2.05	0.89
51:R5:3:LYS:HE3	51:R5:3:LYS:HA	1.54	0.89
2:XB:126:GLU:HG3	2:XB:129:GLU:HG3	1.54	0.89
25:RA:2712:U:HO2'	25:RA:2712(A):A:H8	1.15	0.89
19:QS:64:GLU:O	19:QS:67:VAL:HG23	1.73	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
1:QA:411:A:H62	1:QA:413:G:H21	1.20	0.89
41:RV:44:LYS:O	41:RV:46:VAL:HG12	1.72	0.89
30:YG:88:ILE:O	30:YG:88:ILE:HD13	1.72	0.89
2:XB:32:ILE:HD11	2:XB:40:HIS:HB3	1.52	0.89
10:QJ:74:ILE:H	10:QJ:74:ILE:HD13	1.38	0.89
35:RP:88:LEU:HD12	35:RP:95:VAL:HG11	1.52	0.89
31:YH:10:PRO:HD2	31:YH:50:VAL:O	1.72	0.89
35:RP:65:ARG:HG3	35:RP:65:ARG:HH11	1.35	0.88
2:XB:18:GLY:N	2:XB:42:ILE:HG22	1.86	0.88
2:QB:126:GLU:HG3	2:QB:129:GLU:HG3	1.54	0.88
12:XL:6:THR:H	12:XL:9:GLN:HE21	1.15	0.88
51:Y5:40:LYS:HZ1	51:Y5:48:GLU:HB2	1.37	0.88
47:R1:80:LEU:O	47:R1:81:LYS:HB2	1.71	0.88
44:YY:76:CYS:SG	44:YY:77:PRO:HD2	2.13	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:18:GLY:N	2:QB:42:ILE:HG22	1.86	0.88
35:YP:64:LYS:O	35:YP:66:GLY:N	2.06	0.88
27:RD:27:THR:HG23	27:RD:28:GLU:H	1.38	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
5:QE:41:VAL:HG11	5:QE:113:ALA:HB2	1.54	0.88
35:RP:106:LEU:O	35:RP:107:LYS:HB2	1.71	0.88
30:RG:88:ILE:O	30:RG:88:ILE:HD13	1.72	0.88
5:XE:71:LEU:O	5:XE:72:GLN:HG3	1.74	0.88
28:RE:63:LEU:HD12	28:RE:64:LYS:N	1.88	0.88
33:YN:22:THR:HG22	33:YN:23:LEU:N	1.88	0.88
33:RN:22:THR:HG22	33:RN:23:LEU:N	1.88	0.88
38:YS:106:ARG:NH1	38:YS:106:ARG:HB2	1.88	0.88
1:XA:1086:U:H3	1:XA:1099:G:H22	1.21	0.88
8:QH:51:VAL:HG21	8:QH:60:ARG:HG2	1.55	0.88
29:YF:29:ASN:H	29:YF:112:MET:HE3	1.38	0.88
13:QM:97:PRO:HB2	13:QM:101:GLN:NE2	1.89	0.88
25:YA:1021:A:OP2	33:YN:65:LYS:NZ	2.06	0.88
20:XT:23:ARG:HA	20:XT:26:ASN:HD21	1.36	0.88
35:YP:49:ARG:HD2	54:Y8:58:ILE:HG22	1.54	0.88
25:RA:674:G:H1'	29:RF:74:ARG:HD3	1.56	0.88
11:QK:99:GLN:HG2	11:QK:105:VAL:HG21	1.53	0.88
25:RA:1359:A:N6	25:RA:1372:U:O4	2.05	0.88
47:Y1:82:LEU:HD13	47:Y1:83:GLU:O	1.74	0.87
54:R8:59:LYS:NZ	54:R8:59:LYS:HB2	1.88	0.87
27:YD:44:ASN:CB	27:YD:49:ILE:HA	2.04	0.87
19:XS:8:GLY:O	19:XS:9:VAL:HG22	1.74	0.87
28:YE:77:ILE:HD12	28:YE:78:LEU:N	1.89	0.87
27:RD:28:GLU:HB2	27:RD:29:PRO:HD2	1.56	0.87
21:XU:6:ARG:HE	21:XU:15:ARG:CZ	1.87	0.87
51:R5:40:LYS:HZ1	51:R5:48:GLU:HB2	1.39	0.87
42:RW:65:LEU:HD12	42:RW:68:ARG:HH11	1.36	0.87
4:XD:114:ARG:HH11	4:XD:114:ARG:HG3	1.38	0.87
19:XS:9:VAL:HG12	50:Y4:66:SER:O	1.74	0.87
28:RE:77:ILE:HD12	28:RE:78:LEU:N	1.89	0.87
41:RV:19:LYS:HD2	41:RV:95:LEU:HD23	1.55	0.87
19:QS:41:VAL:HG13	19:QS:44:MET:HB2	1.57	0.87
38:RS:106:ARG:NH1	38:RS:106:ARG:HB2	1.88	0.87
27:YD:27:THR:HG23	27:YD:28:GLU:H	1.38	0.87
20:QT:23:ARG:HA	20:QT:26:ASN:HD21	1.37	0.87
25:YA:2451:A:C6	56:Z8:76:PPU:HE2	2.08	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YQ:64:ILE:HA	36:YQ:106:VAL:HG12	1.54	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
27:RD:181:GLU:HA	27:RD:272:ALA:HB3	1.57	0.87
44:RY:38:ILE:HG22	44:RY:66:PRO:HA	1.54	0.87
1:XA:664:G:H22	1:XA:741:G:H1	1.22	0.87
1:QA:346:G:OP1	39:RT:41:ARG:NH2	2.06	0.87
47:Y1:82:LEU:HD11	47:Y1:83:GLU:O	1.75	0.87
27:YD:181:GLU:HA	27:YD:272:ALA:HB3	1.57	0.87
2:QB:96:ARG:H	2:QB:96:ARG:HD2	1.38	0.87
27:RD:44:ASN:HD22	27:RD:44:ASN:H	1.19	0.87
35:RP:64:LYS:O	35:RP:66:GLY:N	2.07	0.87
21:QU:6:ARG:HE	21:QU:15:ARG:CZ	1.88	0.87
25:YA:67:U:H3	25:YA:74:A:H2	1.20	0.87
36:RQ:64:ILE:HA	36:RQ:106:VAL:HG12	1.54	0.87
11:XK:32:ILE:HD12	11:XK:72:ALA:HB2	1.56	0.87
10:XJ:74:ILE:HD13	10:XJ:74:ILE:H	1.38	0.87
10:QJ:47:PHE:HE1	10:QJ:63:PHE:HB2	1.40	0.87
13:XM:4:ILE:H	13:XM:9:ILE:CG2	1.88	0.87
1:XA:971:G:HO2'	1:XA:1365:G:HO2'	1.22	0.87
13:XM:97:PRO:HB2	13:XM:101:GLN:NE2	1.89	0.87
15:QO:56:LEU:O	15:QO:60:VAL:HG23	1.75	0.87
30:RG:116:ASP:O	30:RG:117:PHE:HB3	1.72	0.87
19:QS:8:GLY:O	19:QS:9:VAL:HG22	1.75	0.86
35:YP:18:ARG:O	35:YP:19:VAL:HB	1.75	0.86
30:YG:145:THR:HG23	50:Y4:28:LYS:HZ1	1.38	0.86
8:XH:51:VAL:HG21	8:XH:60:ARG:HG2	1.55	0.86
25:RA:270(R):G:N3	47:R1:78:LYS:NZ	2.22	0.86
47:R1:92:LYS:HG3	47:R1:96:LYS:HB2	1.57	0.86
35:RP:75:ILE:HD13	35:RP:75:ILE:H	1.39	0.86
30:YG:161:THR:HG22	30:YG:163:ALA:H	1.39	0.86
10:XJ:7:LYS:HB2	10:XJ:97:GLU:HB2	1.56	0.86
38:RS:106:ARG:HH11	38:RS:106:ARG:HB2	1.39	0.86
30:YG:101:ILE:HG13	30:YG:102:PHE:N	1.86	0.86
19:XS:27:GLU:O	19:XS:28:LYS:HG2	1.74	0.86
40:YU:92:ARG:HD2	41:YV:11:GLN:NE2	1.90	0.86
29:RF:29:ASN:H	29:RF:112:MET:HE3	1.40	0.86
29:RF:82:ILE:HG13	29:RF:82:ILE:O	1.73	0.86
30:RG:161:THR:HG22	30:RG:163:ALA:H	1.39	0.86
29:YF:7:TYR:HB3	29:YF:21:ALA:HB1	1.53	0.86
19:QS:27:GLU:O	19:QS:28:LYS:HG2	1.74	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:127:GLU:HG2	31:YH:128:PRO:HD3	0.86	0.86
11:QK:32:ILE:HD12	11:QK:72:ALA:HB2	1.56	0.86
27:RD:44:ASN:CB	27:RD:49:ILE:HA	2.04	0.86
2:XB:67:THR:HG21	2:XB:155:LEU:HD21	1.56	0.86
27:YD:35:LYS:HG2	27:YD:64:ILE:H	1.41	0.86
5:QE:71:LEU:O	5:QE:72:GLN:HG3	1.73	0.86
2:XB:96:ARG:H	2:XB:96:ARG:HD2	1.38	0.86
4:QD:114:ARG:HH11	4:QD:114:ARG:HG3	1.39	0.86
41:YV:19:LYS:HD2	41:YV:95:LEU:HD23	1.55	0.86
19:XS:41:VAL:HG13	19:XS:44:MET:HB2	1.56	0.86
2:QB:67:THR:HG21	2:QB:155:LEU:HD21	1.57	0.86
44:RY:51:VAL:O	44:RY:56:PRO:HA	1.76	0.86
10:QJ:49:VAL:HG13	14:QN:41:ARG:HD2	0.94	0.86
4:QD:22:LYS:CB	4:QD:26:CYS:SG	2.64	0.86
13:QM:4:ILE:H	13:QM:9:ILE:CG2	1.88	0.86
1:QA:1123:A:H4'	10:QJ:36:GLY:HA3	1.58	0.86
3:QC:79:ARG:NE	11:XK:99:GLN:NE2	2.23	0.85
13:QM:14:ARG:H	13:QM:44:ARG:HD3	1.41	0.85
40:RU:92:ARG:HD2	41:RV:11:GLN:NE2	1.90	0.85
1:QA:1286:A:H5''	21:QU:26:LYS:HD2	1.58	0.85
10:XJ:53:PRO:O	14:XN:41:ARG:NH2	2.09	0.85
28:RE:61:ARG:O	28:RE:63:LEU:HG	1.77	0.85
38:YS:106:ARG:HB2	38:YS:106:ARG:HH11	1.39	0.85
47:R1:82:LEU:HD13	47:R1:83:GLU:O	1.74	0.85
30:RG:179:PRO:HG3	50:R4:38:LYS:HZ1	1.40	0.85
1:QA:1305:G:H22	1:QA:1331:G:H2'	1.39	0.85
36:RQ:75:THR:HA	36:RQ:88:GLY:O	1.76	0.85
36:YQ:75:THR:HA	36:YQ:88:GLY:O	1.76	0.85
45:YZ:151:HIS:HB3	45:YZ:170:THR:HA	1.59	0.85
35:YP:101:VAL:HG23	35:YP:107:LYS:H	1.41	0.85
5:XE:51:VAL:HB	5:XE:52:PRO:HD3	1.59	0.85
51:R5:39:MET:O	51:R5:40:LYS:HG3	1.77	0.85
20:QT:36:LEU:HD13	20:QT:39:LYS:HD3	1.57	0.85
1:XA:1321:C:H5''	1:XA:1322:C:H5''	1.59	0.85
15:XO:56:LEU:O	15:XO:60:VAL:HG23	1.75	0.85
19:XS:64:GLU:CD	50:Y4:55:ARG:HH22	1.80	0.85
39:YT:111:ARG:O	39:YT:112:ARG:HG3	1.76	0.85
44:YY:51:VAL:O	44:YY:56:PRO:HA	1.76	0.85
40:RU:64:ARG:HH21	40:RU:64:ARG:HG2	1.42	0.85
35:YP:75:ILE:H	35:YP:75:ILE:HD13	1.39	0.85
29:RF:32:LEU:HD13	29:RF:105:VAL:HG13	1.59	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2729:G:H1'	28:RE:187:ALA:HB2	1.57	0.85
31:YH:89:ILE:HD11	31:YH:129:THR:HB	1.59	0.85
54:Y8:59:LYS:NZ	54:Y8:59:LYS:CB	2.39	0.85
28:RE:81:ILE:O	28:RE:82:ARG:HB2	1.75	0.85
28:RE:95:ILE:H	28:RE:95:ILE:HD12	1.41	0.85
7:XG:44:TYR:HA	7:XG:47:CYS:SG	2.17	0.85
30:YG:67:LYS:HE2	50:Y4:6:HIS:NE2	1.92	0.85
20:XT:36:LEU:HD13	20:XT:39:LYS:HD3	1.58	0.85
31:RH:127:GLU:HG2	31:RH:128:PRO:HD3	0.86	0.85
30:RG:67:LYS:HE2	50:R4:6:HIS:NE2	1.92	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
15:XO:3:ILE:HD13	15:XO:3:ILE:H	1.40	0.85
27:RD:17:THR:HG22	27:RD:205:VAL:H	1.41	0.85
1:XA:686:U:H1'	11:XK:42:TRP:HE1	1.39	0.85
38:YS:83:LYS:HG2	38:YS:109:GLY:CA	2.07	0.84
10:QJ:7:LYS:HB2	10:QJ:97:GLU:HB2	1.57	0.84
13:XM:14:ARG:H	13:XM:44:ARG:HD3	1.41	0.84
1:QA:1494:G:N7	58:QA:1670:PAR:N32	2.23	0.84
31:RH:89:ILE:HD11	31:RH:129:THR:HB	1.58	0.84
54:R8:59:LYS:NZ	54:R8:59:LYS:CB	2.40	0.84
41:YV:49:THR:HB	41:YV:50:PRO:CD	2.07	0.84
30:YG:98:ARG:HA	30:YG:101:ILE:HG12	1.59	0.84
27:YD:17:THR:HG22	27:YD:205:VAL:H	1.41	0.84
28:RE:24:THR:HG21	28:RE:188:VAL:HG11	1.59	0.84
1:QA:448:A:OP2	1:QA:485:G:N2	2.10	0.84
28:YE:95:ILE:H	28:YE:95:ILE:HD12	1.42	0.84
38:YS:106:ARG:HA	38:YS:110:LEU:CD1	2.07	0.84
1:XA:1139:G:N2	1:XA:1143:G:O6	2.09	0.84
10:QJ:49:VAL:CB	14:QN:41:ARG:HB2	2.08	0.84
35:RP:18:ARG:O	35:RP:19:VAL:HB	1.75	0.84
15:QO:82:ILE:HD11	15:QO:88:ARG:CG	2.07	0.84
34:YO:26:LYS:HB2	34:YO:30:ALA:HB2	1.59	0.84
14:QN:21:TYR:HE2	14:QN:23:ARG:HH21	1.24	0.84
14:QN:23:ARG:O	14:QN:24:CYS:O	1.95	0.84
10:QJ:49:VAL:HG21	14:QN:41:ARG:HB2	1.23	0.84
38:RS:89:ARG:HD2	38:RS:92:TYR:O	1.78	0.84
25:RA:2585:U:H5	56:Z6:76:PPU:HO2'	1.23	0.84
7:QG:44:TYR:HA	7:QG:47:CYS:SG	2.17	0.84
28:YE:81:ILE:O	28:YE:82:ARG:HB2	1.76	0.84
13:XM:23:TYR:HB3	13:XM:67:GLU:HG2	1.59	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:XJ:37:PRO:HA	10:XJ:72:VAL:HG22	1.59	0.84
44:YY:57:GLN:NE2	44:YY:58:GLY:H	1.76	0.84
34:RO:26:LYS:HB2	34:RO:30:ALA:HB2	1.59	0.84
31:YH:54:ARG:NH1	31:YH:62:LYS:HG2	1.92	0.84
14:YN:32:SER:OG	14:YN:41:ARG:CB	2.24	0.84
4:QD:22:LYS:HB2	4:QD:26:CYS:SG	2.18	0.84
28:YE:61:ARG:O	28:YE:63:LEU:HG	1.77	0.84
38:RS:83:LYS:HG2	38:RS:109:GLY:CA	2.07	0.84
35:YP:62:LEU:CD2	54:Y8:25:MET:HB2	2.08	0.84
35:RP:62:LEU:CD2	54:R8:25:MET:HB2	2.08	0.84
12:QL:8:ASN:OD1	17:QQ:34:LYS:HE2	1.76	0.84
36:YQ:30:GLY:HA2	36:YQ:107:ALA:HB2	1.60	0.84
29:YF:53:THR:HG23	29:YF:56:GLU:OE1	1.77	0.84
17:QQ:59:ILE:HG22	17:QQ:73:VAL:HA	1.60	0.84
47:R1:82:LEU:HD11	47:R1:83:GLU:O	1.75	0.84
27:RD:35:LYS:HG2	27:RD:64:ILE:H	1.40	0.84
39:RT:111:ARG:O	39:RT:112:ARG:HG3	1.76	0.84
51:Y5:40:LYS:HD3	51:Y5:46:CYS:HB3	1.60	0.84
10:XJ:4:ILE:HB	10:XJ:74:ILE:HD11	1.60	0.84
1:QA:1316:G:H22	1:QA:1319:A:H5"	1.43	0.84
41:RV:49:THR:HB	41:RV:50:PRO:CD	2.07	0.84
30:RG:98:ARG:HA	30:RG:101:ILE:HG12	1.59	0.84
14:QN:8:GLU:OE2	14:QN:11:LYS:HD2	1.78	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
5:QE:51:VAL:HB	5:QE:52:PRO:HD3	1.59	0.83
4:QD:25:ARG:NH1	4:QD:30:LYS:HE3	1.93	0.83
37:YR:117:VAL:HG22	37:YR:118:GLU:H	1.43	0.83
1:XA:1192:C:O2	5:XE:25:ARG:NH2	2.10	0.83
5:QE:81:GLU:HB3	5:QE:90:VAL:HG22	1.60	0.83
31:RH:54:ARG:NH1	31:RH:62:LYS:HG2	1.92	0.83
26:YB:42:C:N4	30:YG:91:ARG:HH21	1.76	0.83
47:Y1:92:LYS:HG3	47:Y1:96:LYS:HB2	1.58	0.83
15:XO:82:ILE:HD11	15:XO:88:ARG:CG	2.07	0.83
10:XJ:47:PHE:HE1	10:XJ:63:PHE:HB2	1.40	0.83
44:RY:81:LYS:HD3	44:RY:97:ARG:HE	1.43	0.83
13:QM:23:TYR:HB3	13:QM:67:GLU:HG2	1.59	0.83
3:XC:15:THR:CG2	3:XC:181:ASN:HA	2.08	0.83
29:YF:32:LEU:HD13	29:YF:105:VAL:HG13	1.59	0.83
4:QD:96:LEU:H	4:QD:96:LEU:HD22	1.43	0.83
14:YN:8:GLU:OE2	14:YN:11:LYS:HD2	1.78	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:166:LYS:HG2	27:YD:134:ARG:NH1	1.93	0.83
52:Y6:27:LYS:HB2	52:Y6:27:LYS:NZ	1.94	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
31:YH:13:LYS:HE2	31:YH:13:LYS:HA	1.61	0.83
31:RH:105:LEU:H	31:RH:105:LEU:HD13	1.42	0.83
35:YP:126:VAL:HG22	35:YP:145:PRO:HG2	1.61	0.83
51:Y5:39:MET:O	51:Y5:40:LYS:HG3	1.77	0.83
51:R5:40:LYS:HD3	51:R5:46:CYS:HB3	1.60	0.83
35:YP:59:LEU:HA	35:YP:61:ARG:HH21	1.44	0.83
1:QA:1330:U:OP1	13:QM:25:ILE:O	1.95	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
25:RA:1689:A:H62	25:RA:1698:A:H2	1.23	0.83
28:RE:35:GLN:HG2	28:RE:37:ARG:HE	1.44	0.83
28:YE:7:VAL:HG23	28:YE:8:LYS:H	1.44	0.83
19:QS:50:ALA:HB1	19:QS:57:HIS:HB3	1.60	0.83
33:YN:131:GLN:NE2	33:YN:132:ALA:H	1.75	0.83
14:YN:12:ARG:C	14:YN:14:PRO:HD2	1.98	0.83
10:QJ:37:PRO:HA	10:QJ:72:VAL:HG22	1.59	0.83
33:YN:133:GLN:HB2	33:YN:135:PRO:HD3	1.59	0.83
39:RT:3:ARG:HG3	39:RT:7:ILE:HG12	1.60	0.83
33:RN:131:GLN:NE2	33:RN:132:ALA:H	1.75	0.83
25:YA:270(R):G:N3	47:Y1:78:LYS:NZ	2.26	0.83
41:RV:66:ARG:NH1	41:RV:88:ARG:HD3	1.94	0.83
15:QO:3:ILE:HD13	15:QO:3:ILE:H	1.40	0.83
14:QN:12:ARG:C	14:QN:14:PRO:HD2	1.98	0.83
50:R4:36:CYS:O	50:R4:39:CYS:HB2	1.79	0.83
4:XD:96:LEU:HD22	4:XD:96:LEU:H	1.43	0.83
12:QL:38:THR:HG23	12:QL:39:VAL:HG23	1.60	0.83
35:RP:101:VAL:HG23	35:RP:107:LYS:H	1.41	0.83
7:QG:78:ARG:HG3	7:QG:79:ARG:N	1.93	0.83
38:RS:88:ASP:O	38:RS:89:ARG:HB3	1.78	0.83
7:XG:78:ARG:HG3	7:XG:79:ARG:N	1.93	0.83
35:RP:65:ARG:HG3	35:RP:65:ARG:NH1	1.90	0.83
25:RA:2056:G:N2	51:R5:4:HIS:O	2.12	0.83
39:RT:53:ARG:O	39:RT:59:THR:HG23	1.78	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
2:XB:185:ILE:HG22	2:XB:199:TYR:HB2	1.60	0.82
2:XB:204:ASN:ND2	2:XB:206:ASP:H	1.77	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:193:ASP:OD2	2:QB:196:LEU:HG	1.78	0.82
36:RQ:30:GLY:HA2	36:RQ:107:ALA:HB2	1.60	0.82
2:QB:204:ASN:ND2	2:QB:206:ASP:H	1.77	0.82
27:YD:25:THR:CG2	27:YD:82:ILE:H	1.93	0.82
1:XA:1123:A:H4'	10:XJ:36:GLY:HA3	1.60	0.82
31:YH:105:LEU:H	31:YH:105:LEU:HD13	1.42	0.82
39:YT:24:PRO:HA	39:YT:49:VAL:HG13	1.59	0.82
1:XA:1318:A:H4'	19:XS:11:VAL:HG11	1.61	0.82
28:YE:15:PHE:CE1	28:YE:20:ALA:HB2	2.14	0.82
36:YQ:81:VAL:HG23	46:Y0:7:LEU:HD21	1.61	0.82
1:XA:954:G:H4'	13:XM:121:LYS:HG3	1.61	0.82
25:YA:2068:U:H3	25:YA:2430:A:H2	1.25	0.82
19:XS:50:ALA:HB1	19:XS:57:HIS:HB3	1.60	0.82
14:XN:44:LEU:HD12	14:XN:53:LEU:CD1	2.08	0.82
3:QC:113:ALA:HB3	3:QC:114:PRO:HD3	1.62	0.82
28:RE:15:PHE:CE1	28:RE:20:ALA:HB2	2.14	0.82
40:YU:64:ARG:HG2	40:YU:64:ARG:HH21	1.42	0.82
38:RS:106:ARG:HA	38:RS:110:LEU:CD1	2.08	0.82
52:R6:27:LYS:HB2	52:R6:27:LYS:NZ	1.93	0.82
11:XK:124:LYS:HD2	11:XK:125:PHE:HE1	1.45	0.82
5:XE:81:GLU:HB3	5:XE:90:VAL:HG22	1.59	0.82
12:XL:38:THR:HG23	12:XL:39:VAL:HG23	1.60	0.82
44:YY:81:LYS:HD3	44:YY:97:ARG:HE	1.43	0.82
2:XB:193:ASP:OD2	2:XB:196:LEU:HG	1.79	0.82
22:XV:6:G:H1	22:XV:67:C:H42	1.25	0.82
25:YA:631:A:OP2	54:Y8:46:ARG:NH2	2.11	0.82
10:QJ:49:VAL:HG11	14:QN:41:ARG:HB2	1.58	0.82
31:YH:153:LYS:HG2	31:YH:162:ILE:HG13	1.61	0.82
27:RD:35:LYS:NZ	27:RD:104:TYR:HB2	1.93	0.82
40:YU:88:ILE:HD13	40:YU:88:ILE:H	1.44	0.82
28:RE:7:VAL:HG23	28:RE:8:LYS:H	1.44	0.82
50:R4:33:VAL:HG12	50:R4:34:GLU:H	1.44	0.82
39:YT:102:ILE:HA	39:YT:105:LEU:HD21	1.62	0.82
48:Y2:16:LEU:O	48:Y2:16:LEU:HG	1.78	0.82
25:YA:265:A:N6	25:YA:427:U:O2'	2.13	0.82
2:XB:84:GLU:OE1	2:XB:216:SER:HA	1.80	0.82
27:YD:35:LYS:NZ	27:YD:104:TYR:HB2	1.93	0.82
40:RU:88:ILE:HD13	40:RU:88:ILE:H	1.44	0.82
2:QB:185:ILE:HG22	2:QB:199:TYR:HB2	1.61	0.82
33:RN:22:THR:HG22	33:RN:23:LEU:H	1.44	0.82
50:Y4:36:CYS:O	50:Y4:39:CYS:HB2	1.80	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:XP:4:ILE:CD1	16:XP:64:ALA:HB1	2.08	0.82
33:YN:22:THR:HG22	33:YN:23:LEU:H	1.45	0.82
38:YS:19:LYS:O	38:YS:20:ARG:HB3	1.80	0.82
1:QA:339:C:OP2	34:RO:97:ARG:NH1	2.13	0.82
17:XQ:59:ILE:HG22	17:XQ:73:VAL:HA	1.60	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
32:RI:52:ARG:HB2	32:RI:56:LYS:HB3	1.62	0.82
14:QN:41:ARG:NH2	14:QN:42:ILE:HD11	1.94	0.81
50:Y4:71:ARG:NH1	50:Y4:71:ARG:HG3	1.90	0.81
30:YG:179:PRO:HG3	50:Y4:38:LYS:NZ	1.95	0.81
12:QL:86:ARG:HB2	12:QL:101:VAL:HG22	1.62	0.81
35:YP:39:LYS:HA	35:YP:45:LEU:CD1	2.10	0.81
10:QJ:63:PHE:HD1	14:QN:58:LYS:HA	1.43	0.81
2:QB:84:GLU:OE1	2:QB:216:SER:HA	1.80	0.81
38:YS:88:ASP:O	38:YS:89:ARG:HB3	1.78	0.81
31:RH:8:PRO:C	31:RH:9:ILE:HG12	2.00	0.81
25:RA:2580:U:H4'	28:RE:130:GLY:HA3	1.62	0.81
31:RH:132:ARG:NH1	31:RH:132:ARG:HB2	1.94	0.81
10:XJ:63:PHE:HD1	14:YN:58:LYS:HA	1.43	0.81
35:RP:126:VAL:HG22	35:RP:145:PRO:HG2	1.60	0.81
31:RH:153:LYS:HG2	31:RH:162:ILE:HG13	1.61	0.81
25:YA:518:G:H4'	42:YW:18:ARG:NH1	1.92	0.81
34:RO:53:LYS:N	34:RO:53:LYS:HD2	1.96	0.81
16:QP:4:ILE:CD1	16:QP:64:ALA:HB1	2.09	0.81
48:R2:16:LEU:HG	48:R2:16:LEU:O	1.78	0.81
31:YH:10:PRO:O	31:YH:11:VAL:HG13	1.80	0.81
30:YG:67:LYS:HE2	50:Y4:6:HIS:CE1	2.14	0.81
4:QD:166:LYS:CD	27:YD:134:ARG:NH1	2.44	0.81
28:YE:24:THR:HG21	28:YE:188:VAL:HG11	1.59	0.81
41:YV:66:ARG:NH1	41:YV:88:ARG:HD3	1.94	0.81
10:XJ:6:ILE:HD12	10:XJ:6:ILE:O	1.81	0.81
54:R8:52:LYS:N	54:R8:53:PRO:CD	2.43	0.81
39:RT:102:ILE:HA	39:RT:105:LEU:HD21	1.62	0.81
36:RQ:90:VAL:HG13	36:RQ:91:GLU:N	1.95	0.81
36:YQ:90:VAL:HG13	36:YQ:91:GLU:N	1.95	0.81
7:QG:111:ARG:HH11	7:QG:111:ARG:HB3	1.45	0.81
1:QA:686:U:H1'	11:QK:42:TRP:HE1	1.43	0.81
31:RH:152:ARG:O	31:RH:153:LYS:HB2	1.80	0.81
30:RG:179:PRO:HG3	50:R4:38:LYS:NZ	1.95	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1021:A:OP2	33:RN:65:LYS:NZ	2.14	0.81
10:QJ:4:ILE:HB	10:QJ:74:ILE:HD11	1.60	0.81
30:YG:47:LYS:HD3	30:YG:81:LYS:HB2	1.63	0.81
4:XD:108:LEU:HD11	4:XD:174:LEU:HD22	1.60	0.81
35:RP:39:LYS:HA	35:RP:45:LEU:CD1	2.10	0.81
13:QM:50:GLU:OE1	50:R4:32:TYR:CE2	2.34	0.81
4:QD:108:LEU:HD11	4:QD:174:LEU:HD22	1.60	0.81
53:R7:48:LYS:HG2	53:R7:49:ARG:H	1.46	0.81
16:QP:51:VAL:HG12	16:QP:52:ASP:H	1.46	0.81
38:RS:36:TYR:HD2	38:RS:52:SER:HB3	1.46	0.81
28:RE:3:GLY:O	28:RE:4:ILE:HB	1.81	0.81
3:QC:15:THR:CG2	3:QC:181:ASN:HA	2.08	0.81
3:XC:113:ALA:HB3	3:XC:114:PRO:HD3	1.61	0.81
30:RG:67:LYS:HE2	50:R4:6:HIS:CE1	2.14	0.81
27:RD:27:THR:HG23	27:RD:28:GLU:N	1.96	0.81
48:R2:43:GLN:O	48:R2:44:LEU:HG	1.81	0.81
33:YN:35:ARG:HG3	33:YN:37:LYS:HG3	1.63	0.81
53:Y7:48:LYS:HG2	53:Y7:49:ARG:H	1.46	0.81
28:YE:50:GLY:CA	28:YE:77:ILE:HA	2.10	0.81
38:RS:106:ARG:CA	38:RS:110:LEU:HD21	2.11	0.81
31:RH:26:VAL:HG13	31:RH:27:LYS:N	1.96	0.81
38:YS:36:TYR:HD2	38:YS:52:SER:HB3	1.46	0.81
48:Y2:43:GLN:O	48:Y2:44:LEU:HG	1.81	0.81
2:XB:122:PHE:HD1	2:XB:139:LYS:HZ1	1.29	0.81
33:RN:35:ARG:HG3	33:RN:37:LYS:HG3	1.63	0.81
33:YN:43:THR:HB	33:YN:46:VAL:HG12	1.63	0.81
3:XC:47:LEU:HD11	3:XC:76:VAL:HG12	1.61	0.81
39:YT:39:ARG:HG2	39:YT:40:THR:H	1.46	0.81
3:QC:47:LEU:HD11	3:QC:76:VAL:HG12	1.62	0.81
28:YE:116:VAL:HG21	28:YE:122:PHE:CD2	2.16	0.81
30:RG:47:LYS:HD3	30:RG:81:LYS:HB2	1.63	0.81
39:RT:62:THR:CG2	39:RT:75:ILE:HG12	2.11	0.81
3:QC:52:LEU:H	3:QC:52:LEU:HD23	1.46	0.81
25:RA:631:A:OP2	54:R8:46:ARG:NH2	2.13	0.81
39:RT:39:ARG:HG2	39:RT:40:THR:H	1.46	0.81
10:QJ:6:ILE:O	10:QJ:6:ILE:HD12	1.81	0.80
25:RA:583:G:H5"	40:RU:10:ARG:HH12	1.46	0.80
19:XS:5:LEU:HD11	50:Y4:66:SER:CB	2.10	0.80
2:QB:4:GLU:HG2	2:QB:5:ILE:N	1.94	0.80
51:R5:4:HIS:HB3	51:R5:5:PRO:CD	2.11	0.80
16:XP:51:VAL:HG12	16:XP:52:ASP:H	1.46	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2056:G:N2	51:Y5:4:HIS:O	2.13	0.80
31:RH:13:LYS:HA	31:RH:13:LYS:HE2	1.60	0.80
29:YF:155:LEU:HD13	29:YF:174:VAL:HG13	1.62	0.80
44:RY:6:HIS:O	44:RY:7:VAL:HG13	1.81	0.80
44:YY:6:HIS:O	44:YY:7:VAL:HG13	1.81	0.80
28:RE:116:VAL:HG21	28:RE:122:PHE:CD2	2.16	0.80
44:RY:76:CYS:HB3	44:RY:96:ILE:CD1	2.07	0.80
44:YY:76:CYS:HB3	44:YY:96:ILE:CD1	2.07	0.80
28:RE:52:LEU:HB2	28:RE:75:VAL:HG23	1.62	0.80
27:YD:27:THR:HG23	27:YD:28:GLU:N	1.96	0.80
1:XA:1178:G:N2	1:XA:1181:G:N7	2.29	0.80
25:YA:2562:U:O2'	34:YO:23:ARG:NH1	2.14	0.80
38:RS:19:LYS:O	38:RS:20:ARG:HB3	1.79	0.80
54:Y8:52:LYS:N	54:Y8:53:PRO:CD	2.43	0.80
3:XC:52:LEU:H	3:XC:52:LEU:HD23	1.46	0.80
35:RP:47:ASP:OD2	35:RP:49:ARG:HG2	1.82	0.80
28:YE:52:LEU:HB2	28:YE:75:VAL:HG23	1.61	0.80
28:RE:50:GLY:CA	28:RE:77:ILE:HA	2.10	0.80
36:YQ:80:GLU:O	36:YQ:81:VAL:CG1	2.30	0.80
28:RE:201:THR:CG2	28:RE:203:LYS:HB3	2.11	0.80
31:YH:8:PRO:C	31:YH:9:ILE:HG12	2.00	0.80
2:XB:212:GLN:CD	2:XB:235:SER:HB2	2.02	0.80
50:Y4:33:VAL:HG12	50:Y4:34:GLU:H	1.44	0.80
3:XC:20:SER:HB2	3:XC:40:ARG:NH2	1.96	0.80
34:YO:31:LYS:HG3	34:YO:32:TYR:CE2	2.17	0.80
28:YE:3:GLY:O	28:YE:4:ILE:HB	1.81	0.80
38:YS:106:ARG:CA	38:YS:110:LEU:HD21	2.10	0.80
5:XE:50:GLU:HB3	5:XE:53:LEU:HD13	1.61	0.80
51:Y5:4:HIS:HB3	51:Y5:5:PRO:CD	2.11	0.80
16:QP:51:VAL:HG12	16:QP:52:ASP:N	1.97	0.80
9:XI:19:LEU:HD23	9:XI:61:ALA:HB2	1.63	0.80
29:YF:198:ALA:HA	29:YF:201:VAL:HG12	1.62	0.80
25:RA:1803:A:H4'	27:RD:259:THR:CG2	2.12	0.80
27:RD:121:PRO:HB3	27:RD:135:PHE:HE1	1.46	0.80
25:RA:338:G:OP1	44:RY:4:LYS:NZ	2.14	0.80
28:YE:201:THR:CG2	28:YE:203:LYS:HB3	2.12	0.80
3:QC:20:SER:HB2	3:QC:40:ARG:NH2	1.96	0.80
8:XH:84:ARG:HG3	8:XH:84:ARG:HH11	1.45	0.80
16:QP:4:ILE:HG13	16:QP:21:VAL:HG12	1.64	0.80
2:XB:196:LEU:CD1	2:XB:197:VAL:HG23	2.10	0.80
27:RD:27:THR:HG21	27:RD:83:GLU:HB3	1.64	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:25:THR:HG22	27:RD:82:ILE:H	1.47	0.80
16:XP:51:VAL:HG12	16:XP:52:ASP:N	1.97	0.80
7:XG:111:ARG:HH11	7:XG:111:ARG:HB3	1.46	0.80
28:YE:35:GLN:HG2	28:YE:37:ARG:HE	1.44	0.80
4:XD:28:SER:HB3	4:XD:29:PRO:CD	2.12	0.80
31:YH:152:ARG:O	31:YH:153:LYS:HB2	1.80	0.80
27:RD:35:LYS:HZ1	27:RD:104:TYR:HB2	1.46	0.80
5:QE:50:GLU:HB3	5:QE:53:LEU:HD13	1.61	0.80
41:RV:99:ILE:HD13	41:RV:99:ILE:N	1.95	0.80
20:XT:50:GLU:HG3	20:XT:51:GLU:N	1.97	0.80
5:QE:126:ARG:HG3	5:QE:126:ARG:HH11	1.47	0.80
27:RD:34:VAL:HG13	27:RD:34:VAL:O	1.80	0.80
2:XB:4:GLU:HG2	2:XB:5:ILE:N	1.95	0.80
2:XB:18:GLY:H	2:XB:42:ILE:CG2	1.95	0.80
34:RO:14:THR:HG21	34:RO:86:ILE:HB	1.62	0.80
5:XE:10:MET:HB3	5:XE:32:VAL:HG22	1.63	0.80
41:YV:99:ILE:HD13	41:YV:99:ILE:N	1.95	0.80
30:YG:61:ALA:HB2	30:YG:68:PRO:CD	2.12	0.80
27:YD:121:PRO:HB3	27:YD:135:PHE:HE1	1.46	0.80
3:QC:138:VAL:HG13	3:QC:149:ALA:HB1	1.64	0.80
29:RF:198:ALA:HA	29:RF:201:VAL:HG12	1.62	0.80
13:XM:4:ILE:H	13:XM:9:ILE:HG21	1.47	0.79
8:QH:84:ARG:HG3	8:QH:84:ARG:HH11	1.44	0.79
16:XP:4:ILE:HG13	16:XP:21:VAL:HG12	1.64	0.79
5:XE:78:HIS:CD2	8:XH:104:ARG:HG2	2.17	0.79
2:QB:35:GLU:O	2:QB:36:ARG:HD3	1.82	0.79
5:XE:126:ARG:HG3	5:XE:126:ARG:HH11	1.47	0.79
2:QB:178:ARG:NH2	8:QH:74:PRO:HB3	1.96	0.79
27:RD:25:THR:CG2	27:RD:82:ILE:H	1.93	0.79
11:XK:32:ILE:CD1	11:XK:72:ALA:HB2	2.12	0.79
30:RG:77:ILE:HD13	30:RG:82:LEU:HD12	1.64	0.79
1:XA:1152:A:H5"	10:XJ:13:HIS:CD2	2.17	0.79
12:XL:48:PRO:HD2	12:XL:49:ASN:N	1.97	0.79
9:QI:19:LEU:HD23	9:QI:61:ALA:HB2	1.63	0.79
27:YD:68:LYS:HB2	27:YD:70:TRP:CH2	2.17	0.79
29:RF:145:GLU:HG3	29:RF:145:GLU:O	1.81	0.79
8:XH:100:ILE:HB	8:XH:125:ARG:HH12	1.47	0.79
14:QN:24:CYS:SG	14:QN:39:LEU:HA	2.22	0.79
4:QD:12:CYS:CA	4:QD:19:LEU:HD21	2.10	0.79
2:XB:187:LEU:HA	2:XB:201:ILE:HB	1.65	0.79
2:XB:178:ARG:NH2	8:XH:74:PRO:HB3	1.96	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RP:14:LYS:O	35:RP:16:ARG:HG2	1.83	0.79
31:YH:126:PRO:CG	31:YH:127:GLU:H	1.95	0.79
27:RD:54:ARG:NH1	27:RD:54:ARG:HG3	1.98	0.79
27:YD:34:VAL:HG13	27:YD:34:VAL:O	1.81	0.79
35:RP:59:LEU:HA	35:RP:61:ARG:HH21	1.44	0.79
8:XH:20:TYR:HA	8:XH:65:TYR:CE2	2.18	0.79
30:RG:61:ALA:HB2	30:RG:68:PRO:CD	2.12	0.79
2:QB:212:GLN:CD	2:QB:235:SER:HB2	2.02	0.79
36:RQ:81:VAL:O	36:RQ:82:ARG:CG	2.31	0.79
39:YT:62:THR:CG2	39:YT:75:ILE:HG12	2.11	0.79
29:RF:11:VAL:HB	29:RF:18:ARG:HG3	1.64	0.79
28:RE:137:HIS:HB3	28:RE:138:PRO:HD2	1.65	0.79
31:YH:169:VAL:HG22	31:YH:170:ARG:H	1.48	0.79
36:YQ:81:VAL:O	36:YQ:82:ARG:CG	2.31	0.79
40:YU:105:VAL:HG22	41:YV:44:LYS:HD2	1.65	0.79
9:XI:15:ALA:HB2	9:XI:65:VAL:HG23	1.65	0.79
25:RA:1803:A:H4'	27:RD:259:THR:HG21	1.65	0.79
11:QK:124:LYS:HD2	11:QK:125:PHE:HE1	1.45	0.79
25:RA:2298:A:H62	25:RA:2318:G:H8	1.28	0.79
25:YA:138:G:N2	43:YX:44:GLU:OE2	2.12	0.79
2:XB:35:GLU:O	2:XB:36:ARG:HD3	1.82	0.79
12:QL:48:PRO:HD2	12:QL:49:ASN:N	1.97	0.79
31:RH:126:PRO:CG	31:RH:127:GLU:H	1.96	0.79
39:YT:102:ILE:HA	39:YT:105:LEU:CD2	2.13	0.79
39:RT:102:ILE:HA	39:RT:105:LEU:CD2	2.13	0.79
20:QT:89:ARG:HH21	20:QT:104:LEU:HD21	1.47	0.79
31:RH:10:PRO:O	31:RH:11:VAL:HG13	1.80	0.79
25:RA:768:G:O2'	25:RA:1379:A:N6	2.15	0.79
14:YN:40:CYS:SG	14:YN:43:CYS:HB2	2.21	0.79
4:XD:28:SER:HB3	4:XD:29:PRO:HD2	1.65	0.79
19:XS:41:VAL:HG12	19:XS:44:MET:N	1.98	0.79
35:RP:97:PRO:O	35:RP:98:GLU:HB3	1.83	0.79
20:XT:100:ILE:HG13	20:XT:102:GLY:H	1.48	0.79
12:XL:6:THR:N	12:XL:9:GLN:HE21	1.80	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
27:RD:68:LYS:HB2	27:RD:70:TRP:CH2	2.17	0.79
35:YP:14:LYS:O	35:YP:16:ARG:HG2	1.83	0.79
1:XA:1348:U:H3	1:XA:1374:A:H2	1.30	0.79
49:Y3:56:VAL:HG12	49:Y3:57:GLU:H	1.48	0.79
1:XA:1071:C:H5"	5:XE:49:PRO:HG2	1.65	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1189:C:OP1	10:QJ:51:ARG:NH2	2.15	0.79
12:XL:86:ARG:HB2	12:XL:101:VAL:HG22	1.62	0.79
44:YY:86:ARG:HB2	44:YY:95:LYS:HD2	1.64	0.79
31:RH:86:GLU:CG	31:RH:165:ALA:H	1.94	0.79
19:QS:41:VAL:HG12	19:QS:44:MET:N	1.98	0.79
5:QE:10:MET:HB3	5:QE:32:VAL:HG22	1.63	0.79
31:YH:26:VAL:HG13	31:YH:27:LYS:N	1.96	0.79
25:RA:141:A:H8	25:RA:1595:G:H21	1.31	0.79
34:RO:31:LYS:HG3	34:RO:32:TYR:CE2	2.17	0.79
18:XR:43:PHE:HE2	18:XR:58:LEU:HD11	1.47	0.79
25:YA:2729:G:H1'	28:YE:187:ALA:HB2	1.63	0.79
28:RE:111:ARG:HE	28:RE:160:TYR:HE1	1.31	0.79
54:R8:59:LYS:HZ2	54:R8:59:LYS:HB2	1.47	0.79
31:YH:153:LYS:CG	31:YH:162:ILE:H	1.96	0.79
25:YA:1490:A:O2'	27:YD:99:ASP:OD2	2.00	0.79
8:QH:20:TYR:HA	8:QH:65:TYR:CE2	2.18	0.79
35:YP:65:ARG:HG3	35:YP:65:ARG:NH1	1.90	0.79
30:YG:77:ILE:HD13	30:YG:82:LEU:HD12	1.65	0.79
35:YP:47:ASP:OD2	35:YP:49:ARG:HG2	1.82	0.79
19:XS:5:LEU:HD22	50:Y4:67:TYR:CZ	2.17	0.79
31:YH:150:ALA:O	31:YH:152:ARG:N	2.14	0.79
18:XR:56:THR:HB	18:XR:58:LEU:CD1	2.13	0.79
25:RA:571:A:O2'	41:RV:78:LYS:NZ	2.16	0.79
47:Y1:11:ARG:HB3	47:Y1:11:ARG:NH1	1.98	0.79
13:XM:3:ARG:CA	13:XM:9:ILE:HG21	2.13	0.78
40:YU:90:VAL:HG12	40:YU:91:ASP:N	1.98	0.78
10:QJ:80:LYS:HE2	1:XA:1162:C:O2'	1.82	0.78
1:XA:27:G:H4'	4:XD:209:ARG:HG3	1.64	0.78
18:QR:56:THR:HB	18:QR:58:LEU:CD1	2.13	0.78
33:RN:71:ILE:HG21	33:RN:84:LYS:HB3	1.65	0.78
50:Y4:58:ARG:O	50:Y4:63:TYR:HB2	1.84	0.78
35:RP:138:LEU:C	35:RP:140:ALA:H	1.85	0.78
34:YO:53:LYS:HD2	34:YO:53:LYS:N	1.96	0.78
12:QL:6:THR:N	12:QL:9:GLN:HE21	1.80	0.78
40:RU:105:VAL:HG22	41:RV:44:LYS:HD2	1.65	0.78
33:RN:43:THR:HB	33:RN:46:VAL:HG12	1.63	0.78
9:XI:83:ARG:O	9:XI:86:VAL:HG12	1.84	0.78
1:XA:1199:U:H4'	10:XJ:54:PHE:CZ	2.18	0.78
36:RQ:80:GLU:O	36:RQ:81:VAL:CG1	2.30	0.78
25:RA:676:A:H8	25:RA:2069:G:H21	1.30	0.78
4:QD:28:SER:HB2	4:QD:29:PRO:CD	2.14	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:30:LYS:HD3	4:QD:30:LYS:N	1.98	0.78
33:RN:62:VAL:HG12	33:RN:66:LYS:HD2	1.66	0.78
27:YD:27:THR:HG21	27:YD:83:GLU:HB3	1.63	0.78
27:RD:54:ARG:HH11	27:RD:54:ARG:HG3	1.49	0.78
13:QM:4:ILE:H	13:QM:9:ILE:HG21	1.47	0.78
30:RG:61:ALA:HB2	30:RG:68:PRO:HD3	1.65	0.78
20:QT:50:GLU:HG3	20:QT:51:GLU:N	1.97	0.78
9:QI:15:ALA:HB2	9:QI:65:VAL:HG23	1.65	0.78
47:R1:11:ARG:NH1	47:R1:11:ARG:HB3	1.98	0.78
36:YQ:59:ARG:HD3	36:YQ:59:ARG:H	1.48	0.78
11:QK:32:ILE:CD1	11:QK:72:ALA:HB2	2.12	0.78
38:RS:106:ARG:HA	38:RS:110:LEU:HD21	1.64	0.78
26:RB:56:G:OP1	30:RG:27:ASN:ND2	2.16	0.78
1:QA:375:U:H4'	16:QP:17:TYR:HE2	1.48	0.78
36:RQ:20:ALA:HB1	36:RQ:99:PRO:HB2	1.65	0.78
34:YO:97:ARG:H	34:YO:117:LEU:HD22	1.48	0.78
25:RA:1279:G:H4'	37:RR:31:HIS:HD2	1.48	0.78
43:YX:70:LEU:N	43:YX:70:LEU:HD23	1.99	0.78
36:RQ:119:ARG:HH11	36:RQ:119:ARG:HG2	1.48	0.78
10:QJ:40:LEU:HB2	10:QJ:69:ASN:HB3	1.65	0.78
30:YG:128:ARG:HG3	30:YG:128:ARG:HH21	1.48	0.78
27:YD:54:ARG:HG3	27:YD:54:ARG:NH1	1.98	0.78
13:XM:88:ARG:CB	13:XM:88:ARG:HH11	1.95	0.78
19:XS:42:PRO:HD3	50:Y4:63:TYR:HE2	1.49	0.78
3:QC:181:ASN:ND2	3:QC:204:LEU:HD12	1.99	0.78
2:QB:84:GLU:HB3	2:QB:219:VAL:HG21	1.66	0.78
18:QR:43:PHE:HE2	18:QR:58:LEU:HD11	1.47	0.78
10:XJ:16:LEU:HD23	10:XJ:94:VAL:HG13	1.66	0.78
43:RX:70:LEU:HD23	43:RX:70:LEU:N	1.99	0.78
31:RH:153:LYS:CG	31:RH:162:ILE:H	1.96	0.78
35:YP:19:VAL:HG22	35:YP:20:GLY:N	1.97	0.78
41:YV:47:VAL:HG13	41:YV:48:GLY:H	1.49	0.78
29:RF:20:LEU:HD12	29:RF:21:ALA:H	1.49	0.78
7:QG:113:GLU:HB2	7:QG:119:ARG:HG2	1.66	0.78
3:XC:138:VAL:HG13	3:XC:149:ALA:HB1	1.64	0.78
27:YD:94:LEU:HD22	27:YD:95:LEU:N	1.98	0.78
28:YE:137:HIS:HB3	28:YE:138:PRO:HD2	1.64	0.78
1:XA:1002:G:H1	1:XA:1038:C:H42	1.31	0.78
28:YE:4:ILE:HD12	28:YE:28:ALA:HB1	1.66	0.78
30:RG:145:THR:HG23	50:R4:28:LYS:HZ1	1.49	0.78
40:RU:90:VAL:HG12	40:RU:91:ASP:N	1.97	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:498:G:N3	44:RY:47:LYS:NZ	2.31	0.78
4:QD:166:LYS:CG	27:YD:134:ARG:NH1	2.47	0.78
25:YA:602:G:HO2'	25:YA:604:G:HO2'	1.31	0.78
29:YF:145:GLU:HG3	29:YF:145:GLU:O	1.81	0.78
44:RY:86:ARG:HB2	44:RY:95:LYS:HD2	1.64	0.78
27:YD:34:VAL:HG21	27:YD:103:ARG:HA	1.66	0.78
34:RO:47:ILE:HD12	34:RO:48:PRO:HD2	1.66	0.78
28:RE:24:THR:HG21	28:RE:188:VAL:CG1	2.13	0.78
1:XA:1152:A:OP1	10:XJ:68:HIS:NE2	2.17	0.78
27:RD:142:VAL:HG23	27:RD:193:VAL:HA	1.66	0.78
49:R3:56:VAL:HG12	49:R3:57:GLU:H	1.48	0.78
1:XA:523:A:H61	12:XL:92:ASP:HB2	1.49	0.78
27:RD:94:LEU:HD22	27:RD:95:LEU:N	1.98	0.78
2:QB:101:MET:CA	2:QB:108:ILE:HG13	2.11	0.78
35:RP:19:VAL:HG22	35:RP:20:GLY:N	1.97	0.78
25:RA:2810:A:O3'	28:RE:61:ARG:HG3	1.84	0.78
5:QE:11:ILE:CD1	5:QE:31:LEU:HD12	2.13	0.78
35:RP:75:ILE:HD13	35:RP:75:ILE:N	2.00	0.78
6:XF:24:GLU:HA	6:XF:27:GLN:CG	2.14	0.78
30:YG:97:ASP:H	30:YG:100:TRP:HD1	1.31	0.78
2:QB:122:PHE:HD1	2:QB:139:LYS:HZ1	1.30	0.78
1:QA:1071:C:H5''	5:QE:49:PRO:HG2	1.66	0.78
10:QJ:16:LEU:HD23	10:QJ:94:VAL:HG13	1.66	0.78
25:YA:890:A:HO2'	25:YA:892:G:H8	1.30	0.78
31:YH:132:ARG:HB2	31:YH:132:ARG:NH1	1.94	0.77
34:YO:47:ILE:HD12	34:YO:48:PRO:HD2	1.66	0.77
27:YD:25:THR:HG22	27:YD:82:ILE:H	1.46	0.77
25:YA:1021:A:N6	25:YA:1141:U:O2	2.17	0.77
29:RF:29:ASN:H	29:RF:112:MET:CE	1.97	0.77
13:XM:15:VAL:HG23	13:XM:43:THR:O	1.84	0.77
7:XG:113:GLU:HB2	7:XG:119:ARG:HG2	1.65	0.77
1:QA:559:A:H4'	1:QA:560:U:H3'	1.64	0.77
40:YU:66:ASN:O	40:YU:70:ARG:HB2	1.84	0.77
30:RG:128:ARG:HG3	30:RG:128:ARG:HH21	1.48	0.77
25:YA:637:A:H2'	35:YP:117:GLU:OE2	1.84	0.77
28:RE:4:ILE:HD12	28:RE:28:ALA:HB1	1.67	0.77
31:YH:152:ARG:HG3	31:YH:153:LYS:CE	2.13	0.77
2:QB:18:GLY:H	2:QB:42:ILE:CG2	1.95	0.77
27:RD:25:THR:O	27:RD:27:THR:N	2.18	0.77
20:QT:100:ILE:HG13	20:QT:102:GLY:H	1.48	0.77
39:RT:43:GLN:HG2	39:RT:44:ASP:N	1.99	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RG:127:GLY:HA2	30:RG:166:ASP:CG	2.05	0.77
1:QA:1139:G:N2	1:QA:1143:G:O6	2.16	0.77
25:RA:2068:U:H3	25:RA:2430:A:H2	1.31	0.77
2:QB:239:VAL:HG12	2:QB:240:GLN:NE2	1.99	0.77
25:YA:958:U:OP2	36:YQ:14:ARG:NH1	2.16	0.77
25:RA:1332:G:H21	25:RA:1610:A:H8	1.32	0.77
2:XB:21:ARG:HG3	2:XB:38:GLY:C	2.05	0.77
2:XB:84:GLU:HB3	2:XB:219:VAL:HG21	1.65	0.77
31:RH:150:ALA:O	31:RH:152:ARG:N	2.14	0.77
35:YP:84:ASN:ND2	35:YP:116:GLY:HA3	1.99	0.77
2:QB:44:LEU:HD12	2:QB:44:LEU:H	1.48	0.77
38:YS:106:ARG:HA	38:YS:110:LEU:HD21	1.64	0.77
25:YA:2404:C:H1'	35:YP:67:MET:HE1	1.66	0.77
35:RP:62:LEU:CD2	35:RP:62:LEU:N	2.46	0.77
52:R6:15:GLU:CD	52:R6:41:PRO:HB3	2.04	0.77
6:QF:24:GLU:HA	6:QF:27:GLN:CG	2.14	0.77
30:YG:127:GLY:HA2	30:YG:166:ASP:CG	2.05	0.77
25:RA:83:G:N2	25:RA:103:A:OP2	2.17	0.77
40:RU:66:ASN:O	40:RU:70:ARG:HB2	1.84	0.77
2:XB:239:VAL:HG12	2:XB:240:GLN:NE2	1.99	0.77
9:XI:53:VAL:HB	9:XI:95:LYS:HE3	1.66	0.77
37:YR:74:LYS:O	37:YR:75:LEU:HB3	1.84	0.77
25:RA:483:A:H4'	44:RY:49:VAL:HA	1.66	0.77
6:QF:23:LYS:O	6:QF:27:GLN:HG2	1.84	0.77
42:RW:65:LEU:CD1	42:RW:68:ARG:HH11	1.97	0.77
50:R4:22:ILE:O	50:R4:24:THR:HG23	1.84	0.77
29:YF:11:VAL:HB	29:YF:18:ARG:HG3	1.64	0.77
33:YN:71:ILE:HG21	33:YN:84:LYS:HB3	1.65	0.77
25:YA:1728:G:N1	25:YA:1730:U:OP2	2.17	0.77
4:XD:30:LYS:C	4:XD:32:ALA:N	2.36	0.77
4:QD:9:CYS:SG	4:QD:22:LYS:HD2	2.25	0.77
44:RY:97:ARG:HH21	44:RY:98:VAL:CB	1.98	0.77
27:YD:44:ASN:N	27:YD:44:ASN:HD22	1.79	0.77
35:RP:84:ASN:ND2	35:RP:116:GLY:HA3	1.99	0.77
35:RP:114:ILE:HD11	35:RP:130:PHE:CE1	2.19	0.77
27:RD:17:THR:CG2	27:RD:205:VAL:H	1.96	0.77
17:QQ:41:LYS:NZ	17:QQ:92:ARG:HH22	1.82	0.77
44:YY:79:CYS:SG	44:YY:80:GLY:N	2.57	0.77
8:QH:100:ILE:HB	8:QH:125:ARG:HH12	1.47	0.77
38:RS:60:GLY:O	38:RS:61:ASN:HB3	1.84	0.77
27:RD:146:GLU:HB2	27:RD:189:CYS:HB3	1.67	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:YF:20:LEU:HD12	29:YF:21:ALA:H	1.49	0.77
2:QB:21:ARG:HG3	2:QB:38:GLY:C	2.05	0.77
47:Y1:13:ILE:HD11	47:Y1:42:GLN:OE1	1.84	0.77
54:Y8:59:LYS:HZ3	54:Y8:59:LYS:CB	1.96	0.77
42:YW:65:LEU:CD1	42:YW:68:ARG:HH11	1.97	0.77
1:XA:971:G:N2	1:XA:1363:A:OP2	2.18	0.77
17:QQ:59:ILE:HD13	17:QQ:59:ILE:H	1.50	0.77
34:RO:97:ARG:H	34:RO:117:LEU:HD22	1.48	0.77
50:Y4:22:ILE:O	50:Y4:24:THR:HG23	1.84	0.77
47:R1:86:SER:N	47:R1:87:PRO:CD	2.48	0.77
50:R4:58:ARG:O	50:R4:63:TYR:HB2	1.84	0.77
5:QE:12:LEU:HD23	5:QE:13:ILE:N	2.00	0.77
2:XB:44:LEU:HD12	2:XB:44:LEU:H	1.48	0.77
36:RQ:66:ILE:HG13	36:RQ:67:ARG:N	1.99	0.77
52:Y6:15:GLU:CD	52:Y6:41:PRO:HB3	2.05	0.77
25:YA:674:G:C1'	29:YF:74:ARG:HD3	2.14	0.77
47:R1:13:ILE:HD11	47:R1:42:GLN:OE1	1.84	0.77
4:QD:76:ARG:HD2	4:QD:207:TYR:CE2	2.20	0.77
25:RA:2115:G:N2	25:RA:2165:G:N7	2.29	0.77
25:YA:1190:G:OP1	35:YP:30:THR:OG1	2.02	0.77
19:XS:39:THR:HG22	19:XS:40:ILE:H	1.50	0.77
50:R4:1:MET:HB2	50:R4:6:HIS:NE2	2.00	0.77
29:YF:183:VAL:O	29:YF:187:VAL:HG23	1.85	0.77
44:RY:44:ILE:HG13	44:RY:45:VAL:N	2.00	0.77
51:Y5:40:LYS:CD	51:Y5:46:CYS:HB3	2.15	0.77
16:QP:6:LEU:HB3	16:QP:17:TYR:HD2	1.50	0.77
36:RQ:20:ALA:CB	36:RQ:99:PRO:HD2	2.14	0.77
20:XT:89:ARG:HH21	20:XT:104:LEU:HD21	1.47	0.77
36:YQ:20:ALA:CB	36:YQ:99:PRO:HD2	2.14	0.77
49:Y3:35:ARG:HB3	49:Y3:37:LEU:HD21	1.66	0.77
25:YA:259:G:H21	25:YA:621:A:H8	1.31	0.77
44:RY:79:CYS:SG	44:RY:80:GLY:N	2.57	0.77
27:RD:44:ASN:HD22	27:RD:44:ASN:N	1.79	0.77
31:RH:153:LYS:NZ	31:RH:153:LYS:HA	1.99	0.77
29:RF:183:VAL:O	29:RF:187:VAL:HG23	1.85	0.77
27:YD:25:THR:O	27:YD:27:THR:N	2.17	0.77
6:XF:23:LYS:O	6:XF:27:GLN:HG2	1.85	0.77
27:YD:153:ALA:O	27:YD:154:LYS:HG3	1.85	0.77
50:Y4:1:MET:HB2	50:Y4:6:HIS:NE2	2.00	0.77
14:YN:25:VAL:HG22	14:YN:38:GLY:O	1.84	0.77
5:XE:42:GLY:HA3	5:XE:66:MET:HG2	1.67	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YQ:119:ARG:HH11	36:YQ:119:ARG:HG2	1.48	0.77
42:YW:18:ARG:HG3	42:YW:76:VAL:CG1	2.16	0.76
5:XE:11:ILE:CD1	5:XE:31:LEU:HD12	2.13	0.76
20:QT:26:ASN:O	20:QT:30:LYS:HB2	1.86	0.76
36:YQ:59:ARG:H	36:YQ:59:ARG:CD	1.99	0.76
48:Y2:47:ASN:H	48:Y2:47:ASN:HD22	1.33	0.76
20:XT:13:LEU:HD12	20:XT:14:LYS:N	2.00	0.76
7:QG:148:ASN:HD22	7:QG:148:ASN:N	1.82	0.76
31:YH:153:LYS:HA	31:YH:153:LYS:NZ	2.00	0.76
35:YP:114:ILE:HD11	35:YP:130:PHE:CE1	2.19	0.76
2:QB:187:LEU:HA	2:QB:201:ILE:HB	1.65	0.76
38:YS:60:GLY:O	38:YS:61:ASN:HB3	1.83	0.76
36:YQ:20:ALA:HB1	36:YQ:99:PRO:HB2	1.65	0.76
4:XD:76:ARG:HD2	4:XD:207:TYR:CE2	2.20	0.76
33:YN:62:VAL:HG12	33:YN:66:LYS:HD2	1.65	0.76
44:YY:94:LYS:O	44:YY:101:LYS:HB3	1.85	0.76
13:QM:88:ARG:CB	13:QM:88:ARG:HH11	1.96	0.76
36:YQ:66:ILE:HG13	36:YQ:67:ARG:N	1.99	0.76
37:RR:33:ARG:HH22	51:R5:55:ARG:HG2	1.51	0.76
30:RG:127:GLY:O	30:RG:128:ARG:HG2	1.85	0.76
28:YE:111:ARG:HE	28:YE:160:TYR:HE1	1.31	0.76
3:XC:59:ARG:HH22	3:XC:97:LYS:HE3	1.50	0.76
40:RU:88:ILE:HG22	40:RU:90:VAL:HG23	1.67	0.76
7:XG:79:ARG:HH22	7:XG:82:GLY:HA2	1.51	0.76
5:QE:72:GLN:NE2	5:QE:144:THR:HG22	2.00	0.76
36:RQ:90:VAL:HG13	36:RQ:91:GLU:H	1.49	0.76
25:RA:530:G:C2	25:RA:2022:U:OP1	2.38	0.76
21:QU:10:ARG:HG2	21:QU:13:ILE:HD12	1.68	0.76
4:XD:9:CYS:SG	4:XD:22:LYS:HD2	2.25	0.76
44:RY:81:LYS:HD3	44:RY:97:ARG:NE	2.01	0.76
44:RY:97:ARG:NH2	44:RY:98:VAL:HB	2.01	0.76
4:XD:20:TYR:CD2	4:XD:27:TYR:HE2	2.01	0.76
35:YP:138:LEU:C	35:YP:140:ALA:H	1.85	0.76
27:RD:153:ALA:O	27:RD:154:LYS:HG3	1.85	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	1.97	0.76
30:YG:142:PRO:HB2	50:Y4:31:ILE:HD13	1.68	0.76
49:R3:35:ARG:HB3	49:R3:37:LEU:HD21	1.66	0.76
34:YO:104:ARG:HH11	34:YO:104:ARG:HG2	1.50	0.76
20:QT:13:LEU:HD12	20:QT:14:LYS:N	2.00	0.76
9:QI:83:ARG:O	9:QI:86:VAL:HG12	1.84	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:XI:113:LYS:HD2	9:XI:113:LYS:H	1.50	0.76
1:XA:411:A:H62	1:XA:413:G:H21	1.34	0.76
44:YY:81:LYS:HD3	44:YY:97:ARG:NE	2.00	0.76
27:RD:34:VAL:HG21	27:RD:103:ARG:HA	1.66	0.76
13:QM:15:VAL:HG23	13:QM:43:THR:O	1.84	0.76
30:YG:127:GLY:O	30:YG:128:ARG:HG2	1.85	0.76
42:YW:73:ALA:HB3	42:YW:106:ILE:HG12	1.68	0.76
4:QD:153:ARG:NH1	4:QD:181:MET:HG3	2.00	0.76
52:R6:34:LEU:HD13	52:R6:34:LEU:H	1.50	0.76
16:QP:22:THR:HA	16:QP:33:ILE:HG12	1.66	0.76
30:RG:101:ILE:HG13	30:RG:102:PHE:H	1.49	0.76
36:YQ:90:VAL:HG13	36:YQ:91:GLU:H	1.49	0.76
30:YG:61:ALA:HB2	30:YG:68:PRO:HD3	1.65	0.76
30:YG:76:SER:OG	30:YG:83:ARG:HA	1.85	0.76
45:RZ:94:GLU:HB2	45:RZ:130:PRO:HD2	1.68	0.76
17:XQ:41:LYS:NZ	17:XQ:92:ARG:HH22	1.82	0.76
47:R1:56:GLN:N	47:R1:56:GLN:NE2	2.34	0.76
25:RA:1754:C:OP1	39:RT:96:ARG:NH1	2.18	0.76
31:YH:125:VAL:HA	31:YH:126:PRO:HB3	1.68	0.76
44:YY:95:LYS:HB3	44:YY:100:ALA:CA	2.10	0.76
10:XJ:38:ILE:HG12	10:XJ:71:LEU:O	1.86	0.76
5:QE:42:GLY:HA3	5:QE:66:MET:HG2	1.68	0.76
55:R9:1:MET:HB3	55:R9:4:ARG:NH1	2.01	0.76
7:XG:37:ASN:ND2	9:XI:40:LEU:HD23	2.00	0.76
27:RD:69:ARG:HH21	27:RD:130:ALA:CB	1.99	0.76
5:QE:53:LEU:CD1	5:QE:53:LEU:H	1.99	0.76
5:XE:12:LEU:HD23	5:XE:13:ILE:N	2.01	0.76
3:QC:59:ARG:HH22	3:QC:97:LYS:HE3	1.50	0.76
39:YT:111:ARG:O	39:YT:113:LYS:N	2.17	0.76
25:RA:1019:U:H3	25:RA:1142(A):A:H62	1.34	0.76
25:YA:1142(A):A:H4'	33:YN:25:ARG:HH22	1.48	0.76
25:RA:2451:A:C6	56:Z6:76:PPU:HE2	2.19	0.76
2:XB:117:GLU:O	2:XB:121:LEU:HB2	1.86	0.76
8:QH:5:PRO:O	8:QH:8:ASP:HB3	1.85	0.76
14:QN:22:THR:O	14:QN:23:ARG:HB2	1.85	0.76
47:Y1:86:SER:N	47:Y1:87:PRO:CD	2.48	0.76
10:QJ:38:ILE:HG12	10:QJ:71:LEU:O	1.86	0.76
29:YF:101:LEU:CD1	29:YF:102:PRO:HD2	2.11	0.76
27:YD:69:ARG:HH21	27:YD:130:ALA:CB	1.99	0.76
31:RH:152:ARG:HG3	31:RH:153:LYS:CE	2.13	0.76
1:QA:973:G:OP1	10:QJ:57:LYS:NZ	2.19	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:Y4:34:GLU:HG3	50:Y4:35:VAL:H	1.51	0.76
52:Y6:34:LEU:HD13	52:Y6:34:LEU:H	1.50	0.76
5:XE:36:ASP:OD2	5:XE:38:GLN:HB2	1.86	0.76
31:RH:169:VAL:HG22	31:RH:170:ARG:H	1.48	0.76
35:YP:97:PRO:O	35:YP:98:GLU:HB3	1.83	0.75
50:R4:34:GLU:HG3	50:R4:35:VAL:H	1.51	0.75
37:RR:74:LYS:O	37:RR:75:LEU:HB3	1.84	0.75
39:YT:50:ILE:HD12	39:YT:102:ILE:HD11	1.68	0.75
35:YP:62:LEU:CD2	35:YP:62:LEU:N	2.46	0.75
51:R5:47:PRO:O	51:R5:48:GLU:HG3	1.86	0.75
34:RO:104:ARG:HG2	34:RO:104:ARG:HH11	1.50	0.75
30:YG:101:ILE:HG13	30:YG:102:PHE:H	1.48	0.75
28:YE:23:VAL:HG21	28:YE:183:LEU:HD23	1.68	0.75
28:YE:36:ARG:HH21	28:YE:88:GLY:HA2	1.51	0.75
25:RA:1187:G:H5''	41:RV:81:TYR:CE2	2.21	0.75
10:XJ:40:LEU:HB2	10:XJ:69:ASN:HB3	1.65	0.75
6:QF:91:VAL:HG13	18:QR:72:ARG:HH12	1.51	0.75
29:RF:129:PHE:HA	29:RF:142:TRP:NE1	2.02	0.75
54:Y8:59:LYS:HZ2	54:Y8:59:LYS:HB2	1.49	0.75
28:YE:63:LEU:CD1	28:YE:65:GLY:H	2.00	0.75
30:RG:76:SER:OG	30:RG:83:ARG:HA	1.85	0.75
9:QI:53:VAL:HB	9:QI:95:LYS:HE3	1.67	0.75
14:QN:43:CYS:O	14:QN:44:LEU:C	2.22	0.75
47:Y1:81:LYS:CA	47:Y1:81:LYS:NZ	2.30	0.75
41:YV:52:VAL:HG21	41:YV:55:ALA:HB3	1.68	0.75
34:YO:47:ILE:CD1	34:YO:48:PRO:HD2	2.16	0.75
16:XP:22:THR:HA	16:XP:33:ILE:HG12	1.66	0.75
35:RP:62:LEU:HD21	54:R8:25:MET:HB2	1.69	0.75
44:YY:44:ILE:HG13	44:YY:45:VAL:N	2.00	0.75
18:QR:53:ARG:HH21	18:QR:60:ALA:N	1.84	0.75
30:RG:3:LEU:HD12	30:RG:4:ASP:H	1.51	0.75
30:YG:3:LEU:HD12	30:YG:4:ASP:H	1.52	0.75
8:XH:5:PRO:O	8:XH:8:ASP:HB3	1.85	0.75
1:XA:1305:G:N2	1:XA:1331:G:H2'	2.01	0.75
16:XP:6:LEU:HB3	16:XP:17:TYR:HD2	1.50	0.75
30:RG:142:PRO:HB2	50:R4:31:ILE:HD13	1.68	0.75
1:QA:377:G:OP1	16:QP:5:ARG:NH1	2.18	0.75
40:RU:52:ARG:HG2	40:RU:52:ARG:HH11	1.51	0.75
5:QE:11:ILE:HD11	5:QE:31:LEU:CD1	2.17	0.75
40:YU:88:ILE:HG22	40:YU:90:VAL:HG23	1.68	0.75
13:XM:49:THR:HG22	13:XM:51:ALA:N	2.01	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:CA	2.17	0.75
35:YP:62:LEU:HD21	54:Y8:25:MET:HB2	1.69	0.75
51:R5:40:LYS:CD	51:R5:46:CYS:HB3	2.15	0.75
41:RV:15:GLU:O	41:RV:18:LEU:HB2	1.86	0.75
18:XR:53:ARG:HH21	18:XR:60:ALA:N	1.84	0.75
7:XG:148:ASN:N	7:XG:148:ASN:HD22	1.82	0.75
8:QH:91:ARG:HH11	8:QH:91:ARG:HG2	1.52	0.75
55:Y9:1:MET:HB3	55:Y9:4:ARG:NH1	2.01	0.75
7:QG:37:ASN:ND2	9:QI:40:LEU:HD23	2.00	0.75
20:QT:58:LYS:HE3	20:QT:62:LEU:HD11	1.68	0.75
44:RY:94:LYS:O	44:RY:101:LYS:HB3	1.85	0.75
44:YY:97:ARG:HH21	44:YY:98:VAL:CB	1.98	0.75
40:YU:92:ARG:HH11	40:YU:95:LEU:CD1	2.00	0.75
25:RA:2701:C:H3'	25:RA:2702:U:C5'	2.16	0.75
41:RV:47:VAL:HG13	41:RV:48:GLY:H	1.49	0.75
25:YA:1496:A:H8	25:YA:1577:C:HO2'	1.34	0.75
16:XP:43:LYS:HG2	16:XP:48:TRP:CE3	2.22	0.75
27:YD:142:VAL:HG23	27:YD:193:VAL:HA	1.67	0.75
44:RY:90:LEU:N	44:RY:90:LEU:HD22	2.02	0.75
19:QS:39:THR:HG22	19:QS:40:ILE:H	1.50	0.75
31:RH:150:ALA:C	31:RH:152:ARG:H	1.88	0.75
37:YR:33:ARG:HH22	51:Y5:55:ARG:HG2	1.51	0.75
41:YV:35:LEU:H	41:YV:35:LEU:HD22	1.51	0.75
43:YX:57:LEU:HD11	43:YX:78:LYS:HB2	1.68	0.75
29:YF:29:ASN:HB3	29:YF:112:MET:HE1	1.69	0.75
12:QL:48:PRO:HD2	12:QL:49:ASN:H	1.52	0.75
47:Y1:56:GLN:N	47:Y1:56:GLN:NE2	2.34	0.75
25:YA:1803:A:H4'	27:YD:259:THR:CG2	2.16	0.75
11:QK:48:ILE:HD11	11:QK:64:ALA:HA	1.67	0.75
4:XD:153:ARG:NH1	4:XD:181:MET:HG3	2.00	0.75
47:Y1:80:LEU:O	47:Y1:81:LYS:CB	2.35	0.75
19:QS:41:VAL:HG12	19:QS:44:MET:H	1.50	0.75
31:RH:153:LYS:HG2	31:RH:162:ILE:H	1.52	0.75
5:QE:45:PHE:CE2	5:QE:47:LYS:HD2	2.22	0.75
27:YD:146:GLU:HB2	27:YD:189:CYS:HB3	1.67	0.75
10:QJ:27:ALA:HB1	10:QJ:34:VAL:HG21	1.69	0.75
20:XT:26:ASN:O	20:XT:30:LYS:HB2	1.85	0.75
20:QT:35:THR:O	20:QT:39:LYS:HG3	1.87	0.75
1:XA:1129:C:N4	1:XA:1133:G:O6	2.20	0.75
25:YA:571:A:O2'	41:YV:78:LYS:NZ	2.19	0.75
39:YT:43:GLN:HG2	39:YT:44:ASP:N	1.99	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:117:GLU:O	2:QB:121:LEU:HB2	1.86	0.75
47:R1:3:LYS:HD3	47:R1:43:TYR:HD2	1.52	0.75
4:QD:26:CYS:HA	4:QD:31:CYS:HB2	1.67	0.75
13:QM:3:ARG:CA	13:QM:9:ILE:HG21	2.13	0.75
37:RR:73:VAL:O	37:RR:76:VAL:HG12	1.87	0.75
5:QE:78:HIS:CD2	8:QH:104:ARG:HG2	2.22	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
44:YY:90:LEU:HD22	44:YY:90:LEU:N	2.02	0.75
19:XS:41:VAL:HG12	19:XS:44:MET:H	1.50	0.75
31:YH:150:ALA:C	31:YH:152:ARG:H	1.88	0.75
28:RE:63:LEU:CD1	28:RE:65:GLY:H	2.00	0.75
41:YV:51:VAL:HG12	41:YV:52:VAL:H	1.52	0.75
25:YA:74:A:H4'	25:YA:75:G:O5'	1.87	0.75
35:YP:75:ILE:N	35:YP:75:ILE:HD13	2.00	0.75
28:RE:36:ARG:HH21	28:RE:88:GLY:HA2	1.51	0.75
44:YY:97:ARG:NH2	44:YY:98:VAL:HB	2.01	0.74
19:XS:3:ARG:HG3	19:XS:4:SER:H	1.52	0.74
41:RV:52:VAL:HG21	41:RV:55:ALA:HB3	1.68	0.74
42:RW:18:ARG:HG3	42:RW:76:VAL:CG1	2.15	0.74
37:YR:73:VAL:O	37:YR:76:VAL:HG12	1.87	0.74
33:RN:96:GLU:CG	33:RN:97:ARG:H	2.00	0.74
7:XG:23:VAL:HG12	7:XG:27:ILE:HD11	1.69	0.74
30:RG:97:ASP:H	30:RG:100:TRP:HD1	1.31	0.74
5:XE:72:GLN:NE2	5:XE:144:THR:HG22	2.00	0.74
25:RA:674:G:C1'	29:RF:74:ARG:HD3	2.17	0.74
29:YF:7:TYR:HB3	29:YF:21:ALA:CB	2.16	0.74
38:RS:62:LYS:HB3	38:RS:97:ARG:HD3	1.69	0.74
20:XT:58:LYS:HE3	20:XT:62:LEU:HD11	1.69	0.74
25:YA:2419:U:H5'	52:Y6:23:THR:HG22	1.69	0.74
7:XG:9:VAL:HG13	7:XG:94:ARG:HE	1.52	0.74
42:YW:40:ASN:O	42:YW:41:LYS:HG2	1.86	0.74
28:YE:61:ARG:HB2	28:YE:62:PRO:HD3	1.69	0.74
51:Y5:47:PRO:O	51:Y5:48:GLU:HG3	1.86	0.74
16:QP:43:LYS:HG2	16:QP:48:TRP:CE3	2.22	0.74
42:RW:40:ASN:O	42:RW:41:LYS:HG2	1.87	0.74
21:XU:10:ARG:HG2	21:XU:13:ILE:HD12	1.68	0.74
13:QM:37:THR:HG21	13:QM:39:ILE:HD11	1.68	0.74
40:RU:92:ARG:HH11	40:RU:95:LEU:CD1	2.00	0.74
44:YY:51:VAL:HG13	44:YY:52:SER:N	2.03	0.74
39:RT:111:ARG:O	39:RT:113:LYS:N	2.17	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:QO:70:LEU:O	15:QO:70:LEU:HD12	1.88	0.74
9:QI:113:LYS:H	9:QI:113:LYS:HD2	1.51	0.74
40:YU:52:ARG:HH11	40:YU:52:ARG:HG2	1.51	0.74
39:YT:78:LEU:HD13	39:YT:78:LEU:O	1.87	0.74
50:R4:71:ARG:NH1	50:R4:71:ARG:HG3	1.90	0.74
2:XB:101:MET:CA	2:XB:108:ILE:HG13	2.11	0.74
27:YD:54:ARG:HG3	27:YD:54:ARG:HH11	1.49	0.74
27:YD:30:GLU:HG3	27:YD:63:ARG:CZ	2.17	0.74
38:RS:83:LYS:HZ2	38:RS:109:GLY:HA2	1.49	0.74
5:XE:10:MET:CB	5:XE:32:VAL:HG22	2.18	0.74
43:RX:57:LEU:HD11	43:RX:78:LYS:HB2	1.68	0.74
29:RF:7:TYR:HB3	29:RF:21:ALA:CB	2.16	0.74
45:YZ:103:ARG:HB2	45:YZ:138:GLU:HG2	1.69	0.74
25:YA:2563:U:H4'	34:YO:28:SER:HA	1.69	0.74
47:R1:26:ARG:O	47:R1:26:ARG:HD2	1.86	0.74
15:QO:87:ILE:HG22	15:QO:88:ARG:N	2.00	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
34:RO:26:LYS:HB2	34:RO:30:ALA:CB	2.18	0.74
17:XQ:59:ILE:HD13	17:XQ:59:ILE:H	1.50	0.74
38:YS:36:TYR:CD2	38:YS:52:SER:HB3	2.23	0.74
48:R2:47:ASN:HD22	48:R2:47:ASN:H	1.33	0.74
49:Y3:7:LYS:HB2	49:Y3:34:GLU:HG2	1.69	0.74
47:Y1:26:ARG:O	47:Y1:26:ARG:HD2	1.86	0.74
2:QB:47:THR:O	2:QB:51:LEU:HG	1.87	0.74
1:XA:1189:C:OP1	10:XJ:51:ARG:NH2	2.21	0.74
25:YA:1826:G:H4'	27:YD:242:ARG:HH21	1.50	0.74
39:YT:26:ASP:HB3	39:YT:91:ARG:HA	1.69	0.74
4:XD:25:ARG:HH12	4:XD:30:LYS:HG3	1.52	0.74
20:XT:35:THR:O	20:XT:39:LYS:HG3	1.87	0.74
25:RA:2245:U:H5''	25:RA:2246:G:H5'	1.67	0.74
29:YF:129:PHE:HA	29:YF:142:TRP:NE1	2.02	0.74
7:QG:9:VAL:HG13	7:QG:94:ARG:HE	1.53	0.74
6:XF:19:LEU:HD23	6:XF:19:LEU:O	1.87	0.74
29:RF:136:THR:HG22	29:RF:166:ALA:O	1.87	0.74
25:YA:583:G:H5''	40:YU:10:ARG:HH12	1.53	0.74
31:YH:153:LYS:HG2	31:YH:162:ILE:H	1.52	0.74
40:YU:64:ARG:HH21	40:YU:64:ARG:CG	2.00	0.74
2:QB:168:THR:HB	2:QB:192:SER:HB2	1.70	0.74
10:XJ:33:GLN:O	10:XJ:75:ILE:HG12	1.88	0.74
10:QJ:33:GLN:O	10:QJ:75:ILE:HG12	1.87	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:RT:50:ILE:HD12	39:RT:102:ILE:HD11	1.68	0.74
4:QD:166:LYS:HD3	27:YD:188:GLU:OE2	1.88	0.74
16:XP:43:LYS:O	16:XP:45:THR:N	2.21	0.74
25:YA:1403:C:H5''	25:YA:1471:A:H1'	1.70	0.74
1:QA:954:G:H21	1:QA:1227:A:H62	1.34	0.74
25:YA:1279:G:H4'	37:YR:31:HIS:HD2	1.52	0.74
6:XF:91:VAL:HG13	18:XR:72:ARG:HH12	1.51	0.74
29:YF:136:THR:HG22	29:YF:166:ALA:O	1.87	0.74
1:XA:973:G:O3'	14:XN:41:ARG:NH1	2.21	0.74
41:RV:51:VAL:HG12	41:RV:52:VAL:H	1.51	0.74
28:RE:201:THR:HG22	28:RE:203:LYS:HB3	1.70	0.74
7:XG:78:ARG:HH12	7:XG:80:VAL:HG23	1.53	0.74
5:XE:72:GLN:HE21	5:XE:144:THR:HG22	1.53	0.74
29:RF:29:ASN:HB3	29:RF:112:MET:HE1	1.68	0.74
39:YT:54:ARG:HH11	39:YT:54:ARG:HG2	1.52	0.74
27:RD:77:ALA:CB	27:RD:97:TYR:HA	2.18	0.74
4:QD:91:SER:HA	4:QD:94:LEU:HD13	1.70	0.74
7:QG:23:VAL:HG12	7:QG:27:ILE:HD11	1.69	0.74
5:QE:72:GLN:HE21	5:QE:144:THR:HG22	1.53	0.74
41:YV:15:GLU:O	41:YV:18:LEU:HB2	1.86	0.74
1:XA:375:U:H4'	16:XP:17:TYR:HE2	1.50	0.74
49:R3:29:ARG:HB2	49:R3:29:ARG:HH11	1.52	0.74
25:YA:1689:A:H62	25:YA:1698:A:H2	1.35	0.74
25:RA:602:G:HO2'	25:RA:604:G:HO2'	1.26	0.74
6:QF:19:LEU:HD23	6:QF:19:LEU:O	1.88	0.74
49:Y3:29:ARG:HH11	49:Y3:29:ARG:HB2	1.53	0.74
1:QA:1106:G:H5''	3:QC:172:ARG:HG2	1.70	0.74
47:R1:80:LEU:O	47:R1:81:LYS:CB	2.35	0.74
44:RY:95:LYS:HB3	44:RY:100:ALA:CA	2.10	0.74
28:YE:78:LEU:HG	28:YE:79:ARG:NE	2.03	0.74
5:XE:45:PHE:CE2	5:XE:47:LYS:HD2	2.22	0.74
2:QB:115:LEU:HD13	2:QB:145:LEU:HB3	1.68	0.74
15:XO:70:LEU:HD12	15:XO:70:LEU:O	1.88	0.74
13:XM:37:THR:HG21	13:XM:39:ILE:HD11	1.68	0.74
54:R8:59:LYS:HZ3	54:R8:59:LYS:CB	1.99	0.73
3:XC:181:ASN:ND2	3:XC:204:LEU:HD12	2.00	0.73
33:YN:1:MET:HE1	40:YU:95:LEU:HD21	1.70	0.73
34:RO:47:ILE:CD1	34:RO:48:PRO:HD2	2.16	0.73
36:RQ:79:LEU:CD1	36:RQ:79:LEU:O	2.35	0.73
44:RY:52:SER:OG	44:RY:53:PRO:HD3	1.88	0.73
51:R5:2:ALA:O	51:R5:3:LYS:HB2	1.88	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:XJ:27:ALA:HB1	10:XJ:34:VAL:HG21	1.69	0.73
25:RA:221:A:H4'	25:RA:222:A:O5'	1.88	0.73
25:RA:637:A:H2'	35:RP:117:GLU:OE2	1.88	0.73
47:R1:76:ARG:HG2	47:R1:76:ARG:HH11	1.53	0.73
42:RW:70:TYR:HD2	42:RW:70:TYR:H	1.36	0.73
14:QN:40:CYS:SG	14:QN:42:ILE:HB	2.27	0.73
27:YD:131:LEU:HB2	27:YD:136:ILE:CD1	2.17	0.73
33:RN:58:ASP:H	33:RN:60:ILE:HD11	1.53	0.73
50:Y4:41:PRO:O	50:Y4:42:PHE:HB3	1.87	0.73
41:RV:35:LEU:H	41:RV:35:LEU:HD22	1.51	0.73
38:RS:36:TYR:CD2	38:RS:52:SER:HB3	2.23	0.73
3:QC:86:VAL:O	3:QC:89:GLU:HB3	1.88	0.73
3:QC:134:ILE:HD11	3:QC:153:VAL:HG21	1.70	0.73
42:RW:73:ALA:HB3	42:RW:106:ILE:HG12	1.68	0.73
10:QJ:3:LYS:HD2	10:QJ:77:PRO:HD3	1.70	0.73
14:YN:44:LEU:CD1	14:YN:53:LEU:CD1	2.66	0.73
35:RP:50:ARG:NH2	35:RP:50:ARG:HB3	1.98	0.73
31:YH:153:LYS:HG3	31:YH:161:GLY:CA	2.18	0.73
2:QB:178:ARG:NE	8:QH:71:GLY:O	2.21	0.73
39:YT:102:ILE:HB	39:YT:110:ILE:CD1	2.19	0.73
35:RP:62:LEU:HD22	35:RP:62:LEU:H	1.53	0.73
25:YA:1903:G:OP2	27:YD:241:PRO:HB2	1.88	0.73
2:XB:47:THR:O	2:XB:51:LEU:HG	1.87	0.73
25:YA:1509:C:H3'	25:YA:1510:A:H5''	1.70	0.73
25:RA:1667:G:O2'	25:RA:1669:A:N6	2.21	0.73
14:YN:32:SER:O	14:YN:41:ARG:N	2.22	0.73
27:RD:30:GLU:HG3	27:RD:63:ARG:CZ	2.17	0.73
28:RE:77:ILE:HD12	28:RE:78:LEU:H	1.52	0.73
28:RE:61:ARG:HB2	28:RE:62:PRO:HD3	1.69	0.73
28:RE:203:LYS:O	28:RE:203:LYS:HD2	1.88	0.73
2:XB:8:LYS:N	2:XB:8:LYS:HD3	2.03	0.73
16:XP:60:LEU:HA	16:XP:64:ALA:HB3	1.71	0.73
11:XK:17:GLY:HA3	11:XK:77:MET:HE3	1.71	0.73
40:RU:64:ARG:CG	40:RU:64:ARG:HH21	2.00	0.73
34:YO:26:LYS:HB2	34:YO:30:ALA:CB	2.18	0.73
3:XC:134:ILE:HD11	3:XC:153:VAL:HG21	1.70	0.73
29:RF:9:ILE:HD11	29:RF:125:LEU:HG	1.70	0.73
25:RA:1286:A:O2'	25:RA:1288:U:OP2	2.06	0.73
25:RA:49:A:H5''	25:RA:51:G:H5'	1.70	0.73
15:XO:87:ILE:HG22	15:XO:88:ARG:N	2.00	0.73
31:RH:153:LYS:HG3	31:RH:161:GLY:CA	2.18	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:R4:41:PRO:O	50:R4:42:PHE:HB3	1.87	0.73
33:RN:96:GLU:HG2	33:RN:97:ARG:N	2.01	0.73
25:YA:1454:U:OP1	37:YR:77:ARG:NH1	2.22	0.73
39:RT:23:ARG:HB2	39:RT:24:PRO:HD2	1.70	0.73
38:YS:62:LYS:HB3	38:YS:97:ARG:HD3	1.68	0.73
48:Y2:29:LYS:HD3	48:Y2:57:ILE:HD13	1.71	0.73
25:YA:2343:C:O2'	25:YA:2373:G:O2'	2.06	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
49:R3:7:LYS:HB2	49:R3:34:GLU:HG2	1.69	0.73
8:XH:20:TYR:HD1	8:XH:65:TYR:CD2	2.07	0.73
1:QA:1055:A:O2'	3:QC:161:GLU:OE2	2.06	0.73
28:RE:23:VAL:HG21	28:RE:183:LEU:HD23	1.68	0.73
3:XC:86:VAL:O	3:XC:89:GLU:HB3	1.88	0.73
16:QP:45:THR:HG23	16:QP:46:PRO:HD2	1.70	0.73
50:Y4:29:PRO:O	50:Y4:30:GLU:HB2	1.89	0.73
25:YA:2298:A:H62	25:YA:2318:G:H8	1.36	0.73
54:Y8:61:LEU:O	54:Y8:62:LEU:HB2	1.88	0.73
27:RD:131:LEU:HB2	27:RD:136:ILE:CD1	2.17	0.73
5:QE:10:MET:CB	5:QE:32:VAL:HG22	2.18	0.73
7:QG:79:ARG:HH22	7:QG:82:GLY:HA2	1.51	0.73
33:YN:58:ASP:H	33:YN:60:ILE:HD11	1.53	0.73
28:YE:203:LYS:HD2	28:YE:203:LYS:O	1.88	0.73
36:YQ:79:LEU:CD1	36:YQ:79:LEU:O	2.35	0.73
4:QD:30:LYS:HB2	4:QD:35:ARG:HG3	1.70	0.73
51:Y5:40:LYS:CE	51:Y5:46:CYS:HB3	2.19	0.73
2:XB:115:LEU:HD13	2:XB:145:LEU:HB3	1.69	0.73
16:QP:43:LYS:O	16:QP:45:THR:N	2.21	0.73
13:QM:121:LYS:HE2	13:QM:121:LYS:HA	1.71	0.73
39:RT:26:ASP:HB3	39:RT:91:ARG:HA	1.69	0.73
25:RA:1403:C:H5''	25:RA:1471:A:H1'	1.71	0.73
19:QS:5:LEU:HD22	50:R4:67:TYR:HE2	1.46	0.73
28:YE:77:ILE:HD12	28:YE:78:LEU:H	1.52	0.73
3:XC:13:GLY:HA3	14:XN:57:ARG:NH2	2.04	0.73
28:RE:55:ASN:C	28:RE:57:LYS:H	1.91	0.73
18:XR:56:THR:HB	18:XR:58:LEU:HD12	1.71	0.73
2:QB:132:LYS:HA	2:QB:135:GLN:HB2	1.71	0.73
4:XD:146:ILE:HD12	4:XD:146:ILE:N	2.04	0.73
1:QA:1269:A:N1	1:QA:1312:G:O2'	2.22	0.73
19:QS:3:ARG:HG3	19:QS:4:SER:H	1.52	0.73
54:Y8:16:ILE:HD11	54:Y8:57:ARG:HG2	1.69	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:101:LEU:CD1	29:RF:102:PRO:HD2	2.11	0.73
28:RE:56:PRO:O	28:RE:57:LYS:HB2	1.89	0.73
52:Y6:13:CYS:HA	52:Y6:50:ARG:O	1.89	0.73
20:XT:47:GLY:O	20:XT:49:ALA:N	2.19	0.73
1:QA:1305:G:N2	1:QA:1331:G:H2'	2.04	0.73
36:RQ:90:VAL:CG1	36:RQ:91:GLU:H	2.02	0.73
30:YG:7:LEU:HD21	30:YG:176:LEU:HD22	1.70	0.73
25:YA:1803:A:H4'	27:YD:259:THR:HG21	1.70	0.73
45:RZ:19:ARG:NH1	45:RZ:84:GLU:O	2.22	0.73
25:RA:1542:G:O6	25:RA:1543:A:N6	2.22	0.73
37:YR:3:HIS:O	37:YR:5:LYS:N	2.22	0.73
6:XF:77:ARG:HB2	6:XF:77:ARG:HH11	1.53	0.73
40:RU:34:LYS:HA	40:RU:34:LYS:HE2	1.70	0.73
48:R2:27:GLU:OE1	48:R2:27:GLU:N	2.19	0.73
3:QC:13:GLY:HA3	14:QN:57:ARG:NH2	2.04	0.72
2:XB:75:LYS:O	2:XB:75:LYS:HD3	1.89	0.72
35:YP:126:VAL:CG1	35:YP:147:LEU:HD21	2.17	0.72
25:YA:2392:A:H2	25:YA:2424:C:H42	1.37	0.72
30:RG:146:TYR:O	30:RG:149:VAL:HG22	1.88	0.72
38:YS:83:LYS:HZ2	38:YS:109:GLY:HA2	1.53	0.72
36:YQ:79:LEU:C	36:YQ:79:LEU:HD22	2.07	0.72
20:QT:50:GLU:HG3	20:QT:51:GLU:H	1.54	0.72
29:RF:157:VAL:HB	29:RF:194:MET:HB3	1.70	0.72
6:QF:25:ILE:HD13	6:QF:28:ARG:NH1	2.04	0.72
25:RA:2562:U:O2'	34:RO:23:ARG:NH1	2.22	0.72
12:XL:11:VAL:HG21	17:XQ:34:LYS:HD3	1.70	0.72
27:YD:77:ALA:CB	27:YD:97:TYR:HA	2.18	0.72
28:YE:55:ASN:C	28:YE:57:LYS:H	1.91	0.72
33:RN:1:MET:HE1	40:RU:95:LEU:HD21	1.71	0.72
51:Y5:58:LEU:CD1	51:Y5:60:VAL:HG12	2.19	0.72
31:RH:54:ARG:HH12	31:RH:62:LYS:HG2	1.54	0.72
11:QK:48:ILE:HD12	11:QK:63:LEU:HB3	1.71	0.72
1:QA:1321:C:H5''	1:QA:1322:C:H5''	1.70	0.72
25:RA:265:A:N6	25:RA:427:U:O2'	2.21	0.72
31:RH:80:SER:O	31:RH:81:GLU:HB2	1.89	0.72
31:YH:125:VAL:HG12	31:YH:126:PRO:HG3	1.71	0.72
1:QA:1318:A:H4'	19:QS:11:VAL:HG11	1.70	0.72
31:YH:152:ARG:O	31:YH:153:LYS:HD2	1.90	0.72
28:RE:13:ARG:HA	28:RE:22:PRO:HA	1.71	0.72
25:YA:2810:A:O3'	28:YE:61:ARG:HG3	1.90	0.72
30:YG:146:TYR:O	30:YG:149:VAL:HG22	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:YU:98:LEU:HD23	40:YU:99:ALA:N	2.04	0.72
38:YS:26:LEU:O	38:YS:26:LEU:HD23	1.90	0.72
4:XD:91:SER:HA	4:XD:94:LEU:HD13	1.70	0.72
16:XP:20:VAL:HG21	16:XP:32:TYR:CG	2.24	0.72
35:YP:88:LEU:C	35:YP:90:ARG:H	1.92	0.72
37:YR:117:VAL:HG22	37:YR:118:GLU:N	2.05	0.72
49:Y3:56:VAL:HG12	49:Y3:57:GLU:N	2.04	0.72
25:RA:1543:A:O2'	25:RA:1544:C:H3'	1.90	0.72
12:QL:126:LYS:HB2	12:QL:126:LYS:NZ	2.04	0.72
33:YN:89:LYS:O	33:YN:93:THR:HG22	1.90	0.72
16:XP:72:ARG:HD3	16:XP:72:ARG:C	2.10	0.72
47:R1:80:LEU:HB2	47:R1:81:LYS:HE2	1.71	0.72
27:YD:35:LYS:HZ1	27:YD:65:ILE:HA	1.52	0.72
26:RB:42:C:H41	30:RG:91:ARG:HH21	1.38	0.72
7:QG:78:ARG:HH12	7:QG:80:VAL:HG23	1.53	0.72
44:YY:52:SER:OG	44:YY:53:PRO:HD3	1.88	0.72
51:R5:40:LYS:CE	51:R5:46:CYS:HB3	2.19	0.72
36:YQ:90:VAL:CG1	36:YQ:91:GLU:H	2.02	0.72
12:XL:48:PRO:HD2	12:XL:49:ASN:H	1.51	0.72
2:XB:21:ARG:O	2:XB:23:ARG:HD3	1.89	0.72
15:QO:71:GLN:HB2	15:QO:78:TYR:CD1	2.25	0.72
31:RH:30:LYS:HD2	31:RH:81:GLU:H	1.54	0.72
37:YR:85:PRO:O	37:YR:87:TYR:N	2.22	0.72
3:XC:16:ARG:NH1	3:XC:16:ARG:HB2	2.04	0.72
35:RP:127:ALA:C	35:RP:147:LEU:HD23	2.10	0.72
28:RE:78:LEU:HG	28:RE:79:ARG:NE	2.03	0.72
41:YV:39:LEU:O	41:YV:40:LEU:HD23	1.90	0.72
38:YS:83:LYS:C	38:YS:109:GLY:HA3	2.10	0.72
4:QD:30:LYS:HG3	4:QD:35:ARG:HE	1.52	0.72
5:QE:36:ASP:OD2	5:QE:38:GLN:HB2	1.87	0.72
48:Y2:27:GLU:OE1	48:Y2:27:GLU:N	2.19	0.72
39:RT:117:ASP:O	39:RT:121:ILE:HG13	1.89	0.72
32:YI:144:VAL:HG13	32:YI:145:VAL:HG13	1.71	0.72
25:RA:27:G:H22	25:RA:512:G:H2'	1.55	0.72
16:QP:72:ARG:HD3	16:QP:72:ARG:C	2.10	0.72
40:YU:34:LYS:HE2	40:YU:34:LYS:HA	1.69	0.72
8:XH:41:ARG:HH11	8:XH:41:ARG:CB	2.03	0.72
54:Y8:29:LYS:HD3	54:Y8:44:LYS:HB2	1.71	0.72
10:QJ:49:VAL:HG22	14:QN:41:ARG:HB3	1.59	0.72
31:YH:132:ARG:CB	31:YH:132:ARG:HH11	1.97	0.72
28:YE:21:VAL:HB	28:YE:22:PRO:CB	2.18	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:201:THR:HG22	28:YE:203:LYS:HB3	1.69	0.72
51:R5:58:LEU:CD1	51:R5:60:VAL:HG12	2.19	0.72
20:QT:97:ALA:O	20:QT:99:LEU:HD13	1.89	0.72
12:QL:10:LEU:HD13	17:QQ:32:TYR:HE2	1.53	0.72
35:RP:88:LEU:C	35:RP:90:ARG:H	1.92	0.72
39:RT:54:ARG:HG2	39:RT:54:ARG:HH11	1.52	0.72
34:RO:113:LYS:HG2	34:RO:117:LEU:HD11	1.71	0.72
35:RP:29:LYS:HD2	35:RP:30:THR:HG22	1.72	0.72
25:YA:1798:U:H5''	27:YD:259:THR:HG22	1.71	0.72
29:RF:124:LEU:HD12	29:RF:125:LEU:N	2.04	0.72
25:RA:140:A:H8	25:RA:1408:C:HO2'	1.34	0.72
6:QF:72:VAL:CG2	6:QF:90:VAL:HG11	2.20	0.72
39:RT:78:LEU:HD13	39:RT:78:LEU:O	1.87	0.72
38:RS:42:ASP:O	38:RS:43:GLU:HB2	1.90	0.72
29:YF:124:LEU:HD12	29:YF:125:LEU:N	2.04	0.72
47:Y1:80:LEU:HB2	47:Y1:81:LYS:HE2	1.71	0.72
28:RE:28:ALA:HB3	28:RE:93:VAL:HG22	1.72	0.72
28:YE:14:ILE:HD11	39:YT:14:TYR:OH	1.90	0.72
8:QH:20:TYR:HD1	8:QH:65:TYR:CD2	2.07	0.72
5:XE:76:ILE:HB	5:XE:77:PRO:HD2	1.72	0.72
31:YH:54:ARG:HH12	31:YH:62:LYS:HG2	1.54	0.72
47:Y1:3:LYS:HD3	47:Y1:43:TYR:HD2	1.52	0.72
39:YT:117:ASP:O	39:YT:121:ILE:HG13	1.89	0.72
4:QD:146:ILE:N	4:QD:146:ILE:HD12	2.04	0.72
10:XJ:3:LYS:HD2	10:XJ:77:PRO:HD3	1.70	0.72
54:R8:16:ILE:HD11	54:R8:57:ARG:HG2	1.70	0.72
10:XJ:98:ILE:H	10:XJ:98:ILE:HD12	1.55	0.72
35:RP:114:ILE:HD13	35:RP:125:VAL:HG21	1.72	0.72
15:QO:79:ARG:O	15:QO:82:ILE:HG22	1.90	0.72
40:RU:69:CYS:HB3	40:RU:106:PHE:HZ	1.55	0.72
38:RS:103:GLU:O	38:RS:106:ARG:HG3	1.90	0.72
29:RF:32:LEU:O	29:RF:32:LEU:HD12	1.90	0.72
29:YF:32:LEU:HD12	29:YF:32:LEU:O	1.90	0.72
36:RQ:79:LEU:HD22	36:RQ:79:LEU:C	2.07	0.72
52:R6:13:CYS:HA	52:R6:50:ARG:O	1.89	0.72
20:QT:27:LYS:O	20:QT:30:LYS:HB3	1.89	0.72
39:RT:57:PHE:C	39:RT:58:ASN:HD22	1.93	0.72
49:R3:56:VAL:HG12	49:R3:57:GLU:N	2.04	0.72
53:Y7:10:ARG:O	53:Y7:14:LYS:HB2	1.89	0.72
25:YA:780:G:H21	25:YA:783:A:H62	1.36	0.72
53:R7:10:ARG:O	53:R7:14:LYS:HB2	1.90	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RH:89:ILE:CD1	31:RH:129:THR:HB	2.19	0.72
28:YE:197:ILE:HD11	28:YE:199:ARG:HH12	1.55	0.72
35:YP:127:ALA:C	35:YP:147:LEU:HD23	2.10	0.72
28:YE:13:ARG:HA	28:YE:22:PRO:HA	1.71	0.72
16:QP:60:LEU:HA	16:QP:64:ALA:HB3	1.71	0.72
44:YY:57:GLN:HE21	44:YY:58:GLY:H	1.37	0.72
20:XT:97:ALA:O	20:XT:99:LEU:HD13	1.89	0.72
31:RH:26:VAL:CG1	31:RH:27:LYS:H	2.02	0.72
29:YF:157:VAL:HB	29:YF:194:MET:HB3	1.70	0.72
31:YH:30:LYS:HD2	31:YH:81:GLU:H	1.54	0.72
25:YA:2131:G:H4'	25:YA:2132:U:H4'	1.72	0.72
6:QF:77:ARG:HB2	6:QF:77:ARG:HH11	1.53	0.72
31:YH:128:PRO:HD2	31:YH:129:THR:H	1.55	0.72
54:R8:61:LEU:O	54:R8:62:LEU:HB2	1.88	0.72
10:QJ:98:ILE:H	10:QJ:98:ILE:HD12	1.55	0.72
10:XJ:5:ARG:HG3	10:XJ:71:LEU:HD11	1.72	0.72
31:RH:152:ARG:O	31:RH:153:LYS:HD2	1.90	0.72
40:RU:98:LEU:HD23	40:RU:99:ALA:N	2.04	0.72
38:YS:83:LYS:HG2	38:YS:109:GLY:N	2.04	0.72
29:RF:32:LEU:HD12	29:RF:32:LEU:C	2.10	0.72
38:RS:26:LEU:HD23	38:RS:26:LEU:O	1.90	0.72
29:YF:32:LEU:HD12	29:YF:32:LEU:C	2.10	0.72
10:QJ:75:ILE:HG13	10:QJ:76:ASN:N	2.05	0.72
31:YH:26:VAL:CG1	31:YH:27:LYS:H	2.02	0.72
53:R7:5:TRP:NE1	53:R7:7:PRO:HG3	2.04	0.72
40:RU:66:ASN:HB2	40:RU:76:TYR:HB2	1.72	0.72
30:RG:7:LEU:HD21	30:RG:176:LEU:HD22	1.70	0.72
2:QB:21:ARG:O	2:QB:23:ARG:HD3	1.90	0.72
54:Y8:60:LEU:C	54:Y8:63:PRO:HD2	2.11	0.72
25:RA:2114:A:N6	25:RA:2119:A:N7	2.38	0.72
12:XL:126:LYS:NZ	12:XL:126:LYS:HB2	2.04	0.72
37:RR:3:HIS:O	37:RR:5:LYS:N	2.22	0.72
24:XX:3:G:O2'	24:XX:4:C:OP2	2.07	0.72
42:YW:70:TYR:H	42:YW:70:TYR:HD2	1.37	0.72
47:Y1:76:ARG:HH11	47:Y1:76:ARG:HG2	1.53	0.72
47:Y1:80:LEU:C	47:Y1:81:LYS:HE2	2.10	0.71
31:YH:84:SER:O	31:YH:85:LYS:HB2	1.89	0.71
28:RE:197:ILE:HD11	28:RE:199:ARG:HH12	1.55	0.71
28:YE:56:PRO:O	28:YE:57:LYS:HB2	1.89	0.71
15:XO:79:ARG:O	15:XO:82:ILE:HG22	1.90	0.71
13:QM:49:THR:HG22	13:QM:51:ALA:N	2.01	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:YS:103:GLU:O	38:YS:106:ARG:HG3	1.90	0.71
8:QH:10:LEU:N	8:QH:10:LEU:HD23	2.04	0.71
36:RQ:79:LEU:O	36:RQ:79:LEU:CD2	2.36	0.71
2:XB:168:THR:HB	2:XB:192:SER:HB2	1.69	0.71
44:RY:51:VAL:HG13	44:RY:52:SER:N	2.03	0.71
25:YA:482:A:O2'	44:YY:47:LYS:NZ	2.22	0.71
51:Y5:2:ALA:O	51:Y5:3:LYS:HB2	1.88	0.71
37:RR:117:VAL:HG22	37:RR:118:GLU:N	2.05	0.71
37:RR:85:PRO:O	37:RR:87:TYR:N	2.22	0.71
6:XF:25:ILE:HD13	6:XF:28:ARG:NH1	2.05	0.71
25:YA:1754:C:OP1	39:YT:96:ARG:NH1	2.21	0.71
28:RE:93:VAL:H	28:RE:95:ILE:HD12	1.54	0.71
13:XM:8:GLU:OE2	30:YG:115:ARG:NH1	2.23	0.71
40:YU:69:CYS:HB3	40:YU:106:PHE:HZ	1.55	0.71
8:XH:10:LEU:HD23	8:XH:10:LEU:N	2.04	0.71
4:QD:25:ARG:HH12	4:QD:30:LYS:HE3	1.55	0.71
39:RT:102:ILE:HB	39:RT:110:ILE:CD1	2.19	0.71
20:QT:57:ARG:HD3	20:QT:102:GLY:O	1.90	0.71
38:YS:67:ARG:O	38:YS:71:ARG:HG3	1.89	0.71
35:RP:85:LEU:HA	35:RP:88:LEU:HD22	1.71	0.71
25:RA:2680:C:H5'	28:RE:189:PRO:HA	1.71	0.71
17:QQ:41:LYS:HZ1	17:QQ:92:ARG:HH22	1.36	0.71
16:XP:45:THR:HG23	16:XP:46:PRO:HD2	1.70	0.71
29:YF:9:ILE:HD11	29:YF:125:LEU:HG	1.70	0.71
54:R8:60:LEU:O	54:R8:63:PRO:HD2	1.90	0.71
25:YA:2245:U:H5'	25:YA:2246:G:H5'	1.70	0.71
20:XT:83:ARG:HA	20:XT:86:ARG:HB3	1.71	0.71
25:RA:2198:A:O2'	25:RA:2199:A:O5'	2.07	0.71
1:XA:8:A:N6	4:XD:205:GLU:O	2.23	0.71
19:QS:40:ILE:HG13	19:QS:44:MET:SD	2.30	0.71
54:Y8:58:ILE:HD13	54:Y8:61:LEU:HD11	1.72	0.71
40:RU:8:VAL:HG23	40:RU:11:ARG:NH2	1.99	0.71
19:XS:42:PRO:HD3	50:Y4:63:TYR:CE2	2.25	0.71
38:RS:83:LYS:HG2	38:RS:109:GLY:N	2.04	0.71
52:Y6:28:ARG:HB3	52:Y6:30:THR:H	1.55	0.71
29:YF:185:ASP:OD1	29:YF:188:ARG:NH1	2.23	0.71
25:RA:1012:U:H3	33:RN:25:ARG:HH11	1.38	0.71
25:YA:2014:A:O2'	51:Y5:2:ALA:HB2	1.91	0.71
35:YP:85:LEU:HA	35:YP:88:LEU:HD22	1.71	0.71
53:Y7:5:TRP:NE1	53:Y7:7:PRO:HG3	2.04	0.71
1:QA:1395:C:HO2'	1:QA:1401:G:HO2'	1.36	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1005:A:HO2'	1:XA:1037:C:HO2'	1.36	0.71
48:R2:29:LYS:HD3	48:R2:57:ILE:HD13	1.71	0.71
42:RW:1:MET:HE2	42:RW:2:GLU:H	1.55	0.71
34:RO:3:GLN:HB2	34:RO:4:PRO:HD2	1.72	0.71
25:RA:620:G:H4'	25:RA:621:A:H5''	1.73	0.71
34:YO:3:GLN:HB2	34:YO:4:PRO:HD2	1.72	0.71
1:QA:1298:C:OP2	7:QG:114:ARG:NH2	2.23	0.71
35:RP:49:ARG:HD2	54:R8:58:ILE:CG2	2.20	0.71
19:XS:40:ILE:HG13	19:XS:44:MET:SD	2.31	0.71
3:XC:16:ARG:HD2	3:XC:54:ARG:NH2	2.03	0.71
35:YP:58:THR:O	35:YP:61:ARG:CZ	2.38	0.71
28:RE:21:VAL:HB	28:RE:22:PRO:CB	2.18	0.71
2:QB:187:LEU:HD11	2:QB:204:ASN:O	1.91	0.71
29:YF:185:ASP:HA	29:YF:188:ARG:CD	2.20	0.71
48:Y2:41:ILE:C	48:Y2:41:ILE:HD12	2.10	0.71
54:Y8:60:LEU:O	54:Y8:63:PRO:HD2	1.90	0.71
1:XA:677:U:H3	1:XA:713:G:H22	1.38	0.71
20:XT:63:ILE:HG22	20:XT:77:ALA:HB1	1.73	0.71
10:QJ:49:VAL:O	10:QJ:60:ARG:HB3	1.90	0.71
41:RV:39:LEU:O	41:RV:40:LEU:HD23	1.90	0.71
2:QB:178:ARG:HD2	8:QH:71:GLY:HA2	1.73	0.71
2:XB:214:ILE:HA	2:XB:217:ARG:HH21	1.55	0.71
38:RS:67:ARG:O	38:RS:71:ARG:HG3	1.89	0.71
1:QA:1348:U:H4'	9:QI:120:ARG:HD2	1.72	0.71
27:RD:244:ARG:HB2	27:RD:245:PRO:HD2	1.71	0.71
31:RH:125:VAL:HG12	31:RH:126:PRO:HG3	1.70	0.71
11:QK:17:GLY:HA3	11:QK:77:MET:CE	2.20	0.71
33:RN:1:MET:CE	40:RU:95:LEU:HD21	2.21	0.71
33:YN:1:MET:CE	40:YU:95:LEU:HD21	2.21	0.71
38:RS:106:ARG:CA	38:RS:110:LEU:HD11	2.19	0.71
7:XG:78:ARG:HH12	7:XG:80:VAL:CG2	2.04	0.71
52:R6:25:LYS:HD2	54:R8:34:TRP:HZ2	1.56	0.71
52:Y6:36:LEU:HD13	52:Y6:50:ARG:NH1	2.05	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
43:RX:12:VAL:HG12	43:RX:27:THR:O	1.91	0.71
1:QA:1073:U:O2'	2:QB:104:ASN:OD1	2.08	0.71
20:QT:83:ARG:HA	20:QT:86:ARG:HB3	1.72	0.71
8:QH:41:ARG:HH11	8:QH:41:ARG:CB	2.03	0.71
28:RE:14:ILE:HD11	39:RT:14:TYR:OH	1.90	0.71
16:QP:20:VAL:HG21	16:QP:32:TYR:CG	2.25	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:XT:57:ARG:HD3	20:XT:102:GLY:O	1.90	0.71
11:XK:124:LYS:HD2	11:XK:125:PHE:CE1	2.25	0.71
50:R4:29:PRO:O	50:R4:30:GLU:HB2	1.89	0.71
43:YX:12:VAL:HG12	43:YX:27:THR:O	1.90	0.71
32:RI:4:ILE:HD11	32:RI:44:LEU:HD12	1.71	0.71
2:QB:75:LYS:HD3	2:QB:75:LYS:O	1.89	0.71
15:XO:71:GLN:HB2	15:XO:78:TYR:CD1	2.24	0.71
25:RA:299:A:H5'	44:RY:84:ARG:HH21	1.54	0.71
4:XD:20:TYR:CE2	4:XD:27:TYR:HE2	2.09	0.71
54:R8:58:ILE:HD13	54:R8:61:LEU:HD11	1.72	0.71
10:QJ:5:ARG:HG3	10:QJ:71:LEU:HD11	1.72	0.71
35:YP:49:ARG:HD2	54:Y8:58:ILE:CG2	2.20	0.71
2:XB:172:ILE:HD12	2:XB:172:ILE:H	1.56	0.71
35:RP:83:VAL:CG1	35:RP:112:LEU:HD21	2.21	0.71
29:RF:66:PRO:O	29:RF:67:GLN:HB3	1.89	0.71
8:QH:84:ARG:HH12	8:QH:86:ILE:CD1	2.02	0.71
39:YT:23:ARG:HB2	39:YT:24:PRO:HD2	1.71	0.71
54:R8:60:LEU:C	54:R8:63:PRO:HD2	2.11	0.71
25:YA:528:A:C2	25:YA:2042:A:H2'	2.25	0.71
2:QB:59:GLU:O	2:QB:62:ALA:HB3	1.90	0.71
1:XA:448:A:OP2	1:XA:485:G:N2	2.18	0.71
1:QA:1312:G:H5''	50:R4:67:TYR:OH	1.90	0.71
28:YE:93:VAL:H	28:YE:95:ILE:HD12	1.54	0.71
3:QC:16:ARG:HB2	3:QC:16:ARG:NH1	2.04	0.71
38:YS:83:LYS:HZ1	38:YS:109:GLY:HA2	1.52	0.71
29:RF:185:ASP:OD1	29:RF:188:ARG:NH1	2.23	0.71
52:Y6:29:ASN:OD1	52:Y6:30:THR:HG22	1.91	0.71
52:R6:36:LEU:HD13	52:R6:50:ARG:NH1	2.05	0.71
2:QB:8:LYS:HD3	2:QB:8:LYS:N	2.02	0.71
51:Y5:40:LYS:HE2	51:Y5:47:PRO:HD2	1.73	0.71
20:QT:23:ARG:CA	20:QT:26:ASN:HD21	2.04	0.71
29:RF:178:PRO:HB2	29:RF:201:VAL:HG11	1.73	0.71
11:QK:124:LYS:HD2	11:QK:125:PHE:CE1	2.25	0.71
3:XC:123:GLN:O	3:XC:128:PHE:HB2	1.90	0.71
25:RA:1332:G:N2	25:RA:1609:A:O2'	2.24	0.71
13:QM:121:LYS:HE2	13:QM:121:LYS:CA	2.21	0.71
48:Y2:7:ARG:HH11	48:Y2:7:ARG:HG3	1.55	0.71
2:XB:59:GLU:O	2:XB:62:ALA:HB3	1.90	0.71
25:RA:2713:A:OP1	37:RR:14:SER:OG	2.09	0.71
42:YW:6:ILE:HG12	42:YW:104:THR:HG23	1.73	0.71
4:QD:190:ASP:HB3	4:QD:193:ASP:OD1	1.91	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1490:A:O2'	27:RD:99:ASP:OD2	2.09	0.71
41:RV:51:VAL:HG12	41:RV:52:VAL:N	2.06	0.71
38:RS:83:LYS:C	38:RS:109:GLY:HA3	2.10	0.71
2:XB:126:GLU:CG	2:XB:129:GLU:HG3	2.20	0.71
18:QR:56:THR:HB	18:QR:58:LEU:HD12	1.71	0.71
2:XB:132:LYS:HA	2:XB:135:GLN:HB2	1.71	0.71
1:XA:439:A:OP2	1:XA:493:G:N1	2.21	0.71
12:XL:24:VAL:HG12	12:XL:24:VAL:O	1.90	0.71
27:RD:263:ARG:NH1	27:RD:263:ARG:HB2	2.05	0.71
31:RH:132:ARG:CB	31:RH:132:ARG:HH11	1.97	0.70
27:RD:43:ARG:HB3	27:RD:54:ARG:HB2	1.73	0.70
25:YA:2287:A:H62	25:YA:2344:U:H3	1.39	0.70
20:XT:23:ARG:CA	20:XT:26:ASN:HD21	2.03	0.70
48:R2:41:ILE:C	48:R2:41:ILE:HD12	2.10	0.70
11:XK:48:ILE:HD12	11:XK:63:LEU:HB3	1.71	0.70
25:YA:1479:G:N7	25:YA:1510:A:N6	2.39	0.70
31:YH:80:SER:O	31:YH:81:GLU:HB2	1.89	0.70
3:XC:152:ILE:HB	3:XC:199:LYS:HB2	1.73	0.70
25:RA:2438:U:O3'	25:RA:2439:A:H3'	1.91	0.70
29:RF:164:ARG:HG3	29:RF:175:THR:OG1	1.91	0.70
31:YH:59:ARG:HG3	31:YH:59:ARG:HH11	1.56	0.70
35:RP:58:THR:O	35:RP:61:ARG:CZ	2.38	0.70
35:YP:20:GLY:HA2	35:YP:27:HIS:O	1.91	0.70
13:XM:4:ILE:N	13:XM:9:ILE:HG21	2.06	0.70
29:YF:66:PRO:O	29:YF:67:GLN:HB3	1.90	0.70
5:XE:11:ILE:HD11	5:XE:31:LEU:CD1	2.17	0.70
25:RA:2014:A:O2'	51:R5:2:ALA:HB2	1.90	0.70
9:XI:15:ALA:HA	9:XI:64:THR:O	1.91	0.70
9:XI:62:TYR:C	9:XI:63:ILE:HD12	2.12	0.70
15:XO:65:ARG:HB2	15:XO:65:ARG:HH11	1.57	0.70
6:XF:72:VAL:CG2	6:XF:90:VAL:HG11	2.20	0.70
27:YD:244:ARG:HB2	27:YD:245:PRO:HD2	1.71	0.70
20:QT:63:ILE:HG22	20:QT:77:ALA:HB1	1.73	0.70
47:Y1:81:LYS:CA	47:Y1:81:LYS:HE2	2.13	0.70
28:YE:28:ALA:HB3	28:YE:93:VAL:HG22	1.72	0.70
29:RF:101:LEU:O	29:RF:106:ARG:NH1	2.23	0.70
10:XJ:6:ILE:HG13	10:XJ:72:VAL:O	1.91	0.70
13:XM:121:LYS:HA	13:XM:121:LYS:HE2	1.71	0.70
29:YF:178:PRO:HG2	29:YF:179:GLU:OE2	1.90	0.70
34:YO:113:LYS:HG2	34:YO:117:LEU:HD11	1.71	0.70
1:XA:1200:C:H4'	1:XA:1201:A:H5'	1.72	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:RS:54:LEU:HD13	38:RS:54:LEU:O	1.91	0.70
47:R1:80:LEU:C	47:R1:81:LYS:HE2	2.10	0.70
47:Y1:80:LEU:C	47:Y1:81:LYS:HD2	2.12	0.70
13:QM:77:ASN:CG	50:R4:71:ARG:NH1	2.45	0.70
31:YH:103:LEU:HD12	31:YH:131:VAL:HG21	1.73	0.70
31:YH:152:ARG:O	31:YH:153:LYS:CB	2.39	0.70
2:XB:187:LEU:HD11	2:XB:204:ASN:O	1.90	0.70
31:RH:154:PRO:O	31:RH:155:SER:HB2	1.91	0.70
40:YU:65:ILE:HG12	40:YU:96:ALA:HB1	1.73	0.70
38:RS:83:LYS:HZ1	38:RS:109:GLY:HA2	1.56	0.70
52:R6:29:ASN:OD1	52:R6:30:THR:HG22	1.90	0.70
44:RY:48:ALA:O	44:RY:49:VAL:C	2.30	0.70
1:XA:1002:G:H2'	1:XA:1003:G:H8	1.56	0.70
25:YA:1187:G:H5''	41:YV:81:TYR:CE2	2.26	0.70
12:XL:8:ASN:OD1	17:XQ:34:LYS:HE2	1.92	0.70
41:YV:22:VAL:HG12	41:YV:23:GLU:N	2.06	0.70
25:YA:1113:U:OP1	31:YH:2:SER:N	2.24	0.70
5:XE:82:VAL:HG12	5:XE:83:GLU:N	2.06	0.70
31:YH:89:ILE:CD1	31:YH:129:THR:HB	2.20	0.70
29:YF:101:LEU:O	29:YF:106:ARG:NH1	2.23	0.70
28:YE:14:ILE:HG12	28:YE:15:PHE:N	2.07	0.70
52:Y6:25:LYS:HD2	54:Y8:34:TRP:HZ2	1.56	0.70
26:YB:45:A:O4'	30:YG:95:ARG:NH1	2.25	0.70
44:RY:45:VAL:HG12	44:RY:60:PHE:CD1	2.27	0.70
2:QB:126:GLU:CG	2:QB:129:GLU:HG3	2.20	0.70
9:QI:15:ALA:HA	9:QI:64:THR:O	1.91	0.70
48:R2:7:ARG:HH11	48:R2:7:ARG:HG3	1.55	0.70
39:YT:41:ARG:NH2	39:YT:43:GLN:HB2	2.06	0.70
54:R8:29:LYS:HD3	54:R8:44:LYS:HB2	1.71	0.70
25:RA:2306:C:H3'	25:RA:2307:G:H5''	1.72	0.70
25:YA:49:A:N7	25:YA:120:U:H5	1.89	0.70
10:QJ:6:ILE:HG13	10:QJ:72:VAL:O	1.91	0.70
31:YH:86:GLU:CG	31:YH:165:ALA:H	1.94	0.70
36:YQ:32:TYR:CD1	36:YQ:133:ARG:HA	2.27	0.70
36:RQ:32:TYR:CD1	36:RQ:133:ARG:HA	2.27	0.70
8:QH:87:SER:HB2	8:QH:93:VAL:HB	1.73	0.70
5:QE:78:HIS:HE1	5:QE:143:ARG:H	1.38	0.70
51:R5:40:LYS:HE2	51:R5:47:PRO:HD2	1.73	0.70
40:YU:66:ASN:HB2	40:YU:76:TYR:HB2	1.72	0.70
25:RA:1332:G:N2	25:RA:1609:A:HO2'	1.90	0.70
47:Y1:7:ILE:CD1	47:Y1:70:VAL:HG22	2.21	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2467:C:H4'	36:YQ:123:HIS:CD2	2.27	0.70
42:YW:29:LEU:HD21	42:YW:33:ARG:CZ	2.22	0.70
5:QE:82:VAL:HG12	5:QE:83:GLU:N	2.06	0.70
1:QA:457:C:H42	1:QA:475:G:H1	1.39	0.70
33:RN:89:LYS:O	33:RN:93:THR:HG22	1.90	0.70
2:XB:101:MET:HA	2:XB:108:ILE:CG1	2.14	0.70
27:YD:43:ARG:HB3	27:YD:54:ARG:HB2	1.73	0.70
31:RH:152:ARG:O	31:RH:153:LYS:CB	2.40	0.70
31:RH:154:PRO:HG2	31:RH:162:ILE:O	1.92	0.70
3:QC:79:ARG:HE	11:XK:99:GLN:HE22	1.37	0.70
28:YE:103:ASP:OD1	28:YE:201:THR:HA	1.92	0.70
2:QB:214:ILE:HA	2:QB:217:ARG:HH21	1.55	0.70
8:XH:49:GLU:HG3	8:XH:51:VAL:HG13	1.74	0.70
25:RA:957:A:H5'	36:RQ:76:LYS:HD2	1.74	0.70
13:XM:121:LYS:HE2	13:XM:121:LYS:CA	2.21	0.70
29:RF:178:PRO:HG2	29:RF:179:GLU:OE2	1.90	0.70
4:XD:190:ASP:HB3	4:XD:193:ASP:OD1	1.91	0.70
47:R1:7:ILE:CD1	47:R1:70:VAL:HG22	2.21	0.70
29:YF:164:ARG:HG3	29:YF:175:THR:OG1	1.92	0.70
29:RF:65:TRP:HZ3	29:RF:73:ALA:O	1.74	0.70
38:YS:42:ASP:O	38:YS:43:GLU:HB2	1.90	0.70
47:R1:82:LEU:HD13	47:R1:83:GLU:N	2.05	0.70
31:YH:154:PRO:HG2	31:YH:162:ILE:O	1.92	0.70
2:XB:162:ILE:HD11	2:XB:184:VAL:HG13	1.74	0.70
27:RD:65:ILE:HD13	27:RD:65:ILE:O	1.91	0.70
40:RU:65:ILE:HG12	40:RU:96:ALA:HB1	1.73	0.70
38:RS:106:ARG:N	38:RS:110:LEU:HD21	2.07	0.70
43:RX:57:LEU:HD11	43:RX:78:LYS:HD2	1.73	0.70
17:XQ:4:LYS:CE	17:XQ:6:LEU:HD21	2.20	0.70
51:Y5:40:LYS:HE2	51:Y5:47:PRO:CD	2.21	0.70
39:YT:57:PHE:C	39:YT:58:ASN:HD22	1.93	0.70
29:YF:178:PRO:HB2	29:YF:201:VAL:HG11	1.73	0.70
15:QO:74:ASP:CG	15:QO:77:ARG:HG2	2.12	0.70
1:QA:1177:G:OP2	9:QI:97:LYS:NZ	2.25	0.70
16:QP:14:ASN:N	16:QP:15:PRO:HD3	2.07	0.70
25:RA:297:C:H5''	44:RY:85:VAL:HG21	1.74	0.70
6:QF:60:PHE:C	6:QF:61:LEU:HD12	2.12	0.70
34:YO:63:VAL:HG13	34:YO:84:ALA:HA	1.73	0.70
31:RH:128:PRO:HD2	31:RH:129:THR:H	1.55	0.70
47:Y1:82:LEU:HD12	47:Y1:83:GLU:CA	2.21	0.70
13:QM:93:ARG:NH1	25:RA:887:A:OP1	2.24	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RG:131:TYR:O	30:RG:159:VAL:HG13	1.92	0.70
8:XH:87:SER:HB2	8:XH:93:VAL:HB	1.73	0.70
25:YA:1019:U:H3	25:YA:1142(A):A:H62	1.38	0.70
19:QS:51:VAL:O	19:QS:57:HIS:HA	1.92	0.70
13:QM:50:GLU:OE1	50:R4:32:TYR:HE2	1.72	0.70
15:XO:74:ASP:CG	15:XO:77:ARG:HG2	2.12	0.70
42:RW:29:LEU:HD21	42:RW:33:ARG:CZ	2.22	0.70
17:QQ:52:LYS:HD2	17:QQ:55:ASP:OD1	1.91	0.70
27:YD:65:ILE:HD13	27:YD:65:ILE:O	1.91	0.70
27:RD:65:ILE:HD11	27:RD:67:PHE:CD1	2.27	0.70
25:YA:2701:C:H3'	25:YA:2702:U:C5'	2.17	0.70
30:YG:131:TYR:O	30:YG:159:VAL:HG13	1.92	0.70
44:RY:57:GLN:HE21	44:RY:58:GLY:H	1.37	0.70
20:XT:50:GLU:HG3	20:XT:51:GLU:H	1.54	0.70
10:XJ:49:VAL:O	10:XJ:60:ARG:HB3	1.90	0.70
1:XA:1346:A:H5'	9:XI:120:ARG:HH12	1.57	0.70
25:RA:1190:G:OP1	35:RP:30:THR:OG1	2.10	0.70
47:Y1:7:ILE:HD12	47:Y1:70:VAL:HG22	1.73	0.70
1:XA:1124:G:H3'	1:XA:1145:C:H41	1.57	0.70
15:QO:65:ARG:HH11	15:QO:65:ARG:HB2	1.56	0.70
36:YQ:43:THR:OG1	36:YQ:46:GLN:HB2	1.91	0.70
3:QC:152:ILE:HB	3:QC:199:LYS:HB2	1.73	0.70
3:QC:16:ARG:HD2	3:QC:54:ARG:NH2	2.03	0.69
3:XC:105:GLU:HG2	3:XC:106:VAL:H	1.57	0.69
35:YP:114:ILE:HD13	35:YP:125:VAL:HG21	1.72	0.69
35:YP:83:VAL:CG1	35:YP:112:LEU:HD21	2.21	0.69
13:QM:4:ILE:N	13:QM:9:ILE:HG21	2.06	0.69
41:YV:51:VAL:HG12	41:YV:52:VAL:N	2.06	0.69
35:YP:64:LYS:C	35:YP:66:GLY:H	1.94	0.69
35:RP:64:LYS:C	35:RP:66:GLY:H	1.94	0.69
5:QE:76:ILE:HB	5:QE:77:PRO:HD2	1.72	0.69
11:XK:17:GLY:HA3	11:XK:77:MET:CE	2.21	0.69
46:Y0:12:ASN:HA	46:Y0:14:ARG:HH21	1.56	0.69
9:QI:62:TYR:C	9:QI:63:ILE:HD12	2.12	0.69
9:QI:113:LYS:N	9:QI:113:LYS:HD2	2.07	0.69
48:R2:47:ASN:O	48:R2:49:LYS:N	2.25	0.69
47:R1:7:ILE:HD12	47:R1:70:VAL:HG22	1.73	0.69
38:YS:54:LEU:HD13	38:YS:54:LEU:O	1.91	0.69
25:RA:2392:A:C8	35:RP:60:MET:HG3	2.27	0.69
1:QA:184:G:H2'	1:QA:185:A:H8	1.57	0.69
3:QC:147:LYS:O	3:QC:203:PHE:HB3	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:162:ILE:O	2:QB:162:ILE:HG13	1.92	0.69
7:QG:78:ARG:HH12	7:QG:80:VAL:CG2	2.04	0.69
43:YX:57:LEU:HD11	43:YX:78:LYS:HD2	1.73	0.69
41:YV:41:GLY:HA3	41:YV:46:VAL:HG11	1.74	0.69
19:XS:51:VAL:O	19:XS:57:HIS:HA	1.92	0.69
47:R1:74:VAL:O	47:R1:74:VAL:HG12	1.92	0.69
32:RI:88:ILE:HG12	32:RI:122:GLU:H	1.57	0.69
4:QD:120:LEU:HD22	4:QD:125:HIS:HB2	1.73	0.69
44:RY:2:ARG:HH11	44:RY:2:ARG:HG2	1.57	0.69
1:XA:642:A:N3	8:XH:113:SER:OG	2.22	0.69
10:QJ:38:ILE:O	10:QJ:38:ILE:HG13	1.92	0.69
35:RP:126:VAL:CG1	35:RP:147:LEU:HD21	2.16	0.69
28:RE:103:ASP:OD1	28:RE:201:THR:HA	1.92	0.69
35:YP:64:LYS:HB2	54:Y8:25:MET:CG	2.22	0.69
48:Y2:47:ASN:O	48:Y2:49:LYS:N	2.25	0.69
6:XF:67:MET:HB2	6:XF:68:PRO:HD2	1.75	0.69
47:Y1:53:VAL:HG22	47:Y1:74:VAL:HG13	1.74	0.69
16:XP:14:ASN:N	16:XP:15:PRO:HD3	2.07	0.69
27:RD:76:PRO:O	27:RD:98:VAL:HG23	1.91	0.69
25:YA:1794:U:H2'	25:YA:1795:C:H6	1.57	0.69
31:RH:59:ARG:HH11	31:RH:59:ARG:HG3	1.56	0.69
47:R1:82:LEU:HD12	47:R1:83:GLU:CA	2.21	0.69
29:RF:103:LYS:HA	29:RF:106:ARG:CG	2.21	0.69
35:RP:20:GLY:HA2	35:RP:27:HIS:O	1.92	0.69
14:YN:6:LEU:HD23	14:YN:6:LEU:O	1.93	0.69
42:YW:86:LEU:HD12	42:YW:87:PRO:CD	2.23	0.69
34:YO:8:LEU:N	34:YO:8:LEU:HD22	2.07	0.69
2:QB:95:GLN:HE21	2:QB:147:LYS:HE2	1.56	0.69
2:XB:95:GLN:HE21	2:XB:147:LYS:HE2	1.56	0.69
3:QC:123:GLN:O	3:QC:128:PHE:HB2	1.91	0.69
33:RN:120:LEU:HD11	33:RN:122:VAL:HG23	1.74	0.69
34:RO:63:VAL:HG13	34:RO:84:ALA:HA	1.72	0.69
31:RH:103:LEU:HD12	31:RH:131:VAL:HG21	1.73	0.69
35:YP:50:ARG:HB3	35:YP:50:ARG:NH2	1.98	0.69
10:XJ:38:ILE:HG13	10:XJ:38:ILE:O	1.92	0.69
2:XB:162:ILE:O	2:XB:162:ILE:HG13	1.92	0.69
27:YD:65:ILE:HD11	27:YD:67:PHE:CD1	2.27	0.69
1:QA:973:G:H3'	1:QA:974:A:H5''	1.73	0.69
4:QD:30:LYS:H	4:QD:30:LYS:HD3	1.57	0.69
17:QQ:4:LYS:CE	17:QQ:6:LEU:HD21	2.20	0.69
31:RH:4:ILE:HG13	31:RH:6:ARG:NE	2.08	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:QU:6:ARG:HE	21:QU:15:ARG:NE	1.91	0.69
33:RN:46:VAL:O	33:RN:47:ALA:HB3	1.92	0.69
41:YV:66:ARG:HH12	41:YV:88:ARG:NH1	1.90	0.69
3:XC:195:VAL:HG12	3:XC:196:LEU:N	2.08	0.69
30:RG:56:ALA:HB2	30:RG:153:ARG:HE	1.57	0.69
47:R1:4:VAL:HG23	47:R1:10:LYS:O	1.93	0.69
12:QL:24:VAL:HG12	12:QL:24:VAL:O	1.90	0.69
8:QH:31:PHE:CE2	8:QH:35:ILE:HD11	2.27	0.69
29:YF:65:TRP:HZ3	29:YF:73:ALA:O	1.74	0.69
6:XF:60:PHE:C	6:XF:61:LEU:HD12	2.12	0.69
17:XQ:52:LYS:HD2	17:XQ:55:ASP:OD1	1.91	0.69
36:RQ:43:THR:OG1	36:RQ:46:GLN:HB2	1.91	0.69
31:YH:89:ILE:HG12	31:YH:89:ILE:O	1.92	0.69
1:XA:1314:C:OP1	19:XS:6:LYS:HE3	1.92	0.69
35:YP:61:ARG:HD2	35:YP:61:ARG:H	1.58	0.69
28:RE:65:GLY:HA2	28:RE:70:ALA:CB	2.23	0.69
2:QB:212:GLN:NE2	2:QB:216:SER:HB2	2.08	0.69
8:QH:6:ILE:N	8:QH:6:ILE:HD12	2.08	0.69
16:XP:1:MET:O	16:XP:24:ALA:HB2	1.92	0.69
2:QB:126:GLU:O	2:QB:126:GLU:HG2	1.92	0.69
51:Y5:40:LYS:HG2	51:Y5:47:PRO:HD2	1.75	0.69
28:YE:7:VAL:HG23	28:YE:8:LYS:N	2.06	0.69
28:RE:7:VAL:HG23	28:RE:8:LYS:N	2.07	0.69
10:XJ:48:THR:HA	10:XJ:62:HIS:HB3	1.75	0.69
6:QF:3:ARG:HB3	6:QF:93:SER:HB2	1.74	0.69
47:Y1:64:ALA:HA	47:Y1:67:ILE:HG13	1.75	0.69
25:RA:2563:U:H4'	34:RO:28:SER:HA	1.75	0.69
2:QB:101:MET:HA	2:QB:108:ILE:CG1	2.14	0.69
31:YH:150:ALA:C	31:YH:152:ARG:N	2.44	0.69
31:YH:154:PRO:O	31:YH:155:SER:HB2	1.91	0.69
38:YS:106:ARG:N	38:YS:110:LEU:HD21	2.07	0.69
44:YY:45:VAL:HG12	44:YY:60:PHE:CD1	2.27	0.69
52:Y6:14:THR:HG21	52:Y6:19:ARG:HH21	1.58	0.69
51:R5:4:HIS:HB3	51:R5:5:PRO:HD3	1.75	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
35:RP:39:LYS:CA	35:RP:45:LEU:HD11	2.23	0.69
4:QD:188:LEU:HD23	4:QD:189:PRO:HD2	1.75	0.69
27:YD:89:SER:HB2	27:YD:159:ALA:HB2	1.75	0.69
1:XA:538:G:OP1	12:XL:113:ARG:HD2	1.92	0.69
25:YA:704:G:H2'	25:YA:726:G:H22	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YN:120:LEU:HD11	33:YN:122:VAL:HG23	1.74	0.69
33:YN:56:ASN:HD22	33:YN:125:GLY:C	1.96	0.69
27:RD:89:SER:HB2	27:RD:159:ALA:HB2	1.74	0.69
1:QA:1502:A:H2	1:QA:1505:G:H1	1.41	0.69
47:R1:81:LYS:CA	47:R1:81:LYS:HE2	2.13	0.69
47:Y1:82:LEU:HD13	47:Y1:83:GLU:N	2.05	0.69
4:XD:20:TYR:CE2	4:XD:27:TYR:CE2	2.80	0.69
19:XS:5:LEU:HD22	50:Y4:67:TYR:CE2	2.28	0.69
3:QC:105:GLU:HG2	3:QC:106:VAL:H	1.58	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
25:RA:2393:A:H4'	35:RP:61:ARG:O	1.93	0.69
10:QJ:54:PHE:CZ	10:QJ:55:LYS:NZ	2.61	0.69
40:RU:90:VAL:O	40:RU:92:ARG:N	2.26	0.69
2:QB:172:ILE:HD12	2:QB:172:ILE:H	1.56	0.69
33:YN:7:LYS:HD3	33:YN:9:VAL:HA	1.75	0.69
29:YF:67:GLN:O	29:YF:68:LYS:CB	2.39	0.69
30:YG:28:VAL:HG23	30:YG:29:TRP:CD1	2.28	0.69
8:XH:84:ARG:HH12	8:XH:86:ILE:CD1	2.02	0.69
52:R6:28:ARG:HB3	52:R6:30:THR:H	1.55	0.69
16:QP:1:MET:O	16:QP:24:ALA:HB2	1.92	0.69
35:YP:62:LEU:H	35:YP:62:LEU:HD22	1.53	0.69
35:RP:64:LYS:HB2	54:R8:25:MET:CG	2.22	0.69
1:QA:191:G:C4	20:QT:105:SER:HB3	2.28	0.69
8:QH:49:GLU:HG3	8:QH:51:VAL:HG13	1.74	0.69
51:R5:40:LYS:HE2	51:R5:47:PRO:CD	2.21	0.69
51:R5:40:LYS:HG2	51:R5:47:PRO:HD2	1.75	0.69
39:RT:41:ARG:NH2	39:RT:43:GLN:HB2	2.06	0.69
25:YA:957:A:H5'	36:YQ:76:LYS:HD2	1.75	0.69
33:RN:7:LYS:HD3	33:RN:9:VAL:HA	1.75	0.69
27:YD:17:THR:HG22	27:YD:205:VAL:N	2.08	0.69
38:RS:52:SER:O	38:RS:56:LEU:HD22	1.93	0.69
35:YP:29:LYS:HD2	35:YP:30:THR:HG22	1.72	0.69
9:XI:113:LYS:HD2	9:XI:113:LYS:N	2.07	0.69
33:YN:68:GLU:HG2	33:YN:88:GLU:OE1	1.92	0.69
27:YD:76:PRO:O	27:YD:98:VAL:HG23	1.91	0.69
1:QA:489:C:OP1	4:QD:132:ARG:NH2	2.25	0.69
33:RN:68:GLU:HG2	33:RN:88:GLU:OE1	1.92	0.69
46:Y0:27:GLU:HG3	46:Y0:68:GLU:HA	1.74	0.69
30:RG:171:ALA:O	30:RG:175:LEU:HG	1.93	0.69
1:QA:1002:G:H2'	1:QA:1003:G:H8	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:XH:31:PHE:CE2	8:XH:35:ILE:HD11	2.27	0.69
1:QA:951:G:OP2	13:QM:102:ARG:NH2	2.26	0.69
14:YN:44:LEU:CD1	14:YN:53:LEU:HD13	2.23	0.69
36:RQ:80:GLU:HG3	36:RQ:81:VAL:H	1.58	0.69
14:YN:23:ARG:CZ	14:YN:30:ALA:HB2	2.22	0.69
30:YG:16:ARG:HH21	30:YG:31:VAL:CG1	2.05	0.69
30:RG:28:VAL:HG23	30:RG:29:TRP:CD1	2.28	0.69
37:YR:29:LEU:HD23	37:YR:79:LEU:HD12	1.75	0.69
35:YP:62:LEU:HD23	54:Y8:25:MET:HB2	1.74	0.69
44:RY:29:GLU:HB3	44:RY:38:ILE:HG12	1.75	0.69
43:YX:12:VAL:HG11	43:YX:27:THR:OG1	1.93	0.69
47:R1:53:VAL:HG22	47:R1:74:VAL:HG13	1.74	0.69
4:XD:13:ARG:HA	4:XD:33:MET:HE3	1.74	0.69
1:QA:1277:C:HO2'	1:QA:1279:A:H8	1.41	0.69
40:YU:8:VAL:HG23	40:YU:11:ARG:NH2	1.99	0.69
2:XB:212:GLN:NE2	2:XB:216:SER:HB2	2.08	0.69
40:YU:65:ILE:HD11	40:YU:93:LYS:HA	1.74	0.69
25:YA:2404:C:H1'	35:YP:67:MET:CE	2.22	0.69
27:YD:17:THR:CG2	27:YD:204:ILE:HA	2.23	0.69
13:XM:117:VAL:HG22	13:XM:118:ALA:H	1.58	0.69
25:RA:2502:G:H5''	25:RA:2503:A:H5''	1.74	0.69
8:QH:112:LEU:HA	8:QH:134:ILE:HG12	1.75	0.69
7:XG:155:ARG:N	7:XG:155:ARG:HD3	2.07	0.69
6:XF:100:ASN:ND2	18:XR:23:LYS:HE3	2.08	0.69
25:YA:2632:A:HO2'	25:YA:2811:G:HO2'	1.35	0.69
25:RA:1080:C:N4	25:RA:1088:A:OP2	2.26	0.69
45:RZ:60:GLU:HA	45:RZ:66:SER:HA	1.75	0.69
41:RV:22:VAL:HG12	41:RV:23:GLU:N	2.06	0.69
27:YD:35:LYS:HB3	27:YD:63:ARG:HA	1.75	0.68
40:RU:65:ILE:HD11	40:RU:93:LYS:HA	1.74	0.68
30:RG:16:ARG:HH21	30:RG:31:VAL:CG1	2.06	0.68
52:R6:14:THR:HG21	52:R6:19:ARG:HH21	1.58	0.68
20:QT:47:GLY:O	20:QT:49:ALA:N	2.20	0.68
4:XD:96:LEU:HD22	4:XD:96:LEU:N	2.08	0.68
48:R2:23:LYS:O	48:R2:27:GLU:OE1	2.11	0.68
20:XT:64:ASP:HA	20:XT:67:ALA:HB3	1.74	0.68
1:XA:235:C:H5'	17:XQ:70:ARG:HG2	1.74	0.68
7:XG:8:GLU:H	7:XG:8:GLU:CD	1.96	0.68
19:XS:31:ILE:HG23	19:XS:49:ILE:HA	1.75	0.68
9:QI:46:ALA:HA	9:QI:78:LYS:HB2	1.75	0.68
3:QC:195:VAL:HG12	3:QC:196:LEU:N	2.08	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:YZ:60:GLU:HA	45:YZ:66:SER:HA	1.75	0.68
7:QG:155:ARG:N	7:QG:155:ARG:HD3	2.07	0.68
47:R1:80:LEU:C	47:R1:81:LYS:HD2	2.12	0.68
28:YE:65:GLY:HA2	28:YE:70:ALA:CB	2.23	0.68
38:YS:106:ARG:CA	38:YS:110:LEU:HD11	2.19	0.68
25:YA:482:A:H4'	44:YY:47:LYS:HD2	1.74	0.68
52:R6:41:PRO:CG	52:R6:45:LYS:H	2.05	0.68
12:QL:11:VAL:HG13	17:QQ:29:HIS:HD2	1.58	0.68
38:YS:57:LYS:H	38:YS:57:LYS:HD3	1.58	0.68
25:YA:2789:C:H1'	25:YA:2892:A:H2	1.58	0.68
6:QF:100:ASN:ND2	18:QR:23:LYS:HE3	2.08	0.68
42:RW:6:ILE:HG12	42:RW:104:THR:HG23	1.73	0.68
30:YG:56:ALA:HB2	30:YG:153:ARG:HE	1.57	0.68
44:YY:2:ARG:HH11	44:YY:2:ARG:HG2	1.57	0.68
20:QT:64:ASP:HA	20:QT:67:ALA:HB3	1.74	0.68
4:XD:30:LYS:HA	4:XD:34:GLU:HB2	1.75	0.68
38:RS:100:ALA:HA	38:RS:103:GLU:HG2	1.75	0.68
38:YS:100:ALA:HA	38:YS:103:GLU:HG2	1.75	0.68
29:RF:185:ASP:HA	29:RF:188:ARG:CD	2.20	0.68
52:Y6:41:PRO:CG	52:Y6:45:LYS:H	2.05	0.68
25:RA:1138:G:H21	33:RN:106:MET:HE3	1.57	0.68
10:XJ:75:ILE:HG13	10:XJ:76:ASN:N	2.05	0.68
44:YY:61:ILE:CG2	44:YY:62:GLU:N	2.56	0.68
20:QT:97:ALA:O	20:QT:99:LEU:N	2.27	0.68
27:RD:17:THR:HG22	27:RD:205:VAL:N	2.08	0.68
17:XQ:41:LYS:HZ1	17:XQ:92:ARG:HH22	1.40	0.68
25:YA:2723:C:H5''	37:YR:1:MET:HG2	1.75	0.68
3:XC:107:GLN:CD	3:XC:107:GLN:H	1.97	0.68
25:RA:2111:C:N3	25:RA:2118:U:O2'	2.26	0.68
13:QM:90:LEU:CA	13:QM:93:ARG:HD2	2.23	0.68
30:RG:112:PRO:CB	50:R4:37:SER:HB2	2.22	0.68
2:QB:165:VAL:HG23	2:QB:166:ASP:H	1.57	0.68
2:QB:162:ILE:HD11	2:QB:184:VAL:HG13	1.74	0.68
8:XH:6:ILE:H	8:XH:6:ILE:CD1	2.07	0.68
39:YT:109:GLU:O	39:YT:113:LYS:HB2	1.94	0.68
16:QP:3:LYS:C	16:QP:4:ILE:HD12	2.14	0.68
34:RO:8:LEU:HD22	34:RO:8:LEU:N	2.08	0.68
44:YY:48:ALA:O	44:YY:49:VAL:C	2.30	0.68
44:YY:29:GLU:HB3	44:YY:38:ILE:HG12	1.74	0.68
9:QI:28:VAL:HG13	9:QI:63:ILE:CG2	2.24	0.68
25:RA:1814:G:H4'	27:RD:51:VAL:HG21	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YI:73:GLU:HG3	32:YI:136:VAL:HG23	1.76	0.68
25:YA:784:A:N7	27:YD:229:VAL:HG21	2.09	0.68
31:YH:126:PRO:HB2	31:YH:130:ARG:O	1.93	0.68
14:QN:26:ARG:NH1	14:QN:43:CYS:SG	2.67	0.68
19:XS:64:GLU:HB2	50:Y4:55:ARG:HH12	1.58	0.68
42:RW:86:LEU:HD12	42:RW:87:PRO:CD	2.23	0.68
8:XH:6:ILE:N	8:XH:6:ILE:HD12	2.08	0.68
52:R6:7:ILE:HG13	52:R6:8:LYS:N	2.06	0.68
30:YG:112:PRO:CB	50:Y4:37:SER:HB2	2.22	0.68
35:RP:62:LEU:HD23	54:R8:25:MET:HB2	1.74	0.68
5:XE:78:HIS:HE1	5:XE:143:ARG:H	1.38	0.68
21:XU:6:ARG:HE	21:XU:15:ARG:NE	1.90	0.68
41:RV:18:LEU:O	41:RV:95:LEU:HA	1.94	0.68
11:XK:124:LYS:HB3	11:XK:125:PHE:HD1	1.58	0.68
4:XD:188:LEU:HD23	4:XD:189:PRO:HD2	1.75	0.68
35:RP:15:ARG:O	35:RP:16:ARG:C	2.32	0.68
42:YW:29:LEU:HD21	42:YW:33:ARG:NE	2.08	0.68
50:R4:15:ILE:HD13	50:R4:15:ILE:N	2.09	0.68
25:YA:857:C:OP2	46:Y0:77:ARG:NH2	2.26	0.68
44:RY:40:GLU:HA	44:RY:64:GLU:OE1	1.94	0.68
7:XG:50:ILE:HB	7:XG:58:PRO:HB3	1.75	0.68
31:RH:126:PRO:HB2	31:RH:130:ARG:O	1.93	0.68
47:R1:83:GLU:HG2	47:R1:84:GLY:N	2.09	0.68
5:QE:53:LEU:HD12	5:QE:53:LEU:N	2.09	0.68
33:RN:134:ARG:N	33:RN:135:PRO:HD3	1.97	0.68
33:YN:46:VAL:O	33:YN:47:ALA:HB3	1.92	0.68
31:YH:4:ILE:HG13	31:YH:6:ARG:NE	2.08	0.68
5:XE:148:VAL:HG21	8:XH:107:LEU:HD13	1.75	0.68
41:YV:18:LEU:O	41:YV:95:LEU:HA	1.94	0.68
27:RD:17:THR:CG2	27:RD:204:ILE:HA	2.23	0.68
3:QC:150:LYS:HB3	3:QC:201:TYR:HB2	1.75	0.68
11:QK:124:LYS:HB3	11:QK:125:PHE:HD1	1.58	0.68
48:Y2:23:LYS:O	48:Y2:27:GLU:OE1	2.11	0.68
4:QD:198:VAL:HG12	4:QD:199:ASN:N	2.09	0.68
8:XH:112:LEU:HA	8:XH:134:ILE:HG12	1.75	0.68
25:YA:1252:G:N3	40:YU:33:ARG:HD2	2.08	0.68
28:YE:16:ARG:HG3	28:YE:16:ARG:O	1.92	0.68
34:RO:25:LEU:HB2	34:RO:38:VAL:HG13	1.74	0.68
47:R1:64:ALA:HA	47:R1:67:ILE:HG13	1.75	0.68
6:XF:3:ARG:HB3	6:XF:93:SER:HB2	1.75	0.68
45:YZ:145:GLU:HG3	45:YZ:146:ILE:HG12	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RP:26:GLY:O	35:RP:28:GLY:N	2.27	0.68
1:QA:266:G:H5''	1:QA:267:C:C5	2.29	0.68
42:YW:1:MET:HE2	42:YW:2:GLU:H	1.58	0.68
31:YH:126:PRO:CD	31:YH:127:GLU:H	2.07	0.68
31:YH:126:PRO:HG2	31:YH:127:GLU:H	1.58	0.68
25:RA:242:G:H5'	54:R8:62:LEU:CD2	2.23	0.68
13:XM:78:ILE:HG23	13:XM:92:HIS:ND1	2.09	0.68
51:R5:20:ARG:HA	51:R5:23:HIS:ND1	2.09	0.68
36:YQ:80:GLU:HG3	36:YQ:81:VAL:H	1.58	0.68
39:RT:108:ARG:HA	39:RT:111:ARG:CZ	2.23	0.68
39:RT:109:GLU:O	39:RT:113:LYS:HB2	1.94	0.68
39:RT:50:ILE:HG22	39:RT:62:THR:OG1	1.94	0.68
20:QT:89:ARG:NH2	20:QT:104:LEU:HD21	2.09	0.68
2:XB:126:GLU:O	2:XB:126:GLU:HG2	1.92	0.68
17:XQ:59:ILE:N	17:XQ:59:ILE:HD13	2.09	0.68
38:RS:57:LYS:HD3	38:RS:57:LYS:H	1.58	0.68
43:RX:12:VAL:HG11	43:RX:27:THR:OG1	1.93	0.68
51:Y5:20:ARG:HA	51:Y5:23:HIS:ND1	2.08	0.68
44:YY:40:GLU:HA	44:YY:64:GLU:OE1	1.94	0.68
10:XJ:96:ILE:HD13	10:XJ:96:ILE:N	2.09	0.68
4:XD:165:MET:HE3	4:XD:165:MET:HA	1.76	0.68
31:RH:126:PRO:HG2	31:RH:127:GLU:H	1.59	0.68
14:QN:6:LEU:HD23	14:QN:6:LEU:O	1.93	0.68
25:RA:270(T):G:OP1	47:R1:97:LEU:HD13	1.93	0.68
8:XH:20:TYR:HE2	8:XH:75:ARG:HD2	1.59	0.68
29:RF:67:GLN:O	29:RF:67:GLN:CG	2.32	0.68
36:RQ:12:GLN:CG	36:RQ:73:PRO:HD2	2.21	0.68
39:YT:50:ILE:HG22	39:YT:62:THR:OG1	1.94	0.68
28:YE:9:VAL:HB	28:YE:25:VAL:HG23	1.76	0.68
37:RR:29:LEU:HD23	37:RR:79:LEU:HD12	1.75	0.68
31:YH:4:ILE:HG13	31:YH:6:ARG:NH1	2.09	0.68
35:YP:39:LYS:CA	35:YP:45:LEU:HD11	2.23	0.68
9:QI:48:GLU:N	9:QI:49:PRO:HD2	2.09	0.68
27:YD:241:PRO:O	27:YD:243:GLY:N	2.27	0.68
25:RA:2392:A:H8	35:RP:60:MET:HG3	1.58	0.68
25:YA:2864:G:OP1	39:YT:119:LYS:HD2	1.93	0.68
1:XA:951:G:OP2	13:XM:102:ARG:NH2	2.27	0.68
1:QA:501:C:H2'	1:QA:502:G:H8	1.59	0.68
4:XD:198:VAL:HG12	4:XD:199:ASN:N	2.09	0.68
30:YG:171:ALA:O	30:YG:175:LEU:HG	1.93	0.68
25:YA:64:A:C4	43:YX:66:LEU:HD13	2.29	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2867:G:O2'	25:RA:2868:A:H8	1.76	0.68
47:Y1:4:VAL:HG23	47:Y1:10:LYS:O	1.93	0.68
13:XM:90:LEU:CA	13:XM:93:ARG:HD2	2.23	0.68
10:XJ:6:ILE:HG22	10:XJ:98:ILE:CG1	2.16	0.68
36:YQ:66:ILE:HG13	36:YQ:67:ARG:H	1.58	0.68
33:YN:96:GLU:CG	33:YN:97:ARG:H	2.00	0.68
7:XG:79:ARG:NH2	7:XG:82:GLY:HA2	2.09	0.68
4:QD:96:LEU:N	4:QD:96:LEU:HD22	2.07	0.68
7:XG:138:LYS:HE2	7:XG:142:GLU:OE2	1.94	0.68
25:RA:1142(A):A:H4'	33:RN:25:ARG:HH22	1.58	0.68
44:RY:49:VAL:O	44:RY:51:VAL:N	2.27	0.68
17:QQ:59:ILE:N	17:QQ:59:ILE:HD13	2.09	0.68
47:Y1:74:VAL:HG12	47:Y1:74:VAL:O	1.93	0.68
31:RH:88:LEU:HD22	31:RH:88:LEU:H	1.58	0.68
10:QJ:48:THR:HA	10:QJ:62:HIS:HB3	1.75	0.68
1:XA:1151:A:H1'	10:XJ:39:PRO:HB2	1.76	0.68
25:RA:643:A:N1	25:RA:2369:A:O2'	2.26	0.68
48:Y2:64:LEU:HD22	48:Y2:68:ARG:HD2	1.76	0.68
47:R1:20:ARG:HH11	47:R1:20:ARG:HG2	1.58	0.68
47:Y1:20:ARG:HH11	47:Y1:20:ARG:HG2	1.58	0.68
27:YD:35:LYS:HZ1	27:YD:104:TYR:HB2	1.56	0.68
2:QB:215:LEU:O	2:QB:219:VAL:HG23	1.94	0.68
36:YQ:133:ARG:O	36:YQ:134:ARG:HB2	1.94	0.68
29:RF:184:TYR:O	29:RF:188:ARG:HG3	1.93	0.68
36:RQ:104:PHE:HE1	36:RQ:125:LEU:HD11	1.59	0.68
16:XP:3:LYS:C	16:XP:4:ILE:HD12	2.14	0.68
9:XI:48:GLU:N	9:XI:49:PRO:HD2	2.09	0.68
1:QA:1226:C:O2'	13:QM:103:THR:O	2.06	0.68
50:Y4:15:ILE:N	50:Y4:15:ILE:HD13	2.09	0.68
16:QP:66:PRO:HG2	16:QP:71:ARG:NH1	2.09	0.68
3:QC:107:GLN:CD	3:QC:107:GLN:H	1.97	0.68
14:QN:25:VAL:CG2	14:QN:38:GLY:O	2.31	0.67
3:XC:147:LYS:O	3:XC:203:PHE:HB3	1.92	0.67
38:YS:35:ILE:HD13	38:YS:101:LEU:HD23	1.76	0.67
34:YO:14:THR:O	34:YO:51:ALA:HB3	1.94	0.67
36:YQ:90:VAL:CG1	36:YQ:91:GLU:N	2.57	0.67
28:RE:116:VAL:O	28:RE:117:MET:HB3	1.94	0.67
35:YP:15:ARG:O	35:YP:16:ARG:C	2.32	0.67
36:RQ:20:ALA:HB1	36:RQ:99:PRO:HD2	1.76	0.67
25:RA:1820:U:C2	27:RD:202:LYS:HB3	2.29	0.67
44:YY:21:LYS:HG3	44:YY:22:GLY:N	2.09	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:QJ:96:ILE:N	10:QJ:96:ILE:HD13	2.09	0.67
45:YZ:182:LYS:HG3	45:YZ:183:LEU:HD23	1.75	0.67
1:XA:1014:A:H4'	19:XS:14:HIS:HE2	1.60	0.67
28:RE:13:ARG:CB	28:RE:13:ARG:HH11	2.07	0.67
36:YQ:12:GLN:CG	36:YQ:73:PRO:HD2	2.21	0.67
7:QG:79:ARG:NH2	7:QG:82:GLY:HA2	2.09	0.67
36:RQ:133:ARG:O	36:RQ:134:ARG:HB2	1.94	0.67
31:YH:77:LYS:HG2	31:YH:77:LYS:O	1.94	0.67
35:YP:65:ARG:CG	35:YP:65:ARG:HH11	2.06	0.67
36:RQ:90:VAL:CG1	36:RQ:91:GLU:N	2.57	0.67
25:YA:2277:G:H5'	36:YQ:85:LYS:HG3	1.75	0.67
4:QD:173:TRP:CD2	4:QD:189:PRO:HB3	2.29	0.67
3:XC:150:LYS:HB3	3:XC:201:TYR:HB2	1.75	0.67
25:RA:993:G:OP1	40:RU:50:ARG:NH2	2.22	0.67
17:QQ:74:LEU:HD12	17:QQ:75:ARG:HG2	1.76	0.67
7:QG:8:GLU:H	7:QG:8:GLU:CD	1.97	0.67
31:RH:89:ILE:O	31:RH:89:ILE:HG12	1.93	0.67
4:XD:29:PRO:O	4:XD:30:LYS:HD3	1.94	0.67
27:YD:44:ASN:N	27:YD:44:ASN:ND2	2.42	0.67
19:XS:5:LEU:CD1	50:Y4:66:SER:HB2	2.18	0.67
25:RA:518:G:H4'	42:RW:18:ARG:NH1	2.03	0.67
38:YS:26:LEU:HD12	38:YS:39:ILE:CD1	2.23	0.67
8:QH:100:ILE:HB	8:QH:125:ARG:NH1	2.10	0.67
39:YT:50:ILE:CD1	39:YT:102:ILE:HD11	2.25	0.67
52:R6:48:VAL:HG13	52:R6:49:HIS:H	1.60	0.67
2:QB:7:VAL:HG22	2:QB:8:LYS:HD3	1.76	0.67
28:YE:116:VAL:O	28:YE:117:MET:HB3	1.94	0.67
9:XI:28:VAL:HG13	9:XI:63:ILE:CG2	2.24	0.67
6:QF:67:MET:HB2	6:QF:68:PRO:HD2	1.75	0.67
8:QH:14:ARG:O	8:QH:18:ARG:HD3	1.94	0.67
4:QD:165:MET:HA	4:QD:165:MET:HE3	1.77	0.67
33:RN:56:ASN:HD22	33:RN:125:GLY:C	1.96	0.67
16:XP:66:PRO:HG2	16:XP:71:ARG:NH1	2.09	0.67
13:QM:23:TYR:CB	13:QM:67:GLU:HG2	2.25	0.67
13:QM:62:ASN:ND2	50:R4:49:PHE:HD2	1.91	0.67
10:QJ:6:ILE:HG22	10:QJ:98:ILE:CG1	2.16	0.67
19:XS:64:GLU:OE2	50:Y4:55:ARG:NH2	2.26	0.67
2:XB:165:VAL:HG23	2:XB:166:ASP:H	1.57	0.67
40:RU:92:ARG:O	40:RU:94:ASN:N	2.25	0.67
38:RS:35:ILE:HD13	38:RS:101:LEU:HD23	1.76	0.67
36:YQ:104:PHE:CE1	36:YQ:125:LEU:HD11	2.29	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YQ:33:GLY:HA2	36:YQ:105:GLU:HA	1.76	0.67
36:RQ:104:PHE:CE1	36:RQ:125:LEU:HD11	2.29	0.67
41:RV:25:LEU:H	41:RV:92:THR:HG21	1.60	0.67
38:YS:67:ARG:CZ	38:YS:67:ARG:HB2	2.24	0.67
36:YQ:90:VAL:O	36:YQ:92:GLY:N	2.25	0.67
38:YS:52:SER:O	38:YS:56:LEU:HD22	1.93	0.67
27:RD:135:PHE:N	27:RD:135:PHE:CD2	2.62	0.67
47:Y1:51:VAL:HG11	47:Y1:74:VAL:HG21	1.76	0.67
25:RA:1300:U:H4'	25:RA:1301:A:H5''	1.77	0.67
32:YI:92:VAL:HG13	32:YI:120:ILE:HG23	1.75	0.67
2:XB:71:VAL:CG2	2:XB:164:VAL:HG22	2.25	0.67
34:YO:25:LEU:HB2	34:YO:38:VAL:HG13	1.74	0.67
4:XD:120:LEU:HD22	4:XD:125:HIS:HB2	1.74	0.67
35:YP:26:GLY:O	35:YP:28:GLY:N	2.26	0.67
25:YA:1899:G:H21	25:YA:1902:C:N4	1.92	0.67
2:QB:24:TRP:HD1	2:QB:24:TRP:H	1.43	0.67
4:XD:11:LEU:CD2	4:XD:66:ARG:HD3	2.17	0.67
28:RE:14:ILE:HG12	28:RE:15:PHE:N	2.06	0.67
25:YA:2250:G:C6	36:YQ:82:ARG:HD2	2.29	0.67
7:XG:120:ILE:O	7:XG:124:LEU:HB2	1.95	0.67
44:YY:49:VAL:O	44:YY:51:VAL:N	2.27	0.67
28:RE:10:GLY:H	28:RE:25:VAL:HG23	1.60	0.67
51:Y5:4:HIS:HB3	51:Y5:5:PRO:HD3	1.75	0.67
20:XT:83:ARG:HA	20:XT:86:ARG:HD3	1.76	0.67
44:YY:14:LEU:HD23	44:YY:15:VAL:N	2.10	0.67
11:XK:95:ILE:HD12	11:XK:108:ILE:HD13	1.76	0.67
11:QK:95:ILE:HD12	11:QK:108:ILE:HD13	1.77	0.67
1:QA:1151:A:H1'	10:QJ:39:PRO:HB2	1.76	0.67
8:XH:14:ARG:O	8:XH:18:ARG:HD3	1.94	0.67
26:RB:80:U:H2'	26:RB:81:G:H21	1.59	0.67
7:QG:50:ILE:HB	7:QG:58:PRO:HB3	1.75	0.67
1:QA:581:G:N2	1:QA:760:G:N7	2.43	0.67
50:R4:33:VAL:HG12	50:R4:34:GLU:N	2.10	0.67
39:YT:108:ARG:HA	39:YT:111:ARG:CZ	2.24	0.67
50:Y4:33:VAL:HG12	50:Y4:34:GLU:N	2.10	0.67
16:XP:21:VAL:HG11	16:XP:59:TRP:CD1	2.30	0.67
25:RA:483:A:H3'	25:RA:484:C:H6	1.59	0.67
44:RY:61:ILE:CG2	44:RY:62:GLU:N	2.56	0.67
52:R6:43:CYS:SG	52:R6:44:ARG:HD3	2.35	0.67
52:Y6:48:VAL:HG13	52:Y6:49:HIS:H	1.60	0.67
31:RH:4:ILE:HG13	31:RH:6:ARG:NH1	2.09	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RO:13:ASN:ND2	34:RO:96:THR:O	2.28	0.67
25:RA:27:G:N2	25:RA:512:G:H2'	2.10	0.67
42:RW:29:LEU:HD21	42:RW:33:ARG:NE	2.09	0.67
28:YE:26:ILE:HD13	28:YE:27:LEU:N	2.10	0.67
25:RA:1980:G:O2'	25:RA:1982:C:OP2	2.13	0.67
25:YA:1980:G:O2'	25:YA:1982:C:OP2	2.12	0.67
25:RA:1252:G:N3	40:RU:33:ARG:HD2	2.09	0.67
10:XJ:54:PHE:CZ	10:XJ:55:LYS:NZ	2.61	0.67
28:YE:13:ARG:HH11	28:YE:13:ARG:CB	2.07	0.67
37:RR:26:LYS:HE2	37:RR:70:LEU:O	1.95	0.67
7:QG:120:ILE:O	7:QG:124:LEU:HB2	1.95	0.67
41:YV:25:LEU:H	41:YV:92:THR:HG21	1.60	0.67
35:RP:90:ARG:NE	35:RP:91:PHE:HD1	1.93	0.67
7:QG:28:ASN:O	7:QG:31:MET:HB3	1.95	0.67
20:QT:83:ARG:HA	20:QT:86:ARG:HD3	1.76	0.67
25:YA:2610:C:H4'	25:YA:2611:U:OP2	1.93	0.67
9:XI:33:PHE:CZ	9:XI:47:LEU:HD21	2.30	0.67
25:YA:2580:U:H4'	28:YE:130:GLY:HA3	1.75	0.67
31:RH:126:PRO:CD	31:RH:127:GLU:H	2.07	0.67
47:Y1:86:SER:N	47:Y1:87:PRO:HD2	2.10	0.67
13:QM:78:ILE:HG23	13:QM:92:HIS:ND1	2.09	0.67
28:YE:62:PRO:O	28:YE:64:LYS:N	2.28	0.67
26:RB:42:C:N4	30:RG:91:ARG:HH21	1.91	0.67
40:YU:90:VAL:O	40:YU:92:ARG:N	2.26	0.67
36:RQ:81:VAL:C	36:RQ:82:ARG:HG2	2.15	0.67
36:YQ:81:VAL:C	36:YQ:82:ARG:HG2	2.15	0.67
36:RQ:66:ILE:HG13	36:RQ:67:ARG:H	1.57	0.67
29:YF:184:TYR:O	29:YF:188:ARG:HG3	1.94	0.67
4:XD:173:TRP:CD2	4:XD:189:PRO:HB3	2.30	0.67
48:R2:47:ASN:ND2	48:R2:47:ASN:H	1.92	0.67
49:Y3:29:ARG:NH1	49:Y3:29:ARG:HB2	2.10	0.67
2:XB:164:VAL:HB	2:XB:186:ALA:CB	2.25	0.67
26:YB:15:A:H5'	26:YB:16:G:C8	2.30	0.67
6:QF:96:PRO:HB3	18:QR:30:ASP:OD2	1.95	0.67
45:YZ:19:ARG:NH1	45:YZ:84:GLU:O	2.24	0.67
1:XA:532:A:H2	1:XA:1206:G:H21	1.42	0.67
19:QS:31:ILE:HG23	19:QS:49:ILE:HA	1.75	0.67
29:YF:34:TRP:HA	35:YP:6:LEU:HD12	1.77	0.67
17:XQ:56:VAL:HB	17:XQ:78:GLU:HB3	1.75	0.67
9:XI:46:ALA:HA	9:XI:78:LYS:HB2	1.75	0.67
31:RH:125:VAL:CG1	31:RH:126:PRO:HG3	2.25	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RH:124:GLU:HB3	31:RH:132:ARG:HD2	1.77	0.67
13:QM:3:ARG:HD2	13:QM:9:ILE:HG12	1.77	0.67
36:YQ:104:PHE:HE1	36:YQ:125:LEU:HD11	1.58	0.67
36:RQ:32:TYR:HD1	36:RQ:133:ARG:HA	1.60	0.67
52:R6:7:ILE:C	52:R6:9:LEU:H	1.98	0.67
50:Y4:16:CYS:SG	50:Y4:33:VAL:HB	2.35	0.67
41:YV:44:LYS:O	41:YV:46:VAL:N	2.28	0.67
1:QA:686:U:O4	1:QA:703:G:H1'	1.94	0.67
28:RE:16:ARG:HG3	28:RE:16:ARG:O	1.93	0.67
2:QB:71:VAL:CG2	2:QB:164:VAL:HG22	2.25	0.67
7:XG:28:ASN:O	7:XG:31:MET:HB3	1.95	0.67
31:YH:88:LEU:H	31:YH:88:LEU:HD22	1.59	0.67
9:QI:33:PHE:CZ	9:QI:47:LEU:HD21	2.30	0.67
25:RA:468:G:N7	53:R7:39:ARG:NH2	2.42	0.67
25:YA:1434:A:H61	25:YA:1558:A:N6	1.91	0.67
1:XA:1112:C:H1'	3:XC:179:ARG:HH11	1.59	0.67
25:YA:2306:C:H3'	25:YA:2307:G:H5''	1.77	0.67
47:Y1:83:GLU:HG2	47:Y1:84:GLY:N	2.09	0.67
29:YF:103:LYS:HA	29:YF:106:ARG:CG	2.21	0.67
27:YD:35:LYS:CA	27:YD:64:ILE:HG22	2.25	0.67
35:RP:122:PRO:HA	35:RP:141:ALA:O	1.95	0.67
35:YP:122:PRO:HA	35:YP:141:ALA:O	1.95	0.67
8:QH:20:TYR:HE2	8:QH:75:ARG:HD2	1.60	0.67
36:RQ:90:VAL:O	36:RQ:92:GLY:N	2.25	0.67
20:QT:36:LEU:HD12	20:QT:55:ILE:HG23	1.76	0.67
3:XC:73:PRO:O	3:XC:76:VAL:HG22	1.95	0.67
1:QA:186:C:H5'	20:QT:78:ALA:HB1	1.77	0.67
1:XA:35:G:N2	12:XL:118:SER:OG	2.27	0.67
1:XA:1450:U:O2'	1:XA:1451:A:N7	2.28	0.67
4:QD:52:SER:HB3	4:QD:55:ALA:HB2	1.77	0.67
18:QR:70:ILE:O	18:QR:74:ARG:HG3	1.95	0.67
25:RA:2131:G:H4'	25:RA:2132:U:H4'	1.77	0.67
47:R1:80:LEU:HD23	47:R1:80:LEU:N	2.10	0.66
27:RD:35:LYS:CG	27:RD:64:ILE:N	2.56	0.66
35:YP:61:ARG:H	35:YP:61:ARG:CD	2.09	0.66
25:YA:518:G:C4'	42:YW:18:ARG:HH12	1.99	0.66
38:RS:107:GLU:H	38:RS:110:LEU:HD11	1.60	0.66
29:YF:46:ARG:HH11	29:YF:46:ARG:CG	2.04	0.66
33:YN:57:ALA:HA	33:YN:60:ILE:HD11	1.78	0.66
31:RH:77:LYS:HG2	31:RH:77:LYS:O	1.94	0.66
8:QH:10:LEU:HD23	8:QH:10:LEU:H	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:Y6:43:CYS:SG	52:Y6:44:ARG:HD3	2.35	0.66
7:QG:138:LYS:HE2	7:QG:142:GLU:OE2	1.94	0.66
43:RX:57:LEU:HD12	43:RX:78:LYS:HB2	1.77	0.66
25:YA:2452:C:O4'	56:Z8:76:PPU:HB2	1.95	0.66
13:QM:13:LYS:HA	13:QM:44:ARG:HD2	1.78	0.66
36:YQ:88:GLY:C	36:YQ:90:VAL:N	2.47	0.66
1:XA:797:C:OP1	11:XK:124:LYS:HE2	1.94	0.66
8:XH:100:ILE:HB	8:XH:125:ARG:NH1	2.09	0.66
34:YO:13:ASN:ND2	34:YO:96:THR:O	2.28	0.66
9:QI:112:LYS:HA	9:QI:119:ALA:HB2	1.77	0.66
49:R3:29:ARG:NH1	49:R3:29:ARG:HB2	2.10	0.66
2:QB:164:VAL:HB	2:QB:186:ALA:CB	2.25	0.66
1:XA:1112:C:H1'	3:XC:179:ARG:NH1	2.10	0.66
1:QA:864:A:H5'	5:QE:86:ALA:HB2	1.77	0.66
25:RA:2343:C:O2'	25:RA:2373:G:O2'	2.12	0.66
25:YA:2680:C:H5'	28:YE:189:PRO:HA	1.76	0.66
44:RY:21:LYS:HG3	44:RY:22:GLY:N	2.09	0.66
41:YV:53:GLU:O	41:YV:53:GLU:HG2	1.94	0.66
44:YY:75:ILE:HG12	44:YY:76:CYS:N	2.10	0.66
10:XJ:6:ILE:HD11	10:XJ:72:VAL:CB	2.24	0.66
19:QS:65:ASN:N	19:QS:65:ASN:HD22	1.93	0.66
36:YQ:32:TYR:HD1	36:YQ:133:ARG:HA	1.60	0.66
35:RP:66:GLY:O	35:RP:67:MET:HB3	1.94	0.66
44:YY:60:PHE:O	44:YY:61:ILE:HD12	1.95	0.66
48:Y2:65:ASN:HB3	48:Y2:69:ARG:NH1	2.10	0.66
28:RE:36:ARG:HB3	28:RE:36:ARG:HH11	1.60	0.66
27:RD:80:ALA:HB3	27:RD:94:LEU:CD1	2.25	0.66
32:RI:93:THR:HG22	32:RI:119:PRO:HB3	1.77	0.66
4:XD:52:SER:O	4:XD:56:VAL:HG23	1.95	0.66
27:RD:241:PRO:O	27:RD:243:GLY:N	2.28	0.66
32:YI:3:VAL:HG12	32:YI:38:LEU:HA	1.77	0.66
7:QG:141:VAL:O	7:QG:141:VAL:HG12	1.96	0.66
25:RA:2864:G:OP1	39:RT:119:LYS:HD2	1.96	0.66
25:RA:1939:U:OP1	25:RA:2604:U:O2'	2.12	0.66
44:YY:89:PHE:C	44:YY:90:LEU:HD13	2.15	0.66
28:YE:28:ALA:O	28:YE:93:VAL:HG23	1.96	0.66
2:XB:215:LEU:O	2:XB:219:VAL:HG23	1.94	0.66
42:YW:18:ARG:HG3	42:YW:76:VAL:HG13	1.77	0.66
40:YU:88:ILE:N	40:YU:88:ILE:HD13	2.10	0.66
8:XH:29:SER:HB3	8:XH:32:LYS:CG	2.22	0.66
34:RO:86:ILE:HD12	34:RO:86:ILE:H	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:QH:6:ILE:H	8:QH:6:ILE:CD1	2.07	0.66
51:Y5:56:LYS:H	51:Y5:56:LYS:CD	2.07	0.66
16:QP:21:VAL:HG11	16:QP:59:TRP:CD1	2.30	0.66
30:RG:136:ARG:O	30:RG:154:GLY:HA3	1.94	0.66
10:XJ:34:VAL:HG22	10:XJ:74:ILE:HG22	1.78	0.66
20:XT:89:ARG:NH2	20:XT:104:LEU:HD21	2.09	0.66
47:Y1:56:GLN:HE21	47:Y1:56:GLN:N	1.93	0.66
1:QA:1152:A:OP1	10:QJ:68:HIS:NE2	2.29	0.66
44:RY:42:VAL:CG1	44:RY:65:ALA:HB3	2.25	0.66
25:RA:2112:G:O6	25:RA:2169:A:N6	2.29	0.66
32:RI:5:LEU:HD11	32:RI:19:VAL:HG12	1.78	0.66
4:XD:14:ARG:HD3	4:XD:14:ARG:O	1.95	0.66
18:XR:70:ILE:O	18:XR:74:ARG:HG3	1.95	0.66
1:XA:963:G:N3	10:XJ:55:LYS:NZ	2.38	0.66
44:RY:89:PHE:C	44:RY:90:LEU:HD13	2.15	0.66
50:R4:37:SER:C	50:R4:39:CYS:H	1.98	0.66
38:YS:106:ARG:HA	38:YS:110:LEU:CD2	2.25	0.66
34:RO:14:THR:O	34:RO:51:ALA:HB3	1.95	0.66
33:YN:58:ASP:H	33:YN:60:ILE:CD1	2.09	0.66
36:RQ:33:GLY:HA2	36:RQ:105:GLU:HA	1.76	0.66
30:YG:179:PRO:HG3	50:Y4:38:LYS:HZ2	1.59	0.66
39:RT:11:GLU:N	39:RT:11:GLU:CD	2.47	0.66
27:RD:145:VAL:HG12	27:RD:146:GLU:O	1.95	0.66
38:RS:67:ARG:HB2	38:RS:67:ARG:CZ	2.25	0.66
27:RD:68:LYS:HB2	27:RD:70:TRP:CZ3	2.31	0.66
13:QM:117:VAL:HG22	13:QM:118:ALA:H	1.59	0.66
25:RA:660:G:O3'	29:RF:38:ARG:NH2	2.29	0.66
1:QA:1014:A:H4'	19:QS:14:HIS:HE2	1.61	0.66
1:QA:677:U:H3	1:QA:713:G:H22	1.40	0.66
25:YA:2713:A:OP1	37:YR:14:SER:OG	2.13	0.66
29:RF:34:TRP:HA	35:RP:6:LEU:HD12	1.77	0.66
3:XC:140:ARG:CZ	3:XC:140:ARG:HB2	2.25	0.66
35:YP:66:GLY:O	35:YP:67:MET:HB3	1.94	0.66
39:RT:50:ILE:CD1	39:RT:102:ILE:HD11	2.25	0.66
35:RP:1:MET:CE	35:RP:5:ASP:HB3	2.24	0.66
20:XT:97:ALA:O	20:XT:99:LEU:N	2.27	0.66
36:RQ:88:GLY:C	36:RQ:90:VAL:N	2.47	0.66
3:QC:101:LEU:HD23	3:QC:102:ASN:N	2.11	0.66
2:XB:24:TRP:HD1	2:XB:24:TRP:H	1.43	0.66
17:QQ:56:VAL:HB	17:QQ:78:GLU:HB3	1.76	0.66
1:XA:973:G:H3'	1:XA:974:A:H5''	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:QN:40:CYS:SG	14:QN:43:CYS:N	2.67	0.66
47:R1:86:SER:N	47:R1:87:PRO:HD2	2.10	0.66
44:RY:94:LYS:HE3	44:RY:101:LYS:NZ	2.11	0.66
35:RP:81:GLN:NE2	35:RP:106:LEU:O	2.29	0.66
13:QM:81:LEU:O	13:QM:84:ILE:HG22	1.95	0.66
13:XM:3:ARG:HD2	13:XM:9:ILE:HG12	1.77	0.66
25:YA:498:G:N3	44:YY:47:LYS:NZ	2.35	0.66
28:RE:9:VAL:HB	28:RE:25:VAL:HG23	1.76	0.66
41:RV:44:LYS:O	41:RV:46:VAL:N	2.28	0.66
51:Y5:40:LYS:NZ	51:Y5:48:GLU:HB2	2.10	0.66
3:QC:73:PRO:O	3:QC:76:VAL:HG22	1.96	0.66
27:YD:68:LYS:HB2	27:YD:70:TRP:CZ3	2.31	0.66
48:Y2:47:ASN:H	48:Y2:47:ASN:ND2	1.92	0.66
31:RH:168:PRO:O	31:RH:169:VAL:HG12	1.96	0.66
27:YD:172:TYR:HB3	27:YD:184:LYS:HG2	1.77	0.66
28:RE:174:ASP:CG	28:RE:175:VAL:H	1.98	0.66
28:YE:174:ASP:CG	28:YE:175:VAL:H	1.98	0.66
2:QB:25:ASN:O	2:QB:27:LYS:N	2.28	0.66
7:XG:141:VAL:O	7:XG:141:VAL:HG12	1.95	0.66
27:RD:44:ASN:HB3	27:RD:49:ILE:HG22	1.78	0.66
13:XM:81:LEU:O	13:XM:84:ILE:HG22	1.95	0.66
50:Y4:71:ARG:CG	50:Y4:71:ARG:HH11	1.98	0.66
27:RD:35:LYS:CA	27:RD:64:ILE:HG22	2.25	0.66
35:YP:81:GLN:NE2	35:YP:106:LEU:O	2.29	0.66
28:RE:62:PRO:O	28:RE:64:LYS:N	2.28	0.66
40:RU:88:ILE:N	40:RU:88:ILE:HD13	2.10	0.66
38:RS:106:ARG:HA	38:RS:110:LEU:CD2	2.26	0.66
7:QG:78:ARG:NH1	7:QG:80:VAL:HG23	2.11	0.66
38:RS:88:ASP:OD2	38:RS:90:GLY:N	2.28	0.66
54:Y8:30:ARG:O	54:Y8:31:HIS:HB2	1.96	0.66
28:RE:101:ARG:CZ	28:RE:171:GLU:HB2	2.25	0.66
8:XH:84:ARG:NH1	8:XH:84:ARG:HG3	2.10	0.66
2:QB:87:ARG:HH11	2:QB:223:ILE:CD1	2.09	0.66
44:RY:47:LYS:HG2	44:RY:60:PHE:CE1	2.31	0.66
5:QE:75:THR:HG23	5:QE:76:ILE:N	2.11	0.66
5:QE:79:GLU:OE2	8:QH:104:ARG:HA	1.96	0.66
30:YG:136:ARG:O	30:YG:154:GLY:HA3	1.95	0.66
5:XE:75:THR:HG23	5:XE:76:ILE:N	2.11	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
29:RF:175:THR:O	29:RF:176:LEU:HB2	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R1:51:VAL:HG11	47:R1:74:VAL:HG21	1.75	0.66
44:RY:14:LEU:HD23	44:RY:15:VAL:N	2.10	0.66
43:YX:11:PRO:HB3	43:YX:92:LEU:HD21	1.78	0.66
25:RA:1026:U:H4'	25:RA:1027:A:OP1	1.96	0.66
19:XS:35:SER:O	19:XS:71:LEU:HD12	1.96	0.66
25:YA:860:U:H5	25:YA:917:A:C2	2.13	0.66
7:XG:69:VAL:O	7:XG:69:VAL:HG12	1.95	0.66
10:XJ:81:THR:C	10:XJ:83:GLU:H	1.99	0.66
33:YN:134:ARG:N	33:YN:135:PRO:HD3	1.97	0.66
35:YP:61:ARG:NH2	54:Y8:13:ARG:HD2	2.10	0.66
40:YU:65:ILE:HG12	40:YU:96:ALA:CB	2.26	0.66
8:QH:23:SER:HA	8:QH:63:LEU:CD2	2.24	0.66
33:RN:58:ASP:H	33:RN:60:ILE:CD1	2.08	0.66
47:Y1:11:ARG:HB3	47:Y1:11:ARG:HH11	1.61	0.66
36:YQ:20:ALA:HB1	36:YQ:99:PRO:HD2	1.77	0.66
1:QA:926:G:N2	24:QX:1:A:OP1	2.28	0.66
7:QG:69:VAL:HG12	7:QG:69:VAL:O	1.95	0.66
12:XL:26:ALA:O	12:XL:27:LEU:O	2.14	0.66
31:YH:125:VAL:CG1	31:YH:126:PRO:HG3	2.25	0.66
47:Y1:80:LEU:HD23	47:Y1:80:LEU:N	2.10	0.66
25:YA:593:G:O3'	54:Y8:61:LEU:HD22	1.95	0.66
13:XM:74:VAL:O	13:XM:78:ILE:HG13	1.96	0.66
30:YG:145:THR:HG23	50:Y4:28:LYS:NZ	2.11	0.66
50:R4:16:CYS:SG	50:R4:33:VAL:HB	2.35	0.66
38:YS:107:GLU:H	38:YS:110:LEU:HD11	1.60	0.66
25:YA:1454:U:H5'	37:YR:63:ARG:NE	2.07	0.66
25:YA:2585:U:H5	56:Z8:76:PPU:HO2'	1.42	0.66
27:RD:121:PRO:HB3	27:RD:135:PHE:CE1	2.29	0.66
10:QJ:99:LYS:O	10:QJ:100:THR:HG23	1.96	0.66
28:RE:26:ILE:HD13	28:RE:27:LEU:N	2.10	0.66
25:RA:1464:C:HO2'	25:RA:1528:A:H8	1.44	0.66
19:XS:15:LEU:O	19:XS:19:VAL:N	2.26	0.66
44:RY:99:CYS:SG	44:RY:100:ALA:N	2.69	0.66
44:RY:75:ILE:HG12	44:RY:76:CYS:N	2.10	0.66
52:Y6:7:ILE:C	52:Y6:9:LEU:H	1.98	0.66
38:YS:88:ASP:OD2	38:YS:90:GLY:N	2.28	0.66
44:YY:47:LYS:HG2	44:YY:60:PHE:CE1	2.31	0.66
27:RD:183:ARG:HH11	27:RD:183:ARG:CG	2.07	0.66
27:YD:183:ARG:CG	27:YD:183:ARG:HH11	2.07	0.66
12:XL:48:PRO:CD	12:XL:49:ASN:N	2.57	0.66
15:QO:25:THR:HG21	15:QO:70:LEU:HB2	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1446:A:O2'	1:XA:1447:G:O5'	2.14	0.66
25:RA:1826:G:H4'	27:RD:242:ARG:HH21	1.61	0.66
48:R2:64:LEU:HD22	48:R2:68:ARG:HD2	1.76	0.66
27:RD:237:GLU:OE1	27:RD:237:GLU:N	2.29	0.66
44:YY:94:LYS:HE3	44:YY:101:LYS:NZ	2.11	0.65
35:RP:61:ARG:NH2	54:R8:13:ARG:HD2	2.10	0.65
7:XG:78:ARG:NH1	7:XG:80:VAL:HG23	2.11	0.65
42:YW:65:LEU:HD12	42:YW:68:ARG:NH1	2.10	0.65
27:YD:121:PRO:HB3	27:YD:135:PHE:CE1	2.30	0.65
34:YO:113:LYS:O	34:YO:117:LEU:HD12	1.96	0.65
6:QF:41:GLU:O	6:QF:43:LEU:HD12	1.96	0.65
12:QL:25:PRO:C	12:QL:27:LEU:H	1.98	0.65
17:QQ:27:PHE:CZ	17:QQ:36:ILE:HD11	2.31	0.65
25:YA:2815:C:H5'	51:Y5:29:THR:HG21	1.76	0.65
25:RA:942:G:O2'	25:RA:1189:A:N3	2.25	0.65
39:RT:22:PHE:N	39:RT:22:PHE:CD2	2.63	0.65
41:RV:53:GLU:O	41:RV:53:GLU:HG2	1.94	0.65
3:QC:140:ARG:CZ	3:QC:140:ARG:HB2	2.25	0.65
44:YY:35:TYR:CE1	44:YY:69:ALA:HB3	2.31	0.65
10:QJ:38:ILE:HD11	10:QJ:71:LEU:HB3	1.78	0.65
31:YH:124:GLU:HB3	31:YH:132:ARG:HD2	1.77	0.65
35:RP:138:LEU:HD11	35:RP:144:GLU:HG3	1.78	0.65
28:YE:13:ARG:NH1	28:YE:21:VAL:HG12	2.11	0.65
37:YR:26:LYS:HE2	37:YR:70:LEU:O	1.95	0.65
54:R8:30:ARG:O	54:R8:31:HIS:HB2	1.96	0.65
44:RY:60:PHE:O	44:RY:61:ILE:HD12	1.95	0.65
9:QI:28:VAL:HA	9:QI:63:ILE:HB	1.79	0.65
9:XI:53:VAL:HG21	9:XI:92:TYR:CE1	2.32	0.65
1:XA:501:C:OP1	12:XL:117:ARG:NH2	2.29	0.65
10:XJ:39:PRO:HB3	10:XJ:70:ARG:HH12	1.61	0.65
4:XD:52:SER:HB3	4:XD:55:ALA:HB2	1.77	0.65
34:YO:71:ARG:NH1	39:YT:74:ARG:HH21	1.94	0.65
1:QA:664:G:H22	1:QA:741:G:H1	1.44	0.65
25:RA:270(L):U:H2'	32:RI:50:ARG:HD2	1.77	0.65
17:XQ:27:PHE:CZ	17:XQ:36:ILE:HD11	2.31	0.65
19:QS:3:ARG:CZ	19:QS:8:GLY:HA2	2.26	0.65
2:XB:14:GLY:O	2:XB:15:VAL:HG13	1.96	0.65
31:RH:150:ALA:C	31:RH:152:ARG:N	2.44	0.65
14:XN:23:ARG:NH1	14:XN:30:ALA:HB2	2.11	0.65
28:YE:101:ARG:CZ	28:YE:171:GLU:HB2	2.26	0.65
4:QD:94:LEU:H	4:QD:94:LEU:CD1	2.08	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:28:SER:CB	4:QD:29:PRO:HD3	2.25	0.65
2:QB:87:ARG:O	2:QB:87:ARG:HD2	1.95	0.65
2:XB:87:ARG:HH11	2:XB:223:ILE:CD1	2.09	0.65
2:XB:87:ARG:O	2:XB:87:ARG:HD2	1.95	0.65
35:YP:90:ARG:NE	35:YP:91:PHE:HD1	1.93	0.65
21:QU:25:LYS:HE2	21:QU:26:LYS:O	1.96	0.65
20:XT:36:LEU:HD12	20:XT:55:ILE:HG23	1.76	0.65
34:RO:113:LYS:O	34:RO:117:LEU:HD12	1.96	0.65
31:YH:168:PRO:O	31:YH:169:VAL:HG12	1.96	0.65
41:RV:76:LYS:HB2	41:RV:81:TYR:HB3	1.79	0.65
45:YZ:58:VAL:O	45:YZ:60:GLU:N	2.29	0.65
12:QL:115:LYS:O	12:QL:117:ARG:HG3	1.96	0.65
2:QB:164:VAL:HB	2:QB:186:ALA:HB2	1.78	0.65
25:RA:443:A:N7	29:RF:45:ARG:HD2	2.11	0.65
42:RW:25:ARG:HB2	42:RW:25:ARG:NH1	2.11	0.65
4:QD:122:ARG:HD3	4:QD:122:ARG:O	1.97	0.65
43:YX:65:ARG:HD3	43:YX:65:ARG:N	2.12	0.65
1:XA:1392:G:H21	1:XA:1502:A:H8	1.42	0.65
19:XS:10:PHE:CG	19:XS:11:VAL:N	2.64	0.65
25:RA:586:A:H5'	29:RF:89:VAL:HG21	1.78	0.65
40:RU:90:VAL:CG1	40:RU:91:ASP:H	2.00	0.65
42:RW:18:ARG:HG3	42:RW:76:VAL:HG13	1.77	0.65
2:QB:17:PHE:HD2	2:QB:44:LEU:HD21	1.61	0.65
34:YO:86:ILE:HD12	34:YO:86:ILE:H	1.61	0.65
8:QH:20:TYR:HA	8:QH:65:TYR:HE2	1.59	0.65
8:XH:10:LEU:H	8:XH:10:LEU:HD23	1.60	0.65
27:RD:27:THR:CG2	27:RD:28:GLU:H	2.09	0.65
27:YD:27:THR:CG2	27:YD:28:GLU:H	2.08	0.65
28:YE:36:ARG:HH11	28:YE:36:ARG:HB3	1.60	0.65
27:YD:80:ALA:HB3	27:YD:94:LEU:CD1	2.26	0.65
16:QP:45:THR:HG22	16:QP:47:ASP:H	1.60	0.65
10:XJ:99:LYS:O	10:XJ:100:THR:HG23	1.96	0.65
44:YY:42:VAL:CG1	44:YY:65:ALA:HB3	2.26	0.65
4:QD:52:SER:O	4:QD:56:VAL:HG23	1.95	0.65
45:YZ:97:GLU:HB3	45:YZ:125:LEU:HD11	1.78	0.65
41:RV:43:GLU:HA	41:RV:43:GLU:OE2	1.95	0.65
1:XA:1226:C:O2'	13:XM:111:LYS:NZ	2.30	0.65
15:XO:8:LYS:O	15:XO:12:ILE:HG13	1.96	0.65
6:XF:96:PRO:HB3	18:XR:30:ASP:OD2	1.95	0.65
43:RX:65:ARG:N	43:RX:65:ARG:HD3	2.12	0.65
1:QA:542:G:OP1	4:QD:10:ARG:NH2	2.29	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RQ:59:ARG:C	36:RQ:60:ARG:HG3	2.17	0.65
10:XJ:38:ILE:HD11	10:XJ:71:LEU:HB3	1.78	0.65
2:XB:67:THR:HG21	2:XB:155:LEU:CD2	2.26	0.65
3:XC:70:VAL:HG12	3:XC:71:ALA:N	2.10	0.65
25:YA:2393:A:H4'	35:YP:61:ARG:O	1.96	0.65
13:QM:74:VAL:O	13:QM:78:ILE:HG13	1.96	0.65
26:RB:45:A:H1'	30:RG:95:ARG:HH22	1.62	0.65
16:XP:21:VAL:HG23	16:XP:33:ILE:HB	1.77	0.65
27:YD:145:VAL:HG12	27:YD:146:GLU:O	1.96	0.65
25:YA:1021:A:H8	25:YA:1022:G:H5''	1.61	0.65
19:QS:21:GLU:O	19:QS:25:LYS:HB3	1.97	0.65
35:YP:39:LYS:HA	35:YP:45:LEU:HD13	1.79	0.65
16:QP:6:LEU:HD23	16:QP:17:TYR:CD2	2.32	0.65
16:XP:45:THR:HG22	16:XP:47:ASP:H	1.60	0.65
4:XD:52:SER:HB3	4:XD:55:ALA:CB	2.27	0.65
7:QG:11:GLN:O	7:QG:12:LEU:HD13	1.97	0.65
25:RA:857:C:H4'	46:R0:23:VAL:HG21	1.78	0.65
46:R0:68:GLU:HG2	46:R0:80:HIS:HB2	1.78	0.65
7:XG:21:VAL:HG23	7:XG:22:LEU:H	1.61	0.65
4:QD:13:ARG:HD3	4:QD:38:TYR:O	1.97	0.65
31:RH:128:PRO:CD	31:RH:129:THR:H	2.09	0.65
50:R4:49:PHE:O	50:R4:50:VAL:HG23	1.97	0.65
28:RE:28:ALA:O	28:RE:93:VAL:HG23	1.95	0.65
2:XB:17:PHE:HD2	2:XB:44:LEU:HD21	1.61	0.65
34:RO:12:ASP:OD1	34:RO:14:THR:HG23	1.97	0.65
28:YE:201:THR:HG22	28:YE:203:LYS:N	2.07	0.65
34:RO:7:TYR:CE1	34:RO:20:MET:HB2	2.32	0.65
20:QT:44:ALA:HB2	20:QT:88:VAL:HG13	1.78	0.65
12:QL:39:VAL:HB	12:QL:57:LYS:HB2	1.79	0.65
29:RF:155:LEU:HD13	29:RF:174:VAL:CG1	2.27	0.65
35:RP:39:LYS:HA	35:RP:45:LEU:HD13	1.79	0.65
48:Y2:42:GLY:O	48:Y2:44:LEU:N	2.30	0.65
12:XL:48:PRO:CD	12:XL:49:ASN:H	2.10	0.65
20:XT:83:ARG:CA	20:XT:86:ARG:HB3	2.27	0.65
6:XF:41:GLU:O	6:XF:43:LEU:HD12	1.96	0.65
12:XL:115:LYS:O	12:XL:117:ARG:HG3	1.96	0.65
1:XA:1502:A:H2	1:XA:1505:G:H1	1.45	0.65
34:RO:71:ARG:NH1	39:RT:74:ARG:HH21	1.94	0.65
7:XG:11:GLN:O	7:XG:12:LEU:HD13	1.96	0.65
6:QF:50:TYR:CE1	18:QR:77:GLY:HA2	2.32	0.65
19:QS:15:LEU:O	19:QS:19:VAL:N	2.26	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:356:A:N3	1:XA:368:U:O2'	2.25	0.65
12:QL:21:LYS:HD2	12:QL:21:LYS:N	2.11	0.65
27:RD:176:ARG:HH11	27:RD:176:ARG:HG2	1.61	0.65
17:XQ:74:LEU:HD12	17:XQ:75:ARG:HG2	1.76	0.65
10:QJ:6:ILE:HD11	10:QJ:72:VAL:CB	2.24	0.65
3:QC:70:VAL:HG12	3:QC:71:ALA:N	2.10	0.65
35:YP:113:LYS:HG2	35:YP:115:LEU:HD23	1.79	0.65
54:Y8:52:LYS:O	54:Y8:52:LYS:HG3	1.97	0.65
50:R4:36:CYS:O	50:R4:37:SER:O	2.14	0.65
2:XB:7:VAL:HG22	2:XB:8:LYS:HD3	1.76	0.65
10:QJ:34:VAL:HG22	10:QJ:74:ILE:HG22	1.77	0.65
51:R5:40:LYS:NZ	51:R5:48:GLU:HB2	2.10	0.65
19:XS:21:GLU:HG3	19:XS:22:LEU:N	2.11	0.65
12:XL:39:VAL:HB	12:XL:57:LYS:HB2	1.78	0.65
47:R1:11:ARG:HH11	47:R1:11:ARG:HB3	1.61	0.65
15:QO:74:ASP:OD1	15:QO:77:ARG:N	2.30	0.65
1:XA:538:G:H5''	12:XL:114:LYS:HB2	1.77	0.65
12:XL:25:PRO:C	12:XL:27:LEU:H	1.98	0.65
6:XF:98:LEU:HB3	18:XR:30:ASP:HA	1.78	0.65
45:YZ:94:GLU:HB2	45:YZ:130:PRO:HD2	1.78	0.65
25:YA:227:A:OP1	35:YP:76:LYS:HE3	1.97	0.65
1:QA:618:C:N3	1:QA:622:A:N6	2.44	0.65
14:YN:40:CYS:SG	14:YN:43:CYS:CB	2.83	0.65
25:RA:270(T):G:H5''	47:R1:97:LEU:HD22	1.79	0.65
27:RD:122:ASP:CG	27:RD:123:ALA:H	2.00	0.65
30:RG:145:THR:HG23	50:R4:28:LYS:NZ	2.11	0.65
13:XM:51:ALA:O	13:XM:55:ARG:HG3	1.97	0.65
28:YE:10:GLY:H	28:YE:25:VAL:HG23	1.60	0.65
51:R5:56:LYS:H	51:R5:56:LYS:CD	2.07	0.65
48:Y2:69:ARG:NH1	48:Y2:69:ARG:HB2	2.11	0.65
10:QJ:27:ALA:CB	10:QJ:34:VAL:HG21	2.26	0.65
44:RY:35:TYR:CE1	44:RY:69:ALA:HB3	2.31	0.65
18:QR:43:PHE:CE2	18:QR:58:LEU:HD11	2.31	0.65
47:R1:56:GLN:N	47:R1:56:GLN:HE21	1.93	0.65
16:XP:6:LEU:HD23	16:XP:17:TYR:CD2	2.32	0.65
5:QE:83:GLU:HG2	5:QE:88:LYS:HG3	1.78	0.65
1:XA:1014:A:H4'	19:XS:14:HIS:NE2	2.12	0.65
35:YP:6:LEU:O	35:YP:7:ARG:HG2	1.97	0.65
7:QG:21:VAL:HG23	7:QG:22:LEU:H	1.60	0.65
47:R1:29:GLY:O	47:R1:30:VAL:HG23	1.97	0.65
47:R1:82:LEU:CD1	47:R1:83:GLU:C	2.64	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:YY:99:CYS:SG	44:YY:100:ALA:N	2.69	0.65
19:QS:5:LEU:HD21	50:R4:67:TYR:CE2	2.30	0.65
54:Y8:56:GLU:N	54:Y8:56:GLU:OE1	2.30	0.65
19:XS:3:ARG:CZ	19:XS:8:GLY:HA2	2.26	0.65
2:XB:80:ILE:CD1	2:XB:208:ILE:HG23	2.22	0.65
35:YP:97:PRO:HD3	35:YP:126:VAL:O	1.97	0.65
40:RU:74:LEU:HD23	40:RU:114:LYS:HD3	1.78	0.65
33:YN:43:THR:HB	33:YN:46:VAL:CG1	2.27	0.65
40:YU:74:LEU:HD23	40:YU:114:LYS:HD3	1.78	0.65
8:QH:20:TYR:CE2	8:QH:75:ARG:HD2	2.32	0.65
3:XC:34:LEU:HD21	3:XC:38:ARG:HD2	1.79	0.65
39:YT:11:GLU:OE1	39:YT:11:GLU:N	2.27	0.65
12:QL:11:VAL:HG13	17:QQ:29:HIS:CD2	2.31	0.65
28:RE:37:ARG:HA	28:RE:37:ARG:NE	2.11	0.65
16:QP:51:VAL:HG21	16:QP:77:ALA:HB2	1.78	0.65
15:XO:74:ASP:OD1	15:XO:77:ARG:N	2.30	0.65
20:QT:83:ARG:CA	20:QT:86:ARG:HB3	2.27	0.65
35:RP:6:LEU:O	35:RP:7:ARG:HG2	1.97	0.65
29:RF:45:ARG:CG	29:RF:45:ARG:HH11	2.09	0.65
11:XK:103:LEU:HD22	11:XK:103:LEU:H	1.62	0.65
10:QJ:81:THR:C	10:QJ:83:GLU:H	1.99	0.65
27:YD:176:ARG:HH11	27:YD:176:ARG:HG2	1.61	0.65
25:YA:2394:C:OP1	35:YP:63:PRO:HD2	1.96	0.65
10:XJ:54:PHE:C	10:XJ:55:LYS:HG3	2.17	0.65
47:Y1:82:LEU:CD1	47:Y1:83:GLU:C	2.64	0.65
13:XM:77:ASN:HA	50:Y4:71:ARG:NH2	2.11	0.65
35:YP:138:LEU:HD11	35:YP:144:GLU:HG3	1.78	0.65
2:QB:155:LEU:HD12	2:QB:157:ARG:O	1.97	0.65
25:RA:2286:A:OP1	52:R6:28:ARG:NE	2.30	0.65
25:YA:2415:G:H4'	35:YP:67:MET:N	2.12	0.65
5:QE:41:VAL:CG1	5:QE:113:ALA:HB2	2.25	0.65
48:R2:69:ARG:HB2	48:R2:69:ARG:NH1	2.11	0.65
9:XI:112:LYS:HA	9:XI:119:ALA:HB2	1.77	0.65
6:QF:98:LEU:HB3	18:QR:30:ASP:HA	1.79	0.65
4:QD:52:SER:HB3	4:QD:55:ALA:CB	2.27	0.65
27:RD:172:TYR:HB3	27:RD:184:LYS:HG2	1.77	0.65
42:YW:25:ARG:HB2	42:YW:25:ARG:NH1	2.11	0.65
25:RA:227:A:OP1	35:RP:76:LYS:HE3	1.97	0.65
41:YV:43:GLU:OE2	41:YV:43:GLU:HA	1.95	0.65
15:QO:8:LYS:O	15:QO:12:ILE:HG13	1.97	0.65
3:XC:101:LEU:HD23	3:XC:102:ASN:N	2.11	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:939:G:H5''	7:QG:102:ARG:HH12	1.62	0.65
1:XA:1342:C:H4'	9:XI:125:TYR:HB3	1.78	0.65
36:YQ:23:GLY:HA3	36:YQ:101:ARG:NH1	2.12	0.65
39:YT:22:PHE:N	39:YT:22:PHE:CD2	2.63	0.65
25:YA:530:G:O2'	25:YA:532:A:N7	2.30	0.65
25:YA:210:C:OP2	53:Y7:29:LYS:NZ	2.30	0.65
19:QS:10:PHE:CG	19:QS:11:VAL:N	2.65	0.64
27:YD:44:ASN:HB3	27:YD:49:ILE:HG22	1.78	0.64
13:XM:23:TYR:CB	13:XM:67:GLU:HG2	2.25	0.64
19:XS:65:ASN:N	19:XS:65:ASN:HD22	1.94	0.64
19:XS:64:GLU:CB	50:Y4:55:ARG:HH12	2.09	0.64
35:RP:97:PRO:HD3	35:RP:126:VAL:O	1.97	0.64
25:YA:2392:A:C8	35:YP:60:MET:HG3	2.31	0.64
28:RE:13:ARG:NH1	28:RE:21:VAL:HG12	2.11	0.64
8:XH:20:TYR:CE2	8:XH:75:ARG:HD2	2.31	0.64
26:RB:42:C:C6	30:RG:69:ALA:HB2	2.31	0.64
40:RU:65:ILE:HG12	40:RU:96:ALA:CB	2.26	0.64
2:QB:14:GLY:O	2:QB:15:VAL:HG13	1.96	0.64
2:XB:4:GLU:CG	2:XB:5:ILE:H	1.99	0.64
25:YA:1138:G:H21	33:YN:106:MET:HE3	1.61	0.64
52:R6:27:LYS:HZ3	52:R6:27:LYS:HB2	1.60	0.64
1:QA:192:U:H4'	20:QT:102:GLY:O	1.97	0.64
5:XE:50:GLU:HG3	5:XE:52:PRO:HD2	1.79	0.64
5:XE:41:VAL:HG12	5:XE:112:LEU:O	1.97	0.64
15:XO:25:THR:HG21	15:XO:70:LEU:HB2	1.77	0.64
27:YD:77:ALA:HB2	27:YD:97:TYR:HA	1.77	0.64
32:YI:129:THR:HA	32:YI:137:PRO:HA	1.80	0.64
40:YU:102:GLU:HG3	41:YV:2:PHE:HE2	1.62	0.64
42:YW:59:VAL:HG12	42:YW:60:ASN:N	2.11	0.64
31:RH:51:ARG:HG3	31:RH:51:ARG:HH11	1.61	0.64
12:XL:21:LYS:N	12:XL:21:LYS:HD2	2.11	0.64
31:YH:128:PRO:CD	31:YH:129:THR:H	2.09	0.64
35:YP:98:GLU:O	35:YP:101:VAL:HG12	1.98	0.64
28:RE:50:GLY:HA3	28:RE:74:PRO:HG3	1.79	0.64
37:YR:28:LEU:HD21	37:YR:114:VAL:HG12	1.80	0.64
5:XE:41:VAL:CG1	5:XE:113:ALA:HB2	2.25	0.64
19:XS:21:GLU:O	19:XS:25:LYS:HB3	1.97	0.64
28:RE:104:VAL:HG11	28:RE:188:VAL:CG2	2.27	0.64
31:RH:105:LEU:H	31:RH:105:LEU:CD1	2.09	0.64
31:YH:105:LEU:H	31:YH:105:LEU:CD1	2.09	0.64
4:QD:79:PHE:HD2	4:QD:79:PHE:C	2.00	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1190:G:H5'	35:YP:32:THR:HA	1.79	0.64
29:YF:175:THR:O	29:YF:176:LEU:HB2	1.95	0.64
2:XB:164:VAL:HB	2:XB:186:ALA:HB2	1.78	0.64
10:QJ:39:PRO:HB3	10:QJ:70:ARG:HH12	1.61	0.64
25:RA:443:A:C5	29:RF:45:ARG:HD2	2.32	0.64
4:XD:122:ARG:HD3	4:XD:122:ARG:O	1.97	0.64
8:XH:42:GLU:HG3	8:XH:109:ILE:HD12	1.80	0.64
19:QS:35:SER:O	19:QS:71:LEU:HD12	1.96	0.64
47:R1:80:LEU:HD12	47:R1:81:LYS:HE3	1.78	0.64
31:RH:148:ILE:O	31:RH:151:ILE:HG12	1.98	0.64
40:RU:102:GLU:HG3	41:RV:2:PHE:HE2	1.62	0.64
36:RQ:81:VAL:O	36:RQ:82:ARG:HG2	1.97	0.64
36:YQ:81:VAL:O	36:YQ:82:ARG:HG2	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	1.99	0.64
39:YT:11:GLU:CD	39:YT:11:GLU:N	2.47	0.64
20:XT:44:ALA:HB2	20:XT:88:VAL:HG13	1.78	0.64
51:Y5:40:LYS:HD3	51:Y5:46:CYS:CB	2.26	0.64
5:XE:78:HIS:HA	8:XH:105:ARG:HB2	1.79	0.64
51:R5:40:LYS:HD3	51:R5:46:CYS:CB	2.26	0.64
14:XN:7:ILE:HG13	14:XN:8:GLU:N	2.11	0.64
4:QD:166:LYS:HG3	27:YD:135:PHE:HZ	1.61	0.64
28:RE:35:GLN:CG	28:RE:37:ARG:HE	2.11	0.64
48:Y2:40:SER:C	48:Y2:42:GLY:H	2.01	0.64
3:QC:138:VAL:HG13	3:QC:149:ALA:CB	2.27	0.64
12:QL:26:ALA:O	12:QL:27:LEU:O	2.14	0.64
16:QP:58:TYR:O	16:QP:62:VAL:HG22	1.96	0.64
1:QA:1095:U:P	1:QA:1108:G:H1	2.20	0.64
32:YI:5:LEU:HD21	32:YI:12:LEU:HB3	1.79	0.64
1:XA:765:G:N2	1:XA:813:U:OP2	2.31	0.64
6:QF:12:PRO:HG2	6:QF:13:ASN:H	1.62	0.64
31:YH:117:PRO:HB3	31:YH:123:PHE:CE1	2.33	0.64
50:R4:71:ARG:HH11	50:R4:71:ARG:CG	1.98	0.64
33:YN:15:LEU:HD12	33:YN:136:GLU:HB2	1.79	0.64
30:YG:114:ILE:CG2	30:YG:117:PHE:HB2	2.27	0.64
54:R8:52:LYS:HG3	54:R8:52:LYS:O	1.97	0.64
36:YQ:81:VAL:O	36:YQ:82:ARG:HD3	1.97	0.64
25:YA:675:A:OP1	29:YF:63:LYS:NZ	2.30	0.64
50:Y4:35:VAL:O	50:Y4:37:SER:N	2.26	0.64
21:XU:25:LYS:HE2	21:XU:26:LYS:O	1.97	0.64
16:QP:21:VAL:HG23	16:QP:33:ILE:HB	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:RT:11:GLU:OE1	39:RT:11:GLU:N	2.27	0.64
1:QA:1305:G:H5'	21:QU:4:GLY:HA3	1.79	0.64
25:RA:1153:C:OP1	40:RU:76:TYR:OH	2.15	0.64
41:YV:76:LYS:HB2	41:YV:81:TYR:HB3	1.79	0.64
4:XD:61:LYS:HD2	4:XD:206:PHE:CE2	2.32	0.64
25:RA:530:G:O2'	25:RA:532:A:N7	2.29	0.64
9:QI:53:VAL:HG21	9:QI:92:TYR:CE1	2.32	0.64
18:QR:73:ALA:HB3	18:QR:79:LEU:HD12	1.78	0.64
18:XR:73:ALA:HB3	18:XR:79:LEU:HD12	1.78	0.64
2:QB:158:LEU:O	2:QB:158:LEU:HD12	1.97	0.64
25:YA:1530:G:O6	25:YA:1542:G:N2	2.30	0.64
26:RB:15:A:H5'	26:RB:16:G:C8	2.32	0.64
44:YY:86:ARG:O	44:YY:92:ASN:HB2	1.97	0.64
25:RA:1251:C:OP1	40:RU:10:ARG:HG3	1.96	0.64
2:XB:187:LEU:HD12	2:XB:205:ASP:HA	1.79	0.64
25:YA:2392:A:H8	35:YP:60:MET:HG3	1.60	0.64
10:QJ:54:PHE:C	10:QJ:55:LYS:HG3	2.18	0.64
33:RN:15:LEU:HD12	33:RN:136:GLU:HB2	1.79	0.64
2:QB:67:THR:HG21	2:QB:155:LEU:CD2	2.27	0.64
38:YS:78:LEU:HD11	38:YS:107:GLU:O	1.98	0.64
34:YO:12:ASP:OD1	34:YO:14:THR:HG23	1.97	0.64
3:QC:58:GLU:O	3:QC:64:VAL:HA	1.98	0.64
33:RN:57:ALA:HA	33:RN:60:ILE:HD11	1.78	0.64
44:RY:56:PRO:HG2	44:RY:57:GLN:OE1	1.98	0.64
44:YY:56:PRO:HG2	44:YY:57:GLN:OE1	1.98	0.64
14:QN:7:ILE:HG13	14:QN:8:GLU:N	2.12	0.64
1:XA:1320:C:N4	19:XS:36:ARG:HG3	2.12	0.64
30:YG:81:LYS:O	30:YG:82:LEU:HB2	1.96	0.64
30:YG:82:LEU:HA	30:YG:86:MET:SD	2.38	0.64
30:RG:83:ARG:HG3	30:RG:86:MET:HE1	1.78	0.64
29:YF:155:LEU:HD13	29:YF:174:VAL:CG1	2.27	0.64
29:YF:11:VAL:HG12	29:YF:12:LEU:N	2.13	0.64
25:RA:95:G:O2'	48:R2:48:HIS:ND1	2.26	0.64
25:RA:2394:C:OP1	35:RP:63:PRO:HD2	1.97	0.64
17:XQ:11:VAL:HG23	17:XQ:20:THR:HB	1.79	0.64
28:YE:69:LYS:O	28:YE:71:GLY:N	2.27	0.64
54:R8:56:GLU:N	54:R8:56:GLU:OE1	2.30	0.64
29:YF:46:ARG:NH1	29:YF:46:ARG:HG2	2.00	0.64
4:QD:29:PRO:HG2	4:QD:30:LYS:NZ	2.12	0.64
10:XJ:27:ALA:CB	10:XJ:34:VAL:HG21	2.26	0.64
13:XM:13:LYS:HA	13:XM:44:ARG:HD2	1.77	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:104:VAL:HG11	28:YE:188:VAL:CG2	2.27	0.64
30:RG:81:LYS:O	30:RG:82:LEU:HB2	1.96	0.64
30:RG:82:LEU:HA	30:RG:86:MET:SD	2.38	0.64
4:QD:61:LYS:HD2	4:QD:206:PHE:CE2	2.32	0.64
25:YA:259:G:N2	25:YA:621:A:H8	1.95	0.64
4:XD:79:PHE:HD2	4:XD:79:PHE:C	1.99	0.64
11:XK:48:ILE:HD11	11:XK:64:ALA:CA	2.27	0.64
27:RD:77:ALA:HB2	27:RD:97:TYR:HA	1.77	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
4:XD:13:ARG:HD2	4:XD:38:TYR:O	1.98	0.64
42:RW:59:VAL:HG12	42:RW:60:ASN:N	2.11	0.64
36:RQ:10:ARG:O	36:RQ:11:LYS:HB2	1.98	0.64
43:RX:11:PRO:HB3	43:RX:92:LEU:HD21	1.78	0.64
16:XP:58:TYR:O	16:XP:62:VAL:HG22	1.96	0.64
31:YH:51:ARG:HG3	31:YH:51:ARG:HH11	1.61	0.64
29:YF:45:ARG:CG	29:YF:45:ARG:HH11	2.09	0.64
25:RA:2208:U:H1'	27:RD:151:LYS:HE2	1.79	0.64
47:Y1:29:GLY:O	47:Y1:30:VAL:HG23	1.97	0.64
47:Y1:80:LEU:HD12	47:Y1:81:LYS:HE3	1.78	0.64
25:YA:242:G:H5'	54:Y8:62:LEU:CD2	2.27	0.64
13:QM:4:ILE:H	13:QM:9:ILE:HG22	1.62	0.64
41:YV:36:PRO:HA	41:YV:56:SER:OG	1.98	0.64
3:QC:34:LEU:HD21	3:QC:38:ARG:HD2	1.79	0.64
25:YA:1796:U:H2'	25:YA:1797:C:C6	2.32	0.64
2:QB:60:ASP:HB3	2:QB:64:ARG:NH1	2.13	0.64
6:XF:12:PRO:HG2	6:XF:13:ASN:H	1.62	0.64
31:YH:92:ILE:HD12	31:YH:92:ILE:H	1.63	0.64
46:R0:18:ALA:O	46:R0:20:ARG:NH1	2.31	0.64
6:QF:92:LYS:HZ2	6:QF:92:LYS:HB2	1.62	0.64
14:QN:53:LEU:HB3	14:QN:56:VAL:HG21	1.80	0.64
50:Y4:49:PHE:O	50:Y4:50:VAL:HG23	1.97	0.64
31:YH:148:ILE:O	31:YH:151:ILE:HG12	1.97	0.64
3:XC:181:ASN:ND2	3:XC:204:LEU:HB2	2.13	0.64
27:YD:122:ASP:CG	27:YD:123:ALA:H	2.00	0.64
34:YO:7:TYR:CE1	34:YO:20:MET:HB2	2.32	0.64
27:RD:182:LEU:H	27:RD:272:ALA:HB3	1.63	0.64
16:XP:51:VAL:HG21	16:XP:77:ALA:HB2	1.78	0.64
9:XI:28:VAL:HA	9:XI:63:ILE:HB	1.79	0.64
9:XI:5:TYR:O	9:XI:84:ALA:HA	1.98	0.64
3:XC:138:VAL:HG13	3:XC:149:ALA:CB	2.28	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:XG:113:GLU:CG	7:XG:119:ARG:HG2	2.28	0.64
31:YH:3:ARG:HA	31:YH:3:ARG:NE	2.12	0.64
1:QA:235:C:H5'	17:QQ:70:ARG:HG2	1.80	0.64
10:QJ:42:THR:HG23	10:QJ:68:HIS:HA	1.80	0.64
36:RQ:23:GLY:HA3	36:RQ:101:ARG:NH1	2.12	0.64
1:QA:922:G:H4'	5:QE:20:GLN:HA	1.79	0.64
11:QK:103:LEU:HD22	11:QK:103:LEU:H	1.62	0.64
47:R1:91:LYS:HG3	47:R1:92:LYS:H	1.63	0.64
25:RA:242:G:H5''	54:R8:3:LYS:HE3	1.80	0.64
15:XO:87:ILE:CG2	15:XO:88:ARG:H	2.00	0.64
2:XB:178:ARG:NE	8:XH:71:GLY:O	2.30	0.64
2:XB:8:LYS:CD	2:XB:8:LYS:H	2.09	0.64
36:RQ:30:GLY:HA3	36:RQ:106:VAL:O	1.98	0.64
11:XK:19:ALA:HA	11:XK:32:ILE:HG22	1.80	0.64
33:RN:131:GLN:CD	33:RN:132:ALA:H	2.01	0.64
9:QI:62:TYR:O	9:QI:63:ILE:HD12	1.98	0.64
37:YR:2:ARG:HG2	37:YR:5:LYS:NZ	2.13	0.64
32:YI:130:TYR:HB3	32:YI:136:VAL:HG13	1.79	0.64
32:YI:129:THR:HG22	32:YI:137:PRO:HB3	1.80	0.64
31:RH:92:ILE:H	31:RH:92:ILE:HD12	1.63	0.64
2:QB:134:GLU:HA	2:QB:137:ARG:HB3	1.80	0.64
2:XB:134:GLU:HA	2:XB:137:ARG:HB3	1.80	0.64
6:XF:50:TYR:CE1	18:XR:77:GLY:HA2	2.32	0.64
25:RA:2405:G:O2'	25:RA:2411:A:N6	2.31	0.64
47:Y1:82:LEU:CD1	47:Y1:83:GLU:CA	2.76	0.64
25:YA:270(T):G:OP1	47:Y1:97:LEU:HD13	1.98	0.64
11:QK:17:GLY:HA3	11:QK:77:MET:HE3	1.78	0.64
8:XH:28:ALA:HB3	8:XH:57:PRO:HB2	1.79	0.64
28:RE:201:THR:HG21	28:RE:203:LYS:HB3	1.80	0.64
3:XC:95:THR:HG22	3:XC:96:GLY:N	2.06	0.64
5:QE:41:VAL:HG12	5:QE:112:LEU:O	1.97	0.64
8:XH:97:VAL:HG13	8:XH:98:LYS:N	2.13	0.64
25:YA:620:G:H4'	25:YA:621:A:C5'	2.28	0.64
15:QO:8:LYS:NZ	15:QO:8:LYS:HB2	2.13	0.64
1:XA:1218:C:H2'	1:XA:1219:U:C6	2.33	0.64
12:QL:18:VAL:HG23	12:QL:19:ARG:H	1.63	0.64
11:XK:12:ARG:HG2	11:XK:13:GLN:H	1.63	0.64
25:YA:2114:A:N6	25:YA:2119:A:N7	2.45	0.64
35:RP:105:LEU:O	35:RP:106:LEU:CB	2.42	0.63
35:RP:113:LYS:HG2	35:RP:115:LEU:HD23	1.79	0.63
35:RP:98:GLU:O	35:RP:101:VAL:HG12	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:14:ILE:CG1	28:YE:15:PHE:H	2.08	0.63
41:RV:52:VAL:CG2	41:RV:55:ALA:HB3	2.28	0.63
40:YU:92:ARG:O	40:YU:94:ASN:N	2.25	0.63
34:RO:86:ILE:N	34:RO:86:ILE:HD12	2.13	0.63
38:YS:26:LEU:HD22	38:YS:87:PHE:HD1	1.63	0.63
43:YX:57:LEU:HD12	43:YX:78:LYS:HB2	1.77	0.63
20:QT:26:ASN:HB2	20:QT:71:THR:HG23	1.79	0.63
21:QU:15:ARG:HH11	21:QU:15:ARG:HG2	1.63	0.63
30:RG:114:ILE:CG2	30:RG:117:PHE:HB2	2.28	0.63
27:YD:135:PHE:HD2	27:YD:135:PHE:N	1.96	0.63
54:Y8:48:PHE:N	54:Y8:48:PHE:CD1	2.66	0.63
16:QP:51:VAL:CG1	16:QP:52:ASP:H	2.11	0.63
9:XI:62:TYR:O	9:XI:63:ILE:HD12	1.98	0.63
2:XB:21:ARG:HB2	2:XB:39:ILE:HA	1.80	0.63
7:QG:148:ASN:N	7:QG:148:ASN:ND2	2.46	0.63
9:QI:97:LYS:HB3	9:QI:98:PRO:HD3	1.79	0.63
1:QA:1205:U:H5'	3:QC:190:ARG:NH2	2.13	0.63
45:YZ:182:LYS:HG3	45:YZ:183:LEU:HA	1.80	0.63
1:QA:1014:A:H4'	19:QS:14:HIS:NE2	2.12	0.63
25:RA:2832:U:H4'	25:RA:2833:G:H5''	1.79	0.63
12:XL:18:VAL:HG23	12:XL:19:ARG:H	1.62	0.63
1:QA:1104:G:H4'	2:QB:111:ARG:NH1	2.13	0.63
19:QS:39:THR:HG22	19:QS:40:ILE:N	2.14	0.63
13:QM:51:ALA:O	13:QM:55:ARG:HG3	1.97	0.63
33:YN:39:ARG:HB3	33:YN:41:ASP:OD1	1.98	0.63
36:RQ:104:PHE:O	36:RQ:105:GLU:HB3	1.98	0.63
8:QH:97:VAL:HG13	8:QH:98:LYS:N	2.13	0.63
39:YT:111:ARG:C	39:YT:113:LYS:H	2.01	0.63
25:RA:2419:U:H5'	52:R6:23:THR:HG22	1.80	0.63
37:RR:28:LEU:HD21	37:RR:114:VAL:HG12	1.79	0.63
5:XE:53:LEU:HD12	5:XE:53:LEU:N	2.09	0.63
42:YW:110:LYS:HG3	42:YW:111:HIS:ND1	2.12	0.63
19:QS:21:GLU:HG3	19:QS:22:LEU:N	2.11	0.63
33:RN:43:THR:HB	33:RN:46:VAL:CG1	2.27	0.63
3:XC:58:GLU:O	3:XC:64:VAL:HA	1.98	0.63
34:YO:104:ARG:HG2	34:YO:104:ARG:NH1	2.14	0.63
20:QT:14:LYS:HA	20:QT:17:ARG:NH1	2.14	0.63
9:QI:47:LEU:N	9:QI:47:LEU:HD22	2.14	0.63
27:YD:18:VAL:HG12	27:YD:19:ALA:O	1.99	0.63
22:QV:6:G:H1	22:QV:67:C:H42	1.44	0.63
12:XL:62:SER:O	12:XL:64:TYR:HD1	1.82	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:RW:74:ALA:O	42:RW:75:TYR:HB3	1.98	0.63
25:RA:635:C:O2'	25:RA:639:U:OP1	2.16	0.63
25:YA:1814:G:H4'	27:YD:51:VAL:HG21	1.79	0.63
31:RH:117:PRO:HB3	31:RH:123:PHE:CE1	2.33	0.63
47:Y1:91:LYS:HG3	47:Y1:92:LYS:H	1.62	0.63
3:QC:181:ASN:ND2	3:QC:204:LEU:HB2	2.13	0.63
27:RD:35:LYS:HZ1	27:RD:65:ILE:HA	1.62	0.63
36:RQ:81:VAL:O	36:RQ:82:ARG:HD3	1.98	0.63
36:YQ:104:PHE:O	36:YQ:105:GLU:HB3	1.98	0.63
29:YF:67:GLN:O	29:YF:67:GLN:CG	2.32	0.63
28:YE:201:THR:HG21	28:YE:203:LYS:HB3	1.80	0.63
3:QC:95:THR:HG22	3:QC:96:GLY:N	2.07	0.63
2:QB:8:LYS:H	2:QB:8:LYS:CD	2.09	0.63
37:YR:117:VAL:O	37:YR:118:GLU:HB3	1.99	0.63
27:RD:135:PHE:HD2	27:RD:135:PHE:N	1.96	0.63
29:RF:11:VAL:HG12	29:RF:12:LEU:N	2.13	0.63
11:QK:48:ILE:HD11	11:QK:64:ALA:CA	2.27	0.63
2:XB:25:ASN:O	2:XB:27:LYS:N	2.28	0.63
14:YN:18:VAL:HG23	14:YN:19:ARG:H	1.63	0.63
25:YA:2335:A:O2'	25:YA:2336:A:O5'	2.15	0.63
32:RI:1:MET:HG3	32:RI:23:PRO:HB3	1.80	0.63
43:RX:63:LYS:O	43:RX:64:LYS:HD2	1.98	0.63
1:QA:355:C:H1'	1:QA:388:G:H2'	1.79	0.63
29:RF:132:VAL:HG23	29:RF:133:ASN:N	2.14	0.63
28:YE:50:GLY:HA3	28:YE:74:PRO:HG3	1.79	0.63
35:RP:112:LEU:HD11	35:RP:114:ILE:HG23	1.80	0.63
35:YP:106:LEU:O	35:YP:107:LYS:CB	2.46	0.63
25:YA:588:U:H1'	29:YF:90:PHE:CD1	2.34	0.63
27:RD:147:LEU:CD1	27:RD:155:LEU:HD11	2.26	0.63
20:XT:26:ASN:HB2	20:XT:71:THR:HG23	1.79	0.63
33:YN:131:GLN:CD	33:YN:132:ALA:H	2.01	0.63
10:XJ:42:THR:HG23	10:XJ:68:HIS:HA	1.80	0.63
18:XR:43:PHE:CE2	18:XR:58:LEU:HD11	2.31	0.63
11:XK:50:TYR:HH	11:XK:59:TYR:HE2	1.47	0.63
8:QH:112:LEU:HD12	8:QH:112:LEU:O	1.98	0.63
31:RH:3:ARG:HA	31:RH:3:ARG:NE	2.12	0.63
33:RN:61:ARG:HA	33:RN:61:ARG:HE	1.63	0.63
43:YX:18:TYR:C	43:YX:20:GLY:H	2.02	0.63
2:XB:158:LEU:HD12	2:XB:158:LEU:O	1.97	0.63
1:QA:1314:C:OP1	19:QS:6:LYS:HE3	1.97	0.63
27:YD:230:ASP:O	27:YD:231:HIS:HB2	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:18:VAL:HG12	27:RD:19:ALA:O	1.99	0.63
1:QA:1124:G:H3'	1:QA:1145:C:N4	2.13	0.63
25:YA:242:G:C8	54:Y8:5:LYS:HG2	2.33	0.63
31:RH:153:LYS:HG3	31:RH:161:GLY:HA3	1.80	0.63
39:RT:49:VAL:HG13	39:RT:49:VAL:O	1.99	0.63
48:R2:42:GLY:O	48:R2:44:LEU:N	2.30	0.63
9:QI:5:TYR:O	9:QI:84:ALA:HA	1.98	0.63
1:QA:1114:C:H1'	14:QN:60:SER:HB2	1.79	0.63
25:RA:1059:G:O6	25:RA:1079:C:N4	2.29	0.63
15:XO:8:LYS:HB2	15:XO:8:LYS:NZ	2.13	0.63
26:RB:52:A:O2'	26:RB:53:A:N7	2.32	0.63
25:YA:1077:A:H5'	25:YA:1078:U:H5''	1.80	0.63
25:YA:1030:G:OP2	36:YQ:128:LYS:HE2	1.98	0.63
43:RX:18:TYR:C	43:RX:20:GLY:H	2.02	0.63
39:YT:60:THR:HG22	39:YT:77:PRO:HA	1.80	0.63
27:RD:230:ASP:O	27:RD:231:HIS:HB2	1.98	0.63
25:YA:666:G:H4'	35:YP:49:ARG:NH1	2.14	0.63
40:RU:102:GLU:HG3	41:RV:2:PHE:CE2	2.34	0.63
38:RS:78:LEU:HD11	38:RS:107:GLU:O	1.98	0.63
36:RQ:66:ILE:CG1	36:RQ:67:ARG:H	2.12	0.63
4:QD:30:LYS:CG	4:QD:35:ARG:HE	2.11	0.63
33:RN:22:THR:CG2	33:RN:23:LEU:N	2.61	0.63
25:RA:2415:G:H4'	35:RP:67:MET:N	2.14	0.63
2:QB:20:GLU:HB2	2:QB:190:THR:OG1	1.99	0.63
33:RN:39:ARG:HB3	33:RN:41:ASP:OD1	1.99	0.63
30:YG:68:PRO:HB2	30:YG:90:LEU:HD12	1.80	0.63
48:Y2:40:SER:C	48:Y2:42:GLY:N	2.51	0.63
12:XL:86:ARG:HB2	12:XL:101:VAL:CG2	2.28	0.63
25:RA:1190:G:H5'	35:RP:32:THR:HA	1.79	0.63
2:XB:60:ASP:HB3	2:XB:64:ARG:NH1	2.13	0.63
19:XS:15:LEU:O	19:XS:19:VAL:HG23	1.98	0.63
25:YA:443:A:C5	29:YF:45:ARG:HD2	2.32	0.63
28:RE:131:ALA:HB1	28:RE:135:HIS:CE1	2.34	0.63
42:RW:110:LYS:HG3	42:RW:111:HIS:ND1	2.12	0.63
1:QA:474:G:H5'	16:QP:81:ARG:HG3	1.81	0.63
25:YA:1291:C:H5'	25:YA:1536:A:H5'	1.81	0.63
48:Y2:46:GLN:HA	48:Y2:46:GLN:OE1	1.97	0.63
44:RY:95:LYS:CB	44:RY:100:ALA:HA	2.13	0.63
27:YD:72:LYS:HG2	27:YD:103:ARG:NH2	2.13	0.63
35:YP:83:VAL:HG12	35:YP:112:LEU:HD21	1.81	0.63
33:YN:7:LYS:H	33:YN:7:LYS:HD2	1.64	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YO:86:ILE:HD12	34:YO:86:ILE:N	2.13	0.63
8:QH:28:ALA:HB3	8:QH:57:PRO:HB2	1.79	0.63
8:QH:6:ILE:HB	8:QH:85:ARG:HH12	1.62	0.63
4:QD:30:LYS:HA	4:QD:34:GLU:HB2	1.79	0.63
25:RA:2287:A:N6	25:RA:2344:U:H3	1.97	0.63
5:XE:51:VAL:O	5:XE:55:VAL:HG23	1.99	0.63
36:YQ:30:GLY:HA3	36:YQ:106:VAL:O	1.98	0.63
29:RF:28:ILE:HG22	29:RF:112:MET:HB3	1.80	0.63
30:YG:61:ALA:HB2	30:YG:68:PRO:HD2	1.81	0.63
48:R2:40:SER:C	48:R2:42:GLY:H	2.00	0.63
54:R8:48:PHE:CD1	54:R8:48:PHE:N	2.66	0.63
36:RQ:20:ALA:HB1	36:RQ:99:PRO:CB	2.29	0.63
36:YQ:20:ALA:HB1	36:YQ:99:PRO:CB	2.28	0.63
7:QG:9:VAL:CG1	7:QG:94:ARG:HE	2.12	0.63
1:QA:954:G:H4'	13:QM:121:LYS:HG3	1.80	0.63
15:QO:61:GLY:C	15:QO:65:ARG:HH12	2.02	0.63
1:QA:78:G:O6	1:QA:91:C:N4	2.30	0.63
33:YN:61:ARG:HE	33:YN:61:ARG:HA	1.63	0.63
12:QL:85:ILE:HD11	12:QL:98:TYR:HB2	1.81	0.63
25:RA:278:A:H61	25:RA:362:U:H3	1.47	0.63
9:XI:97:LYS:HB3	9:XI:98:PRO:HD3	1.79	0.63
13:XM:36:LYS:HD3	13:XM:36:LYS:C	2.19	0.63
48:R2:46:GLN:HA	48:R2:46:GLN:OE1	1.98	0.63
43:RX:49:VAL:HG13	43:RX:83:VAL:HG13	1.80	0.63
14:QN:18:VAL:HG23	14:QN:19:ARG:H	1.63	0.63
25:YA:1348:G:H2'	25:YA:1349:A:H5''	1.80	0.63
1:XA:1298:C:O2'	1:XA:1299:A:OP2	2.14	0.63
47:R1:82:LEU:CD1	47:R1:83:GLU:CA	2.76	0.63
1:XA:1314:C:N4	19:XS:3:ARG:O	2.23	0.63
3:QC:70:VAL:HG12	3:QC:72:LYS:N	2.10	0.63
11:QK:19:ALA:HA	11:QK:32:ILE:HG22	1.80	0.63
35:YP:114:ILE:HD11	35:YP:130:PHE:CD1	2.34	0.63
25:YA:1006:C:H1'	33:YN:106:MET:HE3	1.81	0.63
3:QC:34:LEU:CD2	3:QC:38:ARG:HD2	2.29	0.63
52:R6:13:CYS:HB2	52:R6:22:ALA:HB3	1.80	0.63
37:RR:63:ARG:NH1	37:RR:80:PHE:CD1	2.67	0.63
5:XE:91:LEU:HA	5:XE:120:THR:HG22	1.81	0.63
25:RA:1798:U:H5''	27:RD:259:THR:HG22	1.81	0.63
9:XI:17:VAL:HG21	9:XI:81:ILE:N	2.14	0.63
9:XI:118:LYS:O	9:XI:119:ALA:HB3	1.99	0.63
4:XD:153:ARG:HD3	4:XD:181:MET:SD	2.39	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:XP:66:PRO:HG2	16:XP:71:ARG:HH12	1.64	0.63
19:QS:15:LEU:O	19:QS:19:VAL:HG23	1.98	0.63
11:XK:12:ARG:HG2	11:XK:13:GLN:N	2.14	0.63
12:QL:62:SER:O	12:QL:64:TYR:HD1	1.82	0.63
29:RF:119:ARG:HH11	29:RF:119:ARG:HG2	1.64	0.63
3:QC:3:ASN:N	3:QC:3:ASN:HD22	1.96	0.63
39:YT:16:ARG:HE	39:YT:19:LEU:HD21	1.62	0.63
47:R1:87:PRO:O	47:R1:88:LYS:C	2.37	0.63
44:RY:86:ARG:O	44:RY:92:ASN:HB2	1.97	0.63
44:YY:87:LYS:O	44:YY:88:LYS:NZ	2.32	0.63
54:Y8:59:LYS:HB3	54:Y8:59:LYS:HZ3	1.62	0.63
31:YH:86:GLU:O	31:YH:87:LEU:HB2	1.99	0.63
31:YH:153:LYS:HG3	31:YH:161:GLY:HA3	1.80	0.63
2:XB:155:LEU:HD12	2:XB:157:ARG:O	1.98	0.63
35:RP:108:LYS:H	35:RP:108:LYS:HD2	1.64	0.63
8:XH:20:TYR:HA	8:XH:65:TYR:HE2	1.60	0.63
2:QB:187:LEU:HD12	2:QB:205:ASP:HA	1.79	0.63
36:RQ:83:MET:HB2	46:R0:7:LEU:HD12	1.79	0.63
2:QB:178:ARG:HD2	8:QH:71:GLY:C	2.20	0.63
3:XC:34:LEU:CD2	3:XC:38:ARG:HD2	2.29	0.63
35:YP:64:LYS:HB2	54:Y8:25:MET:HG3	1.81	0.63
39:RT:111:ARG:C	39:RT:113:LYS:H	2.01	0.63
27:RD:133:LEU:HD21	27:RD:191:ALA:CB	2.29	0.63
39:YT:49:VAL:O	39:YT:49:VAL:HG13	1.99	0.63
12:QL:86:ARG:HB2	12:QL:101:VAL:CG2	2.28	0.63
28:YE:35:GLN:CG	28:YE:37:ARG:NE	2.62	0.63
36:RQ:20:ALA:HB1	36:RQ:99:PRO:CD	2.29	0.63
2:QB:21:ARG:HB2	2:QB:39:ILE:HA	1.80	0.63
40:RU:34:LYS:HA	40:RU:34:LYS:CE	2.29	0.63
3:QC:189:ALA:O	3:QC:191:THR:HG23	1.99	0.63
9:XI:47:LEU:HD22	9:XI:47:LEU:N	2.13	0.63
39:RT:16:ARG:HE	39:RT:19:LEU:HD21	1.63	0.63
43:YX:31:HIS:CE1	43:YX:33:LYS:HB2	2.34	0.63
36:YQ:10:ARG:O	36:YQ:11:LYS:HB2	1.98	0.63
38:YS:22:GLY:O	38:YS:23:ARG:O	2.17	0.63
28:YE:4:ILE:CD1	28:YE:28:ALA:HB1	2.29	0.62
2:XB:66:GLY:O	2:XB:67:THR:HG23	1.99	0.62
11:XK:99:GLN:HG2	11:XK:105:VAL:CG2	2.28	0.62
28:YE:13:ARG:HH12	28:YE:21:VAL:HG12	1.64	0.62
2:XB:214:ILE:HD13	2:XB:217:ARG:NH2	2.14	0.62
48:R2:65:ASN:HB3	48:R2:69:ARG:NH1	2.10	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:107:LYS:O	29:RF:108:LYS:C	2.36	0.62
37:RR:117:VAL:O	37:RR:118:GLU:HB3	1.98	0.62
7:QG:113:GLU:CG	7:QG:119:ARG:HG2	2.28	0.62
2:XB:236:TYR:CD2	2:XB:239:VAL:HG21	2.34	0.62
9:QI:118:LYS:O	9:QI:119:ALA:HB3	1.99	0.62
29:YF:129:PHE:O	29:YF:130:ALA:HB3	1.99	0.62
47:R1:76:ARG:HD2	47:R1:76:ARG:H	1.64	0.62
33:YN:87:LEU:HD23	33:YN:87:LEU:O	1.99	0.62
4:XD:33:MET:HE2	4:XD:37:PRO:HA	1.80	0.62
13:QM:40:ASN:HD21	13:QM:42:ALA:HB3	1.64	0.62
25:YA:562:U:O2'	25:YA:572:A:O4'	2.14	0.62
39:RT:60:THR:HG22	39:RT:77:PRO:HA	1.80	0.62
1:XA:598:U:H4'	8:XH:94:TYR:CD2	2.34	0.62
42:YW:74:ALA:O	42:YW:75:TYR:HB3	1.98	0.62
11:QK:12:ARG:HG2	11:QK:13:GLN:N	2.14	0.62
1:XA:1073:U:O2'	2:XB:104:ASN:OD1	2.14	0.62
16:XP:8:ARG:HG2	16:XP:8:ARG:HH11	1.64	0.62
9:QI:59:PHE:HZ	9:QI:88:TYR:CE1	2.17	0.62
25:YA:1068:G:O2'	25:YA:1096:A:N3	2.32	0.62
47:Y1:18:ILE:HG12	47:Y1:37:ILE:HG12	1.81	0.62
54:R8:59:LYS:HZ3	54:R8:59:LYS:HB3	1.64	0.62
7:XG:140:ASP:HA	7:XG:143:ARG:NH1	2.14	0.62
2:QB:214:ILE:HD13	2:QB:217:ARG:NH2	2.14	0.62
7:QG:140:ASP:HA	7:QG:143:ARG:NH1	2.14	0.62
25:RA:483:A:H3'	25:RA:484:C:C6	2.33	0.62
34:RO:8:LEU:HB2	34:RO:19:ILE:HD11	1.81	0.62
4:XD:170:VAL:HG22	4:XD:171:GLY:N	2.12	0.62
4:QD:170:VAL:O	6:XF:21:LEU:HD21	1.99	0.62
2:QB:236:TYR:CD2	2:QB:239:VAL:HG21	2.34	0.62
14:XN:18:VAL:HG23	14:XN:19:ARG:N	2.14	0.62
1:XA:1074:G:H4'	2:XB:104:ASN:HB2	1.81	0.62
25:YA:297:C:H5''	44:YY:85:VAL:HG21	1.80	0.62
31:RH:136:ILE:H	31:RH:136:ILE:HD12	1.64	0.62
11:QK:58:PRO:HD3	11:QK:89:ALA:HB1	1.81	0.62
8:QH:42:GLU:HG3	8:QH:109:ILE:HD12	1.80	0.62
38:RS:48:LEU:HD12	38:RS:48:LEU:N	2.14	0.62
1:QA:752:G:H1'	1:QA:754:C:H41	1.63	0.62
43:YX:49:VAL:HG13	43:YX:83:VAL:HG13	1.80	0.62
29:YF:132:VAL:HG23	29:YF:133:ASN:N	2.14	0.62
4:XD:29:PRO:C	4:XD:30:LYS:HD3	2.19	0.62
27:RD:44:ASN:HB3	27:RD:49:ILE:CA	2.27	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:QE:51:VAL:O	5:QE:55:VAL:HG23	1.99	0.62
37:YR:63:ARG:NH1	37:YR:80:PHE:CD1	2.67	0.62
7:QG:140:ASP:C	7:QG:142:GLU:H	2.03	0.62
52:R6:41:PRO:HG2	52:R6:45:LYS:N	2.10	0.62
35:YP:1:MET:CE	35:YP:5:ASP:HB3	2.25	0.62
39:RT:24:PRO:O	39:RT:94:ALA:HB2	2.00	0.62
25:YA:2311:A:C8	30:YG:82:LEU:HD11	2.34	0.62
48:R2:40:SER:C	48:R2:42:GLY:N	2.50	0.62
16:XP:51:VAL:CG1	16:XP:52:ASP:H	2.10	0.62
1:XA:1347:G:C8	9:XI:107:ARG:HB3	2.34	0.62
9:QI:17:VAL:HG21	9:QI:81:ILE:N	2.14	0.62
7:XG:9:VAL:CG1	7:XG:94:ARG:HE	2.12	0.62
40:YU:34:LYS:CE	40:YU:34:LYS:HA	2.29	0.62
6:QF:8:ILE:HD11	6:QF:79:LEU:HD13	1.81	0.62
25:YA:2485:G:OP1	36:YQ:46:GLN:NE2	2.32	0.62
8:XH:112:LEU:HD12	8:XH:112:LEU:O	1.98	0.62
39:YT:22:PHE:HD2	39:YT:22:PHE:N	1.97	0.62
11:XK:58:PRO:HD3	11:XK:89:ALA:HB1	1.81	0.62
17:QQ:11:VAL:HG23	17:QQ:20:THR:HB	1.79	0.62
18:QR:82:THR:HG22	18:QR:83:GLU:N	2.15	0.62
27:RD:72:LYS:HG2	27:RD:103:ARG:NH2	2.13	0.62
25:RA:2667:C:H1'	31:RH:109:PHE:HD2	1.63	0.62
35:YP:105:LEU:O	35:YP:106:LEU:CB	2.42	0.62
35:RP:61:ARG:H	35:RP:61:ARG:CD	2.09	0.62
41:YV:52:VAL:CG2	41:YV:55:ALA:HB3	2.28	0.62
29:RF:28:ILE:HD13	29:RF:30:PRO:HD3	1.80	0.62
4:XD:96:LEU:CD2	4:XD:96:LEU:H	2.11	0.62
2:QB:23:ARG:HD3	2:QB:23:ARG:H	1.64	0.62
39:RT:96:ARG:NH1	39:RT:96:ARG:HB2	2.14	0.62
10:XJ:29:ARG:O	10:XJ:29:ARG:HG2	2.00	0.62
31:YH:136:ILE:HD12	31:YH:136:ILE:H	1.64	0.62
18:XR:82:THR:HG22	18:XR:83:GLU:N	2.15	0.62
9:QI:13:ALA:HB2	9:QI:67:GLY:O	2.00	0.62
25:RA:1795:C:O2	27:RD:255:LYS:HE2	1.99	0.62
18:QR:25:THR:O	18:QR:25:THR:HG22	2.00	0.62
38:YS:48:LEU:N	38:YS:48:LEU:HD12	2.14	0.62
30:YG:94:LEU:HD23	30:YG:94:LEU:H	1.64	0.62
3:XC:3:ASN:N	3:XC:3:ASN:HD22	1.97	0.62
38:RS:22:GLY:O	38:RS:23:ARG:O	2.17	0.62
27:YD:35:LYS:HA	27:YD:64:ILE:HG22	1.81	0.62
35:RP:83:VAL:HG12	35:RP:112:LEU:HD21	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:XK:51:LYS:CA	11:XK:55:LYS:HD3	2.22	0.62
33:RN:133:GLN:O	33:RN:134:ARG:HB3	1.99	0.62
2:QB:66:GLY:O	2:QB:67:THR:HG23	2.00	0.62
8:QH:84:ARG:NH1	8:QH:84:ARG:HG3	2.10	0.62
52:Y6:44:ARG:O	52:Y6:45:LYS:HB2	2.00	0.62
33:RN:96:GLU:O	33:RN:98:VAL:N	2.33	0.62
29:YF:107:LYS:O	29:YF:108:LYS:C	2.36	0.62
48:Y2:41:ILE:HG12	48:Y2:44:LEU:HD12	1.82	0.62
9:QI:65:VAL:HG21	9:QI:73:GLN:HB3	1.81	0.62
9:QI:116:LYS:O	9:QI:118:LYS:N	2.33	0.62
39:YT:96:ARG:NH1	39:YT:96:ARG:HB2	2.14	0.62
25:RA:259:G:H21	25:RA:621:A:H8	1.46	0.62
42:RW:60:ASN:C	42:RW:61:ASN:HD22	2.03	0.62
33:YN:26:LEU:O	33:YN:30:ILE:HG13	1.99	0.62
8:XH:16:ALA:HB2	8:XH:24:THR:HG21	1.82	0.62
1:XA:1049:U:HO2'	14:YN:2:ALA:N	1.97	0.62
43:YX:63:LYS:O	43:YX:64:LYS:HD2	1.99	0.62
30:RG:94:LEU:N	30:RG:94:LEU:HD23	2.14	0.62
1:QA:299:G:H2'	1:QA:300:A:C8	2.34	0.62
1:XA:1106:G:H5''	3:XC:172:ARG:HG2	1.81	0.62
19:XS:12:ASP:OD1	19:XS:37:ARG:HD2	2.00	0.62
33:YN:133:GLN:O	33:YN:134:ARG:HB3	1.99	0.62
30:RG:68:PRO:HB2	30:RG:90:LEU:HD12	1.80	0.62
41:RV:36:PRO:HA	41:RV:56:SER:OG	1.98	0.62
52:Y6:27:LYS:HB2	52:Y6:27:LYS:HZ3	1.65	0.62
39:YT:108:ARG:O	39:YT:111:ARG:HG3	1.99	0.62
35:RP:65:ARG:CG	35:RP:65:ARG:HH11	2.06	0.62
44:YY:48:ALA:HB2	44:YY:61:ILE:HD13	1.82	0.62
39:RT:108:ARG:O	39:RT:111:ARG:HG3	2.00	0.62
35:YP:65:ARG:HE	54:Y8:15:LYS:HB2	1.65	0.62
48:Y2:69:ARG:HB2	48:Y2:69:ARG:CZ	2.29	0.62
27:YD:133:LEU:HD21	27:YD:191:ALA:CB	2.29	0.62
2:XB:20:GLU:HB2	2:XB:190:THR:OG1	1.99	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
2:XB:23:ARG:H	2:XB:23:ARG:HD3	1.64	0.62
11:QK:57:THR:HG22	11:QK:59:TYR:H	1.64	0.62
25:YA:2723:C:O3'	37:YR:1:MET:HE2	1.99	0.62
31:RH:137:ASP:HB3	31:RH:140:LYS:HB2	1.81	0.62
25:RA:307:G:H21	25:RA:330:A:H62	1.46	0.62
14:YN:53:LEU:HB3	14:YN:56:VAL:HG21	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:106:TYR:HE1	4:QD:112:VAL:O	1.82	0.62
44:RY:87:LYS:O	44:RY:88:LYS:NZ	2.31	0.62
13:XM:69:GLU:O	13:XM:72:ALA:N	2.32	0.62
19:XS:39:THR:HG22	19:XS:40:ILE:N	2.14	0.62
35:YP:112:LEU:HD11	35:YP:114:ILE:HG23	1.80	0.62
28:RE:13:ARG:HH12	28:RE:21:VAL:HG12	1.64	0.62
5:QE:50:GLU:HG3	5:QE:52:PRO:HD2	1.79	0.62
38:YS:100:ALA:HA	38:YS:103:GLU:CG	2.30	0.62
38:RS:26:LEU:HD22	38:RS:87:PHE:HD1	1.63	0.62
29:YF:28:ILE:HD13	29:YF:30:PRO:HD3	1.80	0.62
13:QM:97:PRO:HB2	13:QM:101:GLN:HE22	1.65	0.62
2:XB:115:LEU:CD2	2:XB:153:ARG:HD3	2.30	0.62
33:RN:7:LYS:HD2	33:RN:7:LYS:H	1.64	0.62
27:RD:70:TRP:CH2	27:RD:150:LYS:HA	2.35	0.62
25:YA:928:G:O2'	49:Y3:43:ILE:HD11	1.99	0.62
5:XE:42:GLY:HA2	5:XE:136:MET:HE1	1.82	0.62
20:XT:14:LYS:HA	20:XT:17:ARG:NH1	2.14	0.62
4:QD:153:ARG:HD3	4:QD:181:MET:SD	2.39	0.62
11:XK:57:THR:HG22	11:XK:59:TYR:H	1.65	0.62
25:YA:2219:G:OP1	27:YD:172:TYR:OH	2.17	0.62
25:YA:443:A:N7	29:YF:45:ARG:HD2	2.15	0.62
30:YG:94:LEU:HD23	30:YG:94:LEU:N	2.14	0.62
33:RN:26:LEU:O	33:RN:30:ILE:HG13	1.99	0.62
43:RX:31:HIS:CE1	43:RX:33:LYS:HB2	2.34	0.62
1:XA:1158:C:H4'	2:XB:133:LYS:NZ	2.14	0.62
17:XQ:65:ILE:HD12	17:XQ:65:ILE:N	2.15	0.62
3:QC:127:ARG:HG2	3:QC:127:ARG:HH11	1.64	0.62
28:YE:131:ALA:HB1	28:YE:135:HIS:CE1	2.34	0.62
47:Y1:91:LYS:HE3	47:Y1:91:LYS:HA	1.82	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
29:RF:32:LEU:CD1	29:RF:105:VAL:HG13	2.29	0.62
30:YG:112:PRO:HB3	50:Y4:37:SER:CB	2.25	0.62
27:RD:27:THR:O	27:RD:29:PRO:HD2	1.99	0.62
52:Y6:13:CYS:HB2	52:Y6:22:ALA:HB3	1.81	0.62
36:RQ:86:GLY:C	36:RQ:88:GLY:H	2.03	0.62
39:RT:57:PHE:CD2	39:RT:58:ASN:N	2.66	0.62
27:RD:134:ARG:HD3	27:RD:135:PHE:CE2	2.35	0.62
34:YO:104:ARG:CZ	39:YT:34:VAL:HG11	2.29	0.62
9:XI:116:LYS:O	9:XI:118:LYS:N	2.33	0.62
29:RF:129:PHE:O	29:RF:130:ALA:HB3	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:RN:87:LEU:O	33:RN:87:LEU:HD23	1.99	0.62
25:RA:1043:C:N3	25:RA:1112:G:N2	2.39	0.62
47:R1:18:ILE:HG12	47:R1:37:ILE:HG12	1.81	0.62
2:XB:194:PRO:HG2	2:XB:195:ASP:H	1.64	0.62
14:QN:41:ARG:HH21	14:QN:42:ILE:HD11	1.62	0.62
35:YP:50:ARG:NH2	35:YP:50:ARG:CB	2.58	0.62
27:RD:72:LYS:HE3	27:RD:75:ILE:HD12	1.82	0.62
5:QE:51:VAL:HB	5:QE:52:PRO:CD	2.30	0.62
38:RS:100:ALA:HA	38:RS:103:GLU:CG	2.29	0.62
38:RS:26:LEU:HD12	38:RS:39:ILE:CD1	2.23	0.62
16:XP:4:ILE:HG13	16:XP:21:VAL:CG1	2.29	0.62
5:XE:51:VAL:HB	5:XE:52:PRO:CD	2.30	0.62
1:QA:1459:C:OP1	20:QT:27:LYS:NZ	2.32	0.62
39:RT:31:SER:HA	39:RT:44:ASP:OD2	2.00	0.62
9:XI:65:VAL:HG21	9:XI:73:GLN:HB3	1.81	0.62
4:XD:79:PHE:CD2	4:XD:79:PHE:C	2.71	0.62
1:XA:452:A:H62	1:XA:480:U:H3	1.48	0.62
6:QF:10:LEU:HD13	6:QF:61:LEU:CD1	2.30	0.62
6:XF:8:ILE:HD11	6:XF:79:LEU:HD13	1.81	0.62
4:QD:196:LEU:C	4:QD:198:VAL:H	2.02	0.62
39:RT:22:PHE:N	39:RT:22:PHE:HD2	1.97	0.62
25:RA:2745:C:O2	31:RH:139:GLN:NE2	2.28	0.62
34:RO:78:ARG:HH21	39:RT:103:ARG:NH2	1.98	0.62
8:XH:58:TYR:O	8:XH:59:LEU:HD23	2.00	0.62
30:YG:170:ARG:O	30:YG:174:GLU:HB2	2.00	0.62
25:RA:210:C:OP2	53:R7:29:LYS:NZ	2.33	0.62
48:Y2:70:GLN:O	48:Y2:71:ASN:HB2	2.00	0.62
32:YI:21:VAL:HG21	32:YI:25:TYR:HD1	1.63	0.62
14:QN:23:ARG:NH1	14:QN:30:ALA:HB2	2.14	0.62
47:R1:91:LYS:HE3	47:R1:91:LYS:HA	1.82	0.62
47:Y1:87:PRO:O	47:Y1:88:LYS:C	2.37	0.62
13:QM:69:GLU:O	13:QM:72:ALA:N	2.32	0.62
50:R4:61:ARG:O	50:R4:63:TYR:N	2.33	0.62
28:YE:51:PHE:O	28:YE:52:LEU:C	2.38	0.62
30:RG:9:ARG:HG2	30:RG:13:GLU:OE1	2.00	0.62
52:R6:18:ARG:HD2	52:R6:18:ARG:O	2.00	0.62
48:Y2:17:SER:HB2	48:Y2:18:PRO:CA	2.30	0.62
35:RP:64:LYS:HB2	54:R8:25:MET:HG3	1.80	0.62
25:RA:76:C:O2'	48:R2:62:THR:HG21	1.98	0.62
48:R2:69:ARG:HB2	48:R2:69:ARG:CZ	2.30	0.62
1:QA:411:A:N6	1:QA:413:G:H21	1.96	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:YF:28:ILE:HG22	29:YF:112:MET:HB3	1.80	0.62
27:YD:182:LEU:H	27:YD:272:ALA:HB3	1.63	0.62
27:YD:134:ARG:HD3	27:YD:135:PHE:CE2	2.35	0.62
28:RE:35:GLN:HG2	28:RE:37:ARG:NE	2.14	0.62
38:RS:17:ARG:HG3	38:RS:18:ILE:N	2.14	0.62
1:XA:1305:G:H22	1:XA:1331:G:H2'	1.62	0.62
47:R1:3:LYS:HD3	47:R1:43:TYR:CD2	2.35	0.62
42:YW:60:ASN:C	42:YW:61:ASN:HD22	2.03	0.62
9:XI:59:PHE:HZ	9:XI:88:TYR:CE1	2.17	0.62
1:XA:503:C:OP2	12:XL:116:SER:HB3	1.99	0.62
14:YN:32:SER:O	14:YN:40:CYS:C	2.37	0.61
44:RY:101:LYS:HE3	44:RY:102:CYS:SG	2.40	0.61
2:QB:108:ILE:O	2:QB:111:ARG:HB2	2.00	0.61
50:R4:71:ARG:NH1	50:R4:71:ARG:CG	2.60	0.61
25:RA:242:G:C8	54:R8:5:LYS:HG2	2.34	0.61
35:YP:108:LYS:H	35:YP:108:LYS:HD2	1.64	0.61
28:RE:201:THR:HG22	28:RE:203:LYS:N	2.07	0.61
48:R2:17:SER:HB2	48:R2:18:PRO:CA	2.30	0.61
16:XP:20:VAL:HG21	16:XP:32:TYR:CD2	2.35	0.61
52:R6:44:ARG:O	52:R6:45:LYS:HB2	2.00	0.61
28:YE:104:VAL:HG11	28:YE:188:VAL:HG23	1.82	0.61
1:XA:1346:A:C5'	9:XI:120:ARG:HH12	2.12	0.61
30:RG:6:ALA:HB2	50:R4:23:GLU:OE2	2.00	0.61
30:YG:142:PRO:HB2	50:Y4:31:ILE:CD1	2.30	0.61
15:QO:26:GLU:CD	15:QO:77:ARG:HH12	2.03	0.61
13:QM:117:VAL:HG22	13:QM:118:ALA:N	2.15	0.61
6:QF:77:ARG:HB2	6:QF:77:ARG:NH1	2.15	0.61
47:Y1:76:ARG:HD2	47:Y1:76:ARG:H	1.64	0.61
25:RA:2392:A:H2	25:RA:2424:C:H42	1.46	0.61
3:XC:189:ALA:O	3:XC:191:THR:HG23	1.99	0.61
16:QP:66:PRO:HG2	16:QP:71:ARG:HH12	1.64	0.61
40:YU:102:GLU:HG3	41:YV:2:PHE:CE2	2.34	0.61
1:XA:673:G:H2'	1:XA:674:G:C8	2.35	0.61
3:XC:111:LEU:HD21	3:XC:144:SER:O	2.00	0.61
25:RA:1318:C:H2'	25:RA:1319:G:H5''	1.82	0.61
8:QH:16:ALA:HB2	8:QH:24:THR:HG21	1.82	0.61
30:RG:170:ARG:O	30:RG:174:GLU:HB2	2.00	0.61
25:RA:1348:G:H2'	25:RA:1349:A:H5''	1.82	0.61
3:XC:127:ARG:HH11	3:XC:127:ARG:HG2	1.64	0.61
10:QJ:53:PRO:HA	14:QN:42:ILE:HD12	1.82	0.61
13:QM:66:LEU:HA	13:QM:70:LEU:HD23	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RP:50:ARG:CB	35:RP:50:ARG:NH2	2.57	0.61
35:RP:114:ILE:HD11	35:RP:130:PHE:CD1	2.34	0.61
31:RH:152:ARG:O	31:RH:153:LYS:CD	2.48	0.61
30:RG:112:PRO:HB3	50:R4:37:SER:CB	2.25	0.61
30:RG:111:LEU:HB2	30:RG:112:PRO:HD3	1.82	0.61
8:QH:29:SER:HB3	8:QH:32:LYS:CG	2.22	0.61
29:YF:32:LEU:CD1	29:YF:105:VAL:HG13	2.29	0.61
5:QE:91:LEU:HA	5:QE:120:THR:HG22	1.81	0.61
38:YS:17:ARG:HG3	38:YS:18:ILE:N	2.14	0.61
34:RO:97:ARG:N	34:RO:117:LEU:HD22	2.15	0.61
50:R4:23:GLU:O	50:R4:25:TYR:N	2.33	0.61
39:YT:31:SER:HA	39:YT:44:ASP:OD2	2.00	0.61
15:XO:61:GLY:C	15:XO:65:ARG:HH12	2.02	0.61
27:RD:237:GLU:OE1	27:RD:237:GLU:CA	2.48	0.61
27:RD:137:PRO:HB2	27:RD:140:THR:HG23	1.81	0.61
3:QC:111:LEU:HD21	3:QC:144:SER:O	2.00	0.61
1:XA:1023:G:H3'	1:XA:1024:G:H5''	1.81	0.61
1:XA:595:G:H1'	1:XA:596:C:H5	1.65	0.61
25:YA:1026:U:H4'	25:YA:1027:A:OP1	2.00	0.61
15:QO:68:ARG:O	15:QO:72:ARG:HB2	2.00	0.61
47:Y1:73:LEU:C	47:Y1:75:GLU:H	2.03	0.61
25:YA:898:C:H2'	25:YA:899:A:H5'	1.81	0.61
1:XA:489:C:OP1	4:XD:132:ARG:NH2	2.33	0.61
26:YB:75:G:H5''	45:YZ:36:LYS:HE2	1.82	0.61
2:XB:108:ILE:O	2:XB:111:ARG:HB2	2.00	0.61
40:RU:92:ARG:HD3	40:RU:94:ASN:HB3	1.82	0.61
40:YU:88:ILE:CD1	40:YU:88:ILE:H	2.05	0.61
26:RB:55:U:H4'	30:RG:29:TRP:HE1	1.65	0.61
44:YY:44:ILE:HG13	44:YY:45:VAL:H	1.64	0.61
27:RD:133:LEU:HD21	27:RD:191:ALA:HB2	1.82	0.61
7:XG:15:ASP:O	7:XG:19:GLY:HA2	2.00	0.61
36:YQ:88:GLY:C	36:YQ:90:VAL:H	2.02	0.61
36:YQ:86:GLY:C	36:YQ:88:GLY:N	2.52	0.61
9:XI:28:VAL:HG13	9:XI:63:ILE:HG22	1.83	0.61
15:XO:74:ASP:OD1	15:XO:77:ARG:HG2	2.00	0.61
14:QN:18:VAL:HG23	14:QN:19:ARG:N	2.14	0.61
42:YW:5:ALA:O	42:YW:50:VAL:HG13	2.00	0.61
25:RA:859:G:O2'	25:RA:860:U:O2	2.10	0.61
36:YQ:54:MET:O	36:YQ:57:HIS:HB3	2.00	0.61
14:QN:23:ARG:CD	14:QN:28:GLY:O	2.49	0.61
31:RH:86:GLU:O	31:RH:87:LEU:HB2	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:QS:11:VAL:O	19:QS:12:ASP:HB2	2.00	0.61
2:XB:178:ARG:HD2	8:XH:71:GLY:CA	2.29	0.61
36:YQ:66:ILE:CG1	36:YQ:67:ARG:H	2.12	0.61
26:RB:55:U:C4'	30:RG:29:TRP:HE1	2.13	0.61
33:RN:62:VAL:CG1	33:RN:66:LYS:HD2	2.30	0.61
27:YD:227:ASN:CB	27:YD:228:PRO:HD2	2.24	0.61
44:RY:48:ALA:HB2	44:RY:61:ILE:HD13	1.82	0.61
27:YD:27:THR:O	27:YD:29:PRO:HD2	1.99	0.61
7:QG:15:ASP:O	7:QG:19:GLY:HA2	2.00	0.61
31:YH:6:ARG:HG3	31:YH:7:LEU:N	2.15	0.61
39:YT:24:PRO:O	39:YT:94:ALA:HB2	2.00	0.61
11:QK:121:PRO:HD2	11:QK:126:ARG:HD3	1.82	0.61
50:Y4:23:GLU:O	50:Y4:25:TYR:N	2.33	0.61
30:YG:6:ALA:HB2	50:Y4:23:GLU:OE2	1.99	0.61
33:YN:62:VAL:CG1	33:YN:66:LYS:HD2	2.29	0.61
4:QD:162:LEU:CD1	4:QD:181:MET:HB3	2.31	0.61
6:XF:77:ARG:NH1	6:XF:77:ARG:HB2	2.15	0.61
1:QA:503:C:OP2	12:QL:116:SER:HB3	2.01	0.61
25:YA:2335:A:O2'	25:YA:2336:A:H2'	2.00	0.61
3:XC:3:ASN:N	3:XC:3:ASN:ND2	2.48	0.61
37:RR:38:VAL:HB	37:RR:39:PRO:HD3	1.81	0.61
43:YX:15:GLU:OE1	43:YX:15:GLU:N	2.34	0.61
5:XE:131:ILE:O	5:XE:134:ALA:HB3	2.01	0.61
25:YA:2850:A:N7	25:YA:2868:A:O2'	2.30	0.61
10:QJ:98:ILE:N	10:QJ:98:ILE:HD12	2.16	0.61
31:YH:152:ARG:O	31:YH:153:LYS:CD	2.48	0.61
13:QM:3:ARG:HG2	50:R4:34:GLU:OE1	2.01	0.61
50:R4:35:VAL:O	50:R4:37:SER:N	2.26	0.61
38:RS:88:ASP:O	38:RS:89:ARG:CB	2.49	0.61
52:R6:25:LYS:HD2	54:R8:34:TRP:CZ2	2.36	0.61
34:YO:8:LEU:HB2	34:YO:19:ILE:HD11	1.81	0.61
20:XT:34:LYS:O	20:XT:38:LYS:HB2	2.01	0.61
11:XK:121:PRO:HD2	11:XK:126:ARG:HD3	1.82	0.61
30:RG:142:PRO:HB2	50:R4:31:ILE:CD1	2.30	0.61
49:R3:29:ARG:CB	49:R3:29:ARG:HH11	2.13	0.61
12:QL:126:LYS:C	12:QL:128:ALA:H	2.03	0.61
25:RA:2439:A:H5'	25:RA:2439:A:C8	2.35	0.61
26:RB:116:G:H4'	38:RS:54:LEU:HD13	1.82	0.61
17:QQ:67:LYS:HA	17:QQ:70:ARG:NH1	2.15	0.61
11:QK:12:ARG:HG2	11:QK:13:GLN:H	1.63	0.61
43:RX:66:LEU:O	43:RX:66:LEU:HD23	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1114:C:H1'	14:XN:60:SER:HB2	1.82	0.61
26:RB:75:G:H5''	45:RZ:36:LYS:HE2	1.83	0.61
25:YA:127:A:H5''	25:YA:128:C:C6	2.36	0.61
25:RA:65:C:O2'	25:RA:456:C:N3	2.33	0.61
42:RW:5:ALA:O	42:RW:50:VAL:HG13	2.00	0.61
36:YQ:2:LEU:HD23	36:YQ:2:LEU:H	1.65	0.61
4:XD:149:ALA:HB3	4:XD:152:SER:HB2	1.82	0.61
1:XA:826:C:H2'	1:XA:827:U:O2	2.00	0.61
42:RW:82:LEU:HB2	42:RW:98:LYS:HB2	1.82	0.61
4:QD:11:LEU:HA	4:QD:14:ARG:HB2	1.82	0.61
28:YE:95:ILE:N	28:YE:95:ILE:HD12	2.15	0.61
19:XS:11:VAL:O	19:XS:12:ASP:HB2	1.99	0.61
27:RD:35:LYS:HA	27:RD:64:ILE:HG22	1.82	0.61
2:XB:17:PHE:CD2	2:XB:44:LEU:HD11	2.36	0.61
33:YN:96:GLU:O	33:YN:98:VAL:N	2.33	0.61
16:QP:4:ILE:HG13	16:QP:21:VAL:CG1	2.30	0.61
35:RP:65:ARG:HE	54:R8:15:LYS:HB2	1.64	0.61
27:YD:25:THR:HG21	27:YD:81:ALA:CA	2.31	0.61
52:Y6:18:ARG:O	52:Y6:18:ARG:HD2	2.00	0.61
31:RH:6:ARG:HG3	31:RH:7:LEU:N	2.15	0.61
41:YV:46:VAL:HG13	41:YV:46:VAL:O	2.01	0.61
27:YD:133:LEU:HD21	27:YD:191:ALA:HB2	1.82	0.61
10:QJ:34:VAL:CG2	10:QJ:74:ILE:HG22	2.30	0.61
21:XU:15:ARG:HG2	21:XU:15:ARG:HH11	1.63	0.61
34:RO:104:ARG:CZ	39:RT:34:VAL:HG11	2.29	0.61
1:XA:953:G:H5'	1:XA:965:A:H61	1.65	0.61
13:XM:117:VAL:HG22	13:XM:118:ALA:N	2.15	0.61
30:YG:77:ILE:HD13	30:YG:82:LEU:CD1	2.29	0.61
28:YE:35:GLN:HG2	28:YE:37:ARG:NE	2.14	0.61
27:YD:70:TRP:CH2	27:YD:150:LYS:HA	2.35	0.61
12:QL:48:PRO:CD	12:QL:49:ASN:H	2.10	0.61
2:XB:21:ARG:HG3	2:XB:38:GLY:O	2.01	0.61
25:YA:2529:G:O6	55:Y9:31:LYS:NZ	2.34	0.61
25:RA:49:A:N7	25:RA:120:U:H5	1.98	0.61
6:XF:69:GLU:O	6:XF:72:VAL:HG12	2.01	0.61
6:XF:10:LEU:HD13	6:XF:61:LEU:CD1	2.30	0.61
25:RA:2815:C:H5'	51:R5:29:THR:HG21	1.82	0.61
8:QH:39:LEU:O	8:QH:45:ILE:HG12	2.01	0.61
1:QA:128:G:O2'	17:QQ:3:LYS:NZ	2.34	0.61
27:YD:137:PRO:HB2	27:YD:140:THR:HG23	1.81	0.61
15:XO:68:ARG:O	15:XO:72:ARG:HB2	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:671:G:H2'	1:QA:672:U:H6	1.64	0.61
38:YS:49:VAL:HG22	38:YS:80:LEU:HD12	1.83	0.61
47:R1:80:LEU:O	47:R1:81:LYS:HD2	2.01	0.61
19:XS:68:GLY:N	50:Y4:59:PHE:CE1	2.68	0.61
54:Y8:22:VAL:HG21	54:Y8:53:PRO:HB2	1.83	0.61
7:XG:140:ASP:C	7:XG:142:GLU:H	2.03	0.61
37:YR:44:LEU:HD22	37:YR:48:VAL:HG23	1.82	0.61
25:RA:1454:U:OP1	37:RR:77:ARG:NH1	2.34	0.61
41:RV:46:VAL:HG13	41:RV:46:VAL:O	2.01	0.61
1:QA:346:G:H1'	1:QA:347:G:H5'	1.81	0.61
2:QB:115:LEU:CD2	2:QB:153:ARG:HD3	2.30	0.61
33:RN:7:LYS:CD	33:RN:9:VAL:H	2.14	0.61
1:XA:522:C:H41	12:XL:53:ARG:HH22	1.46	0.61
4:XD:162:LEU:CD1	4:XD:181:MET:HB3	2.31	0.61
25:RA:27:G:HO2'	25:RA:28:A:H8	1.46	0.61
54:Y8:29:LYS:HD3	54:Y8:44:LYS:CB	2.30	0.61
54:R8:29:LYS:HD3	54:R8:44:LYS:CB	2.30	0.61
29:YF:164:ARG:HG2	29:YF:164:ARG:HH11	1.66	0.61
4:XD:196:LEU:C	4:XD:198:VAL:H	2.02	0.61
44:YY:19:LYS:HG3	44:YY:19:LYS:O	2.01	0.61
31:YH:137:ASP:HB3	31:YH:140:LYS:HB2	1.81	0.61
25:RA:1794:U:H2'	25:RA:1795:C:H6	1.66	0.61
42:YW:28:SER:O	42:YW:31:GLU:N	2.34	0.61
49:Y3:5:LYS:HB2	49:Y3:36:VAL:HG12	1.82	0.61
1:QA:189:U:O2'	1:QA:190:G:OP1	2.19	0.61
25:YA:2361:A:O5'	54:Y8:27:THR:OG1	2.17	0.61
34:YO:78:ARG:HH21	39:YT:103:ARG:NH2	1.98	0.61
1:XA:668:G:O2'	15:XO:46:HIS:HB3	2.00	0.61
27:RD:21:PHE:HB3	27:RD:24:ILE:HG13	1.83	0.61
28:YE:52:LEU:HB3	28:YE:54:GLN:OE1	2.00	0.61
27:YD:35:LYS:HE3	27:YD:64:ILE:C	2.21	0.61
27:RD:35:LYS:HG2	27:RD:64:ILE:CG2	2.31	0.61
35:YP:96:THR:HG22	35:YP:126:VAL:HB	1.82	0.61
13:QM:9:ILE:O	13:QM:9:ILE:HD12	2.01	0.61
33:YN:7:LYS:CD	33:YN:9:VAL:H	2.14	0.61
4:QD:90:GLY:CA	4:QD:204:ILE:HD11	2.31	0.61
4:QD:29:PRO:CG	4:QD:30:LYS:HD3	2.28	0.61
27:YD:147:LEU:CD1	27:YD:155:LEU:HD11	2.26	0.61
8:XH:102:ARG:HH11	8:XH:105:ARG:NH2	1.99	0.61
42:RW:65:LEU:HD12	42:RW:68:ARG:NH1	2.10	0.61
10:XJ:34:VAL:CG2	10:XJ:74:ILE:HG22	2.30	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:XM:96:LEU:HB3	13:XM:97:PRO:HD2	1.82	0.61
48:Y2:41:ILE:HD11	48:Y2:44:LEU:HG	1.83	0.61
25:RA:2311:A:H1'	30:RG:82:LEU:HD11	1.81	0.61
25:YA:662:G:H5''	35:YP:15:ARG:O	2.00	0.61
7:QG:113:GLU:CB	7:QG:119:ARG:HG2	2.30	0.61
36:YQ:20:ALA:HB1	36:YQ:99:PRO:CD	2.30	0.61
12:XL:126:LYS:C	12:XL:128:ALA:H	2.04	0.61
42:YW:1:MET:HA	42:YW:1:MET:HE3	1.83	0.61
6:QF:98:LEU:HD12	6:QF:98:LEU:O	2.01	0.61
1:XA:15:G:H4'	5:XE:24:ARG:NH1	2.16	0.61
1:XA:243:A:H4'	1:XA:244:U:O5'	2.01	0.61
9:XI:13:ALA:HB2	9:XI:67:GLY:O	1.99	0.61
12:XL:85:ILE:HD11	12:XL:98:TYR:HB2	1.81	0.61
36:RQ:2:LEU:HD23	36:RQ:2:LEU:H	1.65	0.61
27:RD:174:ILE:N	27:RD:174:ILE:HD12	2.16	0.61
34:YO:91:LEU:HD22	34:YO:91:LEU:N	2.16	0.61
29:YF:119:ARG:HH11	29:YF:119:ARG:HG2	1.64	0.61
3:QC:70:VAL:O	3:QC:106:VAL:HG23	2.01	0.61
40:RU:69:CYS:HB3	40:RU:106:PHE:CZ	2.36	0.61
29:RF:63:LYS:HE2	29:RF:67:GLN:HB3	1.83	0.61
52:R6:41:PRO:HD2	52:R6:46:HIS:N	2.16	0.61
30:YG:44:GLY:HA2	30:YG:88:ILE:CG1	2.31	0.61
11:QK:99:GLN:HG2	11:QK:105:VAL:CG2	2.29	0.61
20:QT:34:LYS:O	20:QT:38:LYS:HB2	2.01	0.61
28:YE:35:GLN:CG	28:YE:37:ARG:HE	2.11	0.61
1:QA:375:U:H4'	16:QP:17:TYR:CE2	2.35	0.61
15:XO:26:GLU:CD	15:XO:77:ARG:HH12	2.03	0.61
43:YX:66:LEU:O	43:YX:66:LEU:HD23	2.01	0.61
6:XF:98:LEU:HD12	6:XF:98:LEU:O	2.01	0.61
43:YX:14:SER:O	43:YX:17:ALA:N	2.34	0.61
25:YA:247:G:H4'	25:YA:386:G:C5	2.35	0.61
27:YD:2:ALA:HB3	27:YD:20:ASP:HB3	1.83	0.61
13:QM:36:LYS:C	13:QM:36:LYS:HD3	2.20	0.61
43:RX:14:SER:O	43:RX:17:ALA:N	2.34	0.61
1:QA:280:C:C2	17:QQ:38:ARG:HG3	2.36	0.61
4:QD:129:ASN:HA	4:QD:145:GLU:HB2	1.82	0.61
17:QQ:65:ILE:HD12	17:QQ:65:ILE:N	2.15	0.61
37:YR:38:VAL:HB	37:YR:39:PRO:HD3	1.81	0.61
26:RB:38:C:H42	26:RB:44:G:H1	1.47	0.61
25:YA:468:G:N7	53:Y7:39:ARG:NH2	2.49	0.61
25:RA:900:A:H3'	25:RA:901:A:H8	1.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:54:ARG:HH11	27:YD:54:ARG:CG	2.14	0.61
3:XC:13:GLY:HA3	14:XN:57:ARG:CZ	2.31	0.61
28:RE:52:LEU:HB3	28:RE:54:GLN:OE1	2.00	0.61
35:YP:27:HIS:N	35:YP:27:HIS:ND1	2.49	0.61
52:Y6:7:ILE:HG13	52:Y6:8:LYS:N	2.06	0.61
38:YS:89:ARG:O	38:YS:90:GLY:O	2.19	0.61
30:RG:28:VAL:O	30:RG:31:VAL:HG12	2.01	0.61
33:RN:23:LEU:HD12	33:RN:99:LEU:HD23	1.82	0.61
16:QP:20:VAL:HG21	16:QP:32:TYR:CD2	2.35	0.61
20:QT:84:LEU:O	20:QT:88:VAL:HG23	2.01	0.61
41:RV:15:GLU:HG3	41:RV:16:PRO:HD2	1.83	0.61
36:RQ:88:GLY:C	36:RQ:90:VAL:H	2.02	0.61
33:RN:6:PRO:HG3	33:RN:41:ASP:HB2	1.83	0.61
48:R2:41:ILE:HD11	48:R2:44:LEU:HG	1.82	0.61
2:QB:60:ASP:O	2:QB:64:ARG:HG2	2.01	0.61
17:XQ:67:LYS:HA	17:XQ:70:ARG:NH1	2.15	0.61
4:XD:196:LEU:N	4:XD:196:LEU:HD12	2.15	0.61
3:QC:3:ASN:N	3:QC:3:ASN:ND2	2.48	0.61
28:YE:131:ALA:HB1	28:YE:135:HIS:HE1	1.65	0.61
2:QB:194:PRO:HG2	2:QB:195:ASP:H	1.64	0.61
25:YA:1057:A:H62	25:YA:1086:A:H2'	1.66	0.61
33:YN:17:ASP:O	33:YN:18:ALA:HB3	2.01	0.61
49:R3:5:LYS:HB2	49:R3:36:VAL:HG12	1.82	0.61
6:XF:45:LEU:HD12	6:XF:59:TYR:HD1	1.66	0.61
25:RA:247:G:H4'	25:RA:386:G:C5	2.35	0.61
49:R3:59:VAL:HG12	49:R3:60:GLU:N	2.16	0.61
32:YI:27:ARG:HD3	47:Y1:71:TYR:HE1	1.66	0.61
49:Y3:59:VAL:HG12	49:Y3:60:GLU:N	2.16	0.61
18:XR:25:THR:HG22	18:XR:25:THR:O	2.00	0.61
25:YA:1820:U:C2	27:YD:202:LYS:HB3	2.35	0.61
38:RS:49:VAL:HG22	38:RS:80:LEU:HD12	1.82	0.61
25:RA:25:U:H5''	42:RW:80:PRO:HD3	1.83	0.61
2:QB:80:ILE:CD1	2:QB:208:ILE:HG23	2.22	0.60
5:XE:43:LEU:HD21	5:XE:132:ALA:HB1	1.83	0.60
7:XG:79:ARG:HH11	7:XG:79:ARG:HG2	1.66	0.60
8:XH:6:ILE:HB	8:XH:85:ARG:HH12	1.62	0.60
52:Y6:41:PRO:HD2	52:Y6:46:HIS:N	2.16	0.60
33:RN:58:ASP:N	33:RN:60:ILE:HD11	2.16	0.60
8:XH:23:SER:HA	8:XH:63:LEU:CD2	2.24	0.60
37:RR:52:ILE:O	37:RR:55:ALA:HB3	2.01	0.60
2:QB:141:GLU:O	2:QB:145:LEU:HD23	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:XM:40:ASN:HD21	13:XM:42:ALA:HB3	1.64	0.60
9:XI:3:GLN:HB3	9:XI:20:ARG:HG2	1.82	0.60
3:QC:47:LEU:O	3:QC:52:LEU:HD22	2.01	0.60
25:RA:395:U:H2'	25:RA:396:G:N7	2.16	0.60
1:QA:1226:C:OP2	13:QM:103:THR:OG1	2.12	0.60
29:RF:175:THR:O	29:RF:176:LEU:CB	2.49	0.60
15:QO:5:LYS:O	15:QO:8:LYS:HG2	2.01	0.60
42:RW:28:SER:O	42:RW:31:GLU:N	2.34	0.60
4:XD:106:TYR:HE1	4:XD:112:VAL:O	1.82	0.60
25:YA:503:A:H4'	25:YA:504:U:H5'	1.83	0.60
16:XP:40:ASP:OD2	16:XP:42:ARG:HB2	2.01	0.60
19:XS:16:LEU:O	19:XS:20:LEU:HG	2.01	0.60
3:XC:141:VAL:O	3:XC:146:ALA:HB3	2.01	0.60
51:R5:52:TYR:O	51:R5:53:ALA:HB3	2.01	0.60
25:RA:1292:U:H2'	25:RA:1293:C:C6	2.37	0.60
34:RO:91:LEU:N	34:RO:91:LEU:HD22	2.16	0.60
42:YW:82:LEU:HB2	42:YW:98:LYS:HB2	1.82	0.60
8:XH:118:VAL:C	8:XH:119:LEU:HD23	2.22	0.60
25:YA:2212:A:H1'	25:YA:2215:G:C5	2.37	0.60
28:YE:53:PRO:HG2	28:YE:54:GLN:NE2	2.16	0.60
35:RP:96:THR:HG22	35:RP:126:VAL:HB	1.83	0.60
13:XM:4:ILE:H	13:XM:9:ILE:HG22	1.62	0.60
1:QA:1053:G:H5'	1:QA:1054:C:H5'	1.82	0.60
36:YQ:66:ILE:CG1	36:YQ:67:ARG:N	2.64	0.60
36:RQ:66:ILE:CG1	36:RQ:67:ARG:N	2.64	0.60
4:QD:90:GLY:HA2	4:QD:204:ILE:HD11	1.83	0.60
16:XP:20:VAL:HG22	16:XP:21:VAL:N	2.16	0.60
41:YV:41:GLY:H	41:YV:46:VAL:HG13	1.66	0.60
8:QH:49:GLU:O	8:QH:51:VAL:HG13	2.02	0.60
25:YA:1019:U:HO2'	25:YA:1021:A:H2	1.49	0.60
36:RQ:86:GLY:C	36:RQ:88:GLY:N	2.52	0.60
41:RV:66:ARG:HH12	41:RV:88:ARG:HH11	1.49	0.60
11:QK:41:THR:HG21	11:QK:71:LYS:HB2	1.83	0.60
39:YT:34:VAL:HG12	39:YT:36:GLU:HG2	1.83	0.60
2:XB:132:LYS:HA	2:XB:135:GLN:CD	2.22	0.60
3:XC:88:ARG:NH1	3:XC:101:LEU:H	1.99	0.60
11:QK:78:GLN:O	11:QK:103:LEU:HA	2.01	0.60
1:XA:1499:A:H1'	1:XA:1520:G:H5'	1.82	0.60
31:RH:44:VAL:O	31:RH:44:VAL:HG22	2.01	0.60
1:QA:1192:C:O2	5:QE:25:ARG:NH2	2.34	0.60
31:RH:126:PRO:CD	31:RH:127:GLU:N	2.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R1:80:LEU:C	47:R1:81:LYS:CD	2.69	0.60
44:YY:101:LYS:HE3	44:YY:102:CYS:SG	2.40	0.60
19:QS:12:ASP:OD1	19:QS:37:ARG:HD2	2.00	0.60
2:XB:69:LEU:O	2:XB:162:ILE:HA	2.02	0.60
27:YD:35:LYS:HG2	27:YD:64:ILE:CG2	2.31	0.60
27:YD:35:LYS:NZ	27:YD:65:ILE:HA	2.15	0.60
28:YE:63:LEU:CD1	28:YE:64:LYS:H	2.04	0.60
13:XM:9:ILE:HD12	13:XM:9:ILE:O	2.01	0.60
40:RU:96:ALA:C	40:RU:98:LEU:H	2.04	0.60
40:YU:90:VAL:CG1	40:YU:91:ASP:H	2.00	0.60
38:YS:99:LYS:O	38:YS:102:ALA:N	2.34	0.60
33:YN:99:LEU:O	33:YN:103:VAL:HG23	2.02	0.60
4:XD:90:GLY:CA	4:XD:204:ILE:HD11	2.31	0.60
41:RV:35:LEU:HD23	41:RV:35:LEU:O	2.01	0.60
20:QT:101:GLY:O	20:QT:103:GLY:N	2.35	0.60
8:XH:49:GLU:O	8:XH:51:VAL:HG13	2.02	0.60
28:RE:104:VAL:HG11	28:RE:188:VAL:HG23	1.82	0.60
25:YA:2068:U:N3	25:YA:2430:A:H2	1.97	0.60
9:QI:28:VAL:HG13	9:QI:63:ILE:HG22	1.83	0.60
35:YP:13:ASN:O	35:YP:15:ARG:N	2.34	0.60
2:QB:114:ARG:O	2:QB:117:GLU:HB2	2.01	0.60
2:QB:132:LYS:HA	2:QB:135:GLN:CD	2.22	0.60
6:QF:69:GLU:O	6:QF:72:VAL:HG12	2.01	0.60
27:RD:263:ARG:CB	27:RD:263:ARG:HH11	2.14	0.60
4:QD:196:LEU:HD12	4:QD:196:LEU:N	2.15	0.60
25:RA:2131:G:N2	25:RA:2158:A:N7	2.49	0.60
3:QC:88:ARG:NH1	3:QC:101:LEU:H	1.98	0.60
8:QH:118:VAL:C	8:QH:119:LEU:HD23	2.22	0.60
48:R2:70:GLN:O	48:R2:71:ASN:HB2	2.00	0.60
30:RG:50:ALA:O	30:RG:53:LEU:HB3	2.01	0.60
16:QP:8:ARG:HG2	16:QP:8:ARG:HH11	1.64	0.60
25:YA:551:G:H5'	25:YA:1220:A:H1'	1.82	0.60
3:XC:70:VAL:O	3:XC:106:VAL:HG23	2.01	0.60
27:RD:35:LYS:NZ	27:RD:65:ILE:HA	2.15	0.60
25:RA:2636:U:OP1	28:RE:79:ARG:HA	2.01	0.60
25:YA:586:A:H5'	29:YF:89:VAL:HG21	1.84	0.60
2:QB:17:PHE:CD2	2:QB:44:LEU:HD11	2.36	0.60
30:YG:28:VAL:O	30:YG:31:VAL:HG12	2.01	0.60
26:RB:56:G:H5'	30:RG:27:ASN:ND2	2.17	0.60
16:QP:20:VAL:HG22	16:QP:21:VAL:N	2.16	0.60
10:QJ:32:ALA:H	10:QJ:78:ASN:HD21	1.49	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:Y6:13:CYS:O	52:Y6:21:TYR:HA	2.02	0.60
3:XC:47:LEU:O	3:XC:52:LEU:HD22	2.01	0.60
28:YE:37:ARG:CA	28:YE:37:ARG:NE	2.64	0.60
3:XC:130:VAL:O	3:XC:134:ILE:HG12	2.01	0.60
4:QD:76:ARG:HD2	4:QD:207:TYR:HE2	1.66	0.60
15:QO:74:ASP:OD1	15:QO:77:ARG:HG2	2.00	0.60
25:RA:2562:U:H1'	34:RO:23:ARG:NH1	2.17	0.60
47:Y1:3:LYS:HD3	47:Y1:43:TYR:CD2	2.35	0.60
27:YD:263:ARG:CB	27:YD:263:ARG:HH11	2.15	0.60
1:QA:1074:G:H4'	2:QB:104:ASN:HB2	1.83	0.60
2:XB:60:ASP:O	2:XB:64:ARG:HG2	2.01	0.60
6:XF:61:LEU:HB3	6:XF:63:TYR:HE2	1.67	0.60
29:YF:34:TRP:CZ3	35:YP:8:PRO:HB3	2.37	0.60
3:QC:88:ARG:O	3:QC:99:VAL:HG21	2.01	0.60
30:RG:94:LEU:HD23	30:RG:94:LEU:H	1.64	0.60
33:YN:16:ILE:O	33:YN:55:VAL:HG22	2.01	0.60
25:YA:1210:A:H5'	25:YA:1210:A:H8	1.67	0.60
16:QP:40:ASP:OD2	16:QP:42:ARG:HB2	2.02	0.60
51:Y5:52:TYR:O	51:Y5:53:ALA:HB3	2.01	0.60
8:XH:39:LEU:O	8:XH:45:ILE:HG12	2.01	0.60
25:RA:612:G:H2'	25:RA:613:U:O2	2.01	0.60
31:YH:44:VAL:O	31:YH:44:VAL:HG22	2.01	0.60
25:YA:994:C:H3'	40:YU:54:LYS:HE3	1.83	0.60
14:YN:44:LEU:HD12	14:YN:48:ALA:HB2	1.83	0.60
14:QN:23:ARG:HD2	14:QN:28:GLY:O	2.00	0.60
47:Y1:80:LEU:O	47:Y1:81:LYS:HD2	2.00	0.60
36:RQ:54:MET:O	36:RQ:57:HIS:HB3	2.00	0.60
3:XC:70:VAL:HG12	3:XC:72:LYS:N	2.11	0.60
28:RE:51:PHE:O	28:RE:52:LEU:C	2.38	0.60
40:YU:69:CYS:HB3	40:YU:106:PHE:CZ	2.36	0.60
2:XB:221:LEU:HD13	2:XB:221:LEU:O	2.02	0.60
8:QH:86:ILE:HG22	8:QH:93:VAL:HG21	1.84	0.60
37:YR:52:ILE:O	37:YR:55:ALA:HB3	2.01	0.60
1:QA:192:U:H4'	20:QT:103:GLY:HA2	1.84	0.60
34:RO:104:ARG:HG2	34:RO:104:ARG:NH1	2.14	0.60
4:QD:166:LYS:HD2	27:YD:134:ARG:NH1	2.16	0.60
4:QD:79:PHE:C	4:QD:79:PHE:CD2	2.71	0.60
6:QF:1:MET:HA	6:QF:67:MET:O	2.02	0.60
4:QD:146:ILE:H	4:QD:146:ILE:HD12	1.66	0.60
32:RI:4:ILE:HG12	32:RI:18:VAL:HG22	1.82	0.60
29:YF:175:THR:O	29:YF:176:LEU:CB	2.48	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1002:G:H2'	1:QA:1003:G:C8	2.36	0.60
25:YA:2306:C:H2'	25:YA:2307:G:H21	1.66	0.60
44:RY:19:LYS:HG3	44:RY:19:LYS:O	2.01	0.60
33:RN:17:ASP:O	33:RN:18:ALA:HB3	2.01	0.60
25:RA:1582:C:HO2'	25:RA:1586:A:H8	1.48	0.60
25:RA:77:C:O3'	48:R2:14:ARG:NH2	2.34	0.60
1:QA:22:G:H4'	1:QA:885:G:C8	2.36	0.60
25:RA:2543:G:H2'	25:RA:2544:G:C8	2.36	0.60
43:RX:43:VAL:CG1	43:RX:51:VAL:HG21	2.32	0.60
4:QD:149:ALA:HB3	4:QD:152:SER:HB2	1.83	0.60
9:XI:96:LEU:HD23	9:XI:102:LEU:HD12	1.84	0.60
25:YA:389:G:H1	35:YP:71:VAL:HG12	1.64	0.60
28:RE:4:ILE:CD1	28:RE:28:ALA:HB1	2.29	0.60
28:RE:4:ILE:C	28:RE:5:LEU:HD23	2.22	0.60
27:YD:72:LYS:HE3	27:YD:75:ILE:HD12	1.82	0.60
13:XM:3:ARG:HA	13:XM:9:ILE:CG2	2.21	0.60
2:QB:221:LEU:O	2:QB:221:LEU:HD13	2.02	0.60
2:QB:4:GLU:CG	2:QB:5:ILE:H	1.99	0.60
36:RQ:80:GLU:C	36:RQ:81:VAL:HG13	2.22	0.60
41:YV:35:LEU:O	41:YV:35:LEU:HD23	2.01	0.60
5:XE:79:GLU:HB3	5:XE:92:LYS:HA	1.84	0.60
30:RG:44:GLY:HA2	30:RG:88:ILE:CG1	2.30	0.60
5:XE:74:GLY:O	5:XE:115:VAL:HA	2.01	0.60
2:XB:141:GLU:O	2:XB:145:LEU:HD23	2.01	0.60
48:R2:41:ILE:HG12	48:R2:44:LEU:HD12	1.81	0.60
13:XM:37:THR:CG2	13:XM:39:ILE:HD11	2.32	0.60
4:XD:146:ILE:H	4:XD:146:ILE:HD12	1.66	0.60
25:RA:2723:C:H5''	37:RR:1:MET:HG2	1.82	0.60
6:QF:61:LEU:HB3	6:QF:63:TYR:HE2	1.67	0.60
11:XK:78:GLN:O	11:XK:103:LEU:HA	2.01	0.60
27:YD:166:GLN:CA	27:YD:166:GLN:HE21	2.14	0.60
1:XA:67:C:H2'	1:XA:68:G:C8	2.36	0.60
42:YW:36:LEU:HD11	42:YW:47:VAL:HG12	1.83	0.60
9:QI:3:GLN:HB3	9:QI:20:ARG:HG2	1.82	0.60
5:XE:33:VAL:HG11	5:XE:109:ILE:HA	1.83	0.60
3:QC:141:VAL:O	3:QC:146:ALA:HB3	2.01	0.60
38:YS:11:LYS:HB2	38:YS:91:PRO:HD3	1.84	0.60
9:QI:9:ARG:CB	9:QI:14:VAL:HG22	2.31	0.60
8:QH:58:TYR:O	8:QH:59:LEU:HD23	2.00	0.60
35:RP:55:ARG:HD2	35:RP:56:SER:O	2.01	0.60
25:RA:1262:A:N3	51:R5:10:LYS:HE3	2.16	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:QI:114:TYR:O	9:QI:114:TYR:HD2	1.85	0.60
10:XJ:5:ARG:O	10:XJ:98:ILE:HA	2.01	0.60
27:YD:35:LYS:NZ	27:YD:64:ILE:O	2.32	0.60
30:RG:61:ALA:HB2	30:RG:68:PRO:HD2	1.81	0.60
33:YN:23:LEU:HD12	33:YN:99:LEU:HD23	1.82	0.60
33:RN:99:LEU:O	33:RN:103:VAL:HG23	2.02	0.60
41:YV:99:ILE:CD1	41:YV:99:ILE:N	2.65	0.60
44:RY:44:ILE:HG13	44:RY:45:VAL:H	1.65	0.60
27:YD:25:THR:HG21	27:YD:81:ALA:HA	1.84	0.60
30:RG:64:THR:HG23	30:RG:66:GLN:H	1.67	0.60
12:XL:5:PRO:HA	12:XL:9:GLN:NE2	2.17	0.60
19:QS:25:LYS:O	19:QS:26:GLY:O	2.20	0.60
1:XA:1152:A:H5''	10:XJ:13:HIS:HD2	1.64	0.60
7:XG:113:GLU:CB	7:XG:119:ARG:HG2	2.29	0.60
20:XT:104:LEU:HD12	20:XT:105:SER:H	1.66	0.60
9:XI:85:LEU:O	9:XI:85:LEU:HD12	2.02	0.60
7:XG:148:ASN:N	7:XG:148:ASN:ND2	2.46	0.60
43:RX:15:GLU:OE1	43:RX:15:GLU:N	2.34	0.60
25:RA:1952:A:OP1	34:RO:44:LYS:NZ	2.21	0.60
25:YA:1952:A:OP1	34:YO:44:LYS:NZ	2.19	0.60
25:YA:1812:A:O2'	27:YD:45:ASN:HB2	2.00	0.60
47:R1:73:LEU:C	47:R1:75:GLU:H	2.03	0.60
23:XY:30:C:H2'	23:XY:31:G:H8	1.67	0.60
1:XA:377:G:OP1	16:XP:5:ARG:NH1	2.35	0.60
6:XF:97:PHE:HD2	6:XF:97:PHE:C	2.05	0.60
1:XA:745:C:OP1	1:XA:851:G:O2'	2.19	0.60
43:YX:43:VAL:CG1	43:YX:51:VAL:HG21	2.31	0.60
25:YA:558:G:P	33:YN:111:PRO:HD2	2.42	0.60
31:RH:89:ILE:O	31:RH:91:GLY:N	2.35	0.60
4:QD:11:LEU:O	4:QD:14:ARG:N	2.35	0.60
28:YE:93:VAL:N	28:YE:95:ILE:HD12	2.17	0.60
27:YD:35:LYS:HD3	27:YD:63:ARG:CB	2.32	0.60
28:RE:53:PRO:HG2	28:RE:54:GLN:NE2	2.16	0.60
54:Y8:53:PRO:CD	54:Y8:54:GLU:H	2.15	0.60
29:RF:46:ARG:HH11	29:RF:46:ARG:CG	2.04	0.60
40:YU:92:ARG:NH1	40:YU:95:LEU:CD1	2.65	0.60
36:YQ:63:LYS:HE2	36:YQ:65:PHE:CE1	2.37	0.60
4:QD:96:LEU:H	4:QD:96:LEU:CD2	2.11	0.60
26:YB:40:U:O2'	26:YB:45:A:N6	2.31	0.60
37:RR:92:GLY:H	37:RR:94:TYR:HE2	1.49	0.60
37:RR:44:LEU:HD22	37:RR:48:VAL:HG23	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:QT:104:LEU:HD12	20:QT:105:SER:H	1.66	0.60
5:QE:42:GLY:HA2	5:QE:136:MET:HE1	1.82	0.60
34:YO:7:TYR:HE1	34:YO:20:MET:HE3	1.67	0.60
27:YD:147:LEU:HD13	27:YD:155:LEU:CD1	2.29	0.60
41:RV:18:LEU:HB3	41:RV:96:ILE:HG12	1.83	0.60
16:XP:51:VAL:CG1	16:XP:52:ASP:N	2.65	0.60
34:YO:97:ARG:N	34:YO:117:LEU:HD22	2.15	0.60
2:XB:114:ARG:O	2:XB:117:GLU:HB2	2.02	0.60
13:QM:37:THR:CG2	13:QM:39:ILE:HD11	2.31	0.60
29:RF:164:ARG:HG2	29:RF:164:ARG:HH11	1.66	0.60
6:XF:1:MET:HA	6:XF:67:MET:O	2.02	0.60
29:RF:34:TRP:CZ3	35:RP:8:PRO:HB3	2.37	0.60
46:R0:68:GLU:OE1	46:R0:82:ARG:NH1	2.34	0.60
10:QJ:29:ARG:O	10:QJ:29:ARG:HG2	2.00	0.60
27:YD:21:PHE:HB3	27:YD:24:ILE:HG13	1.83	0.60
25:RA:1398:C:OP1	43:RX:53:LYS:NZ	2.34	0.60
25:RA:1509:C:H3'	25:RA:1510:A:H5''	1.83	0.60
1:XA:1059:C:H2'	1:XA:1060:C:H6	1.67	0.60
9:XI:9:ARG:CB	9:XI:14:VAL:HG22	2.31	0.60
1:QA:1086:U:H3	1:QA:1099:G:H22	1.48	0.60
1:QA:119:A:H4'	1:QA:120:A:O5'	2.00	0.60
1:XA:842:C:O2'	1:XA:848:C:N4	2.35	0.60
27:RD:2:ALA:HB3	27:RD:20:ASP:HB3	1.83	0.60
31:RH:117:PRO:HB3	31:RH:123:PHE:CD1	2.37	0.60
47:Y1:80:LEU:C	47:Y1:81:LYS:CD	2.69	0.60
28:YE:93:VAL:N	28:YE:95:ILE:CD1	2.65	0.60
35:RP:138:LEU:C	35:RP:140:ALA:N	2.55	0.60
5:QE:43:LEU:HD21	5:QE:132:ALA:HB1	1.83	0.60
30:YG:9:ARG:HG2	30:YG:13:GLU:OE1	2.01	0.60
37:YR:75:LEU:HD13	37:YR:75:LEU:C	2.22	0.60
4:XD:90:GLY:HA2	4:XD:204:ILE:HD11	1.83	0.60
27:RD:25:THR:HG21	27:RD:81:ALA:CA	2.31	0.60
37:RR:44:LEU:O	37:RR:48:VAL:HG23	2.02	0.60
20:QT:96:GLY:O	20:QT:97:ALA:HB3	2.02	0.60
4:QD:114:ARG:NH1	4:QD:114:ARG:HG3	2.13	0.60
28:RE:37:ARG:CA	28:RE:37:ARG:NE	2.64	0.60
3:QC:130:VAL:O	3:QC:134:ILE:HG12	2.01	0.60
40:RU:76:TYR:CZ	40:RU:80:ILE:HG13	2.37	0.60
7:XG:150:ALA:HA	11:XK:59:TYR:CD2	2.36	0.60
31:RH:30:LYS:CD	31:RH:81:GLU:H	2.15	0.60
14:YN:19:ARG:O	14:YN:20:ALA:C	2.40	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:131:ALA:HB1	28:RE:135:HIS:HE1	1.65	0.60
1:XA:674:G:H2'	1:XA:675:A:H8	1.67	0.60
45:YZ:80:ARG:HH21	45:YZ:82:ARG:HH22	1.49	0.60
25:YA:1049:C:H2'	25:YA:1050:A:H5''	1.84	0.60
5:QE:131:ILE:O	5:QE:134:ALA:HB3	2.01	0.60
12:QL:54:LYS:N	12:QL:54:LYS:CD	2.65	0.60
30:RG:126:ASP:OD1	30:RG:130:ASN:HB2	2.02	0.60
28:RE:95:ILE:HD12	28:RE:95:ILE:N	2.15	0.60
10:XJ:98:ILE:N	10:XJ:98:ILE:HD12	2.15	0.60
35:RP:27:HIS:N	35:RP:27:HIS:ND1	2.49	0.60
27:YD:35:LYS:CG	27:YD:64:ILE:N	2.56	0.60
27:RD:35:LYS:HD3	27:RD:63:ARG:CB	2.32	0.60
35:YP:79:ARG:HD3	35:YP:110:TYR:HE1	1.67	0.60
35:YP:138:LEU:C	35:YP:140:ALA:N	2.55	0.60
28:RE:63:LEU:CD1	28:RE:64:LYS:H	2.04	0.60
37:RR:75:LEU:C	37:RR:75:LEU:HD13	2.22	0.60
40:YU:96:ALA:C	40:YU:98:LEU:H	2.04	0.60
48:R2:32:LEU:HD11	48:R2:54:LYS:HG3	1.84	0.60
30:YG:111:LEU:HB2	30:YG:112:PRO:HD3	1.82	0.60
39:RT:34:VAL:HG12	39:RT:36:GLU:HG2	1.83	0.60
13:XM:97:PRO:HB2	13:XM:101:GLN:HE22	1.65	0.60
41:YV:66:ARG:HH12	41:YV:88:ARG:HH11	1.49	0.60
25:RA:1007:C:O3'	33:RN:108:PRO:HB3	2.02	0.60
35:RP:13:ASN:O	35:RP:15:ARG:N	2.34	0.60
30:RG:128:ARG:HG3	30:RG:128:ARG:NH2	2.17	0.60
25:YA:566:U:OP1	35:YP:29:LYS:HE2	2.01	0.60
9:QI:85:LEU:O	9:QI:85:LEU:HD12	2.02	0.60
1:QA:1347:G:N2	1:QA:1374:A:OP2	2.30	0.60
17:QQ:76:LEU:HD12	17:QQ:77:VAL:H	1.66	0.60
3:XC:88:ARG:O	3:XC:99:VAL:HG21	2.01	0.60
28:YE:68:ALA:O	28:YE:69:LYS:HG3	2.02	0.60
1:QA:1118:C:H1'	1:QA:1179:A:C4	2.36	0.60
30:YG:50:ALA:O	30:YG:53:LEU:HB3	2.01	0.60
1:XA:545:C:OP2	4:XD:62:GLN:NE2	2.32	0.60
6:QF:97:PHE:HD2	6:QF:97:PHE:C	2.05	0.60
15:QO:4:THR:HB	15:QO:6:GLU:OE2	2.02	0.60
22:XV:61:C:H2'	22:XV:62:C:H6	1.67	0.60
4:XD:129:ASN:HA	4:XD:145:GLU:HB2	1.82	0.60
38:RS:11:LYS:HB2	38:RS:91:PRO:HD3	1.84	0.60
14:QN:15:LYS:HD2	14:QN:16:PHE:CZ	2.37	0.60
27:RD:165:ILE:HA	27:RD:175:LEU:HD23	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:YY:96:ILE:CD1	44:YY:98:VAL:HG12	2.32	0.59
10:QJ:5:ARG:O	10:QJ:98:ILE:HA	2.01	0.59
3:QC:13:GLY:HA3	14:QN:57:ARG:CZ	2.31	0.59
54:Y8:22:VAL:CG2	54:Y8:53:PRO:HB2	2.32	0.59
40:YU:92:ARG:HD3	40:YU:94:ASN:HB3	1.82	0.59
38:RS:99:LYS:O	38:RS:102:ALA:N	2.34	0.59
36:RQ:81:VAL:HG23	36:RQ:82:ARG:H	1.67	0.59
29:YF:63:LYS:HE2	29:YF:67:GLN:HB3	1.83	0.59
52:Y6:25:LYS:HD2	54:Y8:34:TRP:CZ2	2.36	0.59
39:YT:107:ASP:O	39:YT:110:ILE:HG22	2.02	0.59
10:XJ:32:ALA:H	10:XJ:78:ASN:HD21	1.49	0.59
39:RT:107:ASP:O	39:RT:110:ILE:HG22	2.02	0.59
38:YS:59:LYS:HG2	38:YS:60:GLY:N	2.13	0.59
5:QE:74:GLY:O	5:QE:115:VAL:HA	2.02	0.59
31:RH:4:ILE:N	31:RH:4:ILE:HD13	2.17	0.59
35:RP:95:VAL:HG13	35:RP:100:LEU:HD21	1.83	0.59
13:QM:96:LEU:HB3	13:QM:97:PRO:HD2	1.83	0.59
19:XS:25:LYS:O	19:XS:26:GLY:O	2.20	0.59
33:RN:41:ASP:O	33:RN:48:MET:HE3	2.01	0.59
28:RE:116:VAL:O	28:RE:117:MET:CB	2.49	0.59
44:RY:4:LYS:O	44:RY:5:MET:HB2	2.01	0.59
9:XI:111:ARG:HG2	9:XI:112:LYS:N	2.16	0.59
20:XT:58:LYS:O	20:XT:62:LEU:HD12	2.01	0.59
31:YH:30:LYS:CD	31:YH:81:GLU:H	2.15	0.59
3:QC:189:ALA:HB3	3:QC:196:LEU:HB2	1.84	0.59
25:RA:1826:G:OP1	27:RD:224:ALA:N	2.32	0.59
41:YV:1:MET:CE	41:YV:43:GLU:HG2	2.32	0.59
6:XF:44:GLY:HA2	6:XF:59:TYR:CZ	2.37	0.59
45:YZ:144:LEU:HD11	45:YZ:149:SER:HA	1.83	0.59
25:YA:2168:G:N2	25:YA:2170:A:N7	2.50	0.59
28:RE:68:ALA:O	28:RE:69:LYS:HG3	2.02	0.59
12:XL:54:LYS:CD	12:XL:54:LYS:N	2.64	0.59
47:R1:91:LYS:CG	47:R1:92:LYS:H	2.15	0.59
25:RA:270(R):G:H1'	47:R1:78:LYS:HZ1	1.65	0.59
47:Y1:81:LYS:HZ3	47:Y1:81:LYS:HA	0.70	0.59
27:RD:35:LYS:HE3	27:RD:64:ILE:C	2.21	0.59
35:YP:121:LYS:HG3	35:YP:122:PRO:HD2	1.84	0.59
25:RA:2250:G:C6	36:RQ:82:ARG:HD2	2.37	0.59
36:YQ:80:GLU:C	36:YQ:81:VAL:HG13	2.22	0.59
7:QG:79:ARG:HH11	7:QG:79:ARG:HG2	1.66	0.59
39:YT:102:ILE:HB	39:YT:110:ILE:HD13	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:RV:35:LEU:HB2	41:RV:37:VAL:HG23	1.85	0.59
36:YQ:86:GLY:C	36:YQ:88:GLY:H	2.03	0.59
29:RF:155:LEU:CD1	29:RF:174:VAL:HG13	2.32	0.59
4:XD:173:TRP:O	4:XD:186:LEU:HB2	2.02	0.59
25:RA:1287:A:N7	37:RR:107:ASP:HB2	2.17	0.59
1:QA:1238:A:H62	1:QA:1299:A:H61	1.48	0.59
1:XA:677:U:H1'	11:XK:119:CYS:SG	2.42	0.59
1:QA:1152:A:H5''	10:QJ:13:HIS:HD2	1.67	0.59
27:YD:172:TYR:CD1	27:YD:186:HIS:HA	2.37	0.59
27:RD:236:GLY:C	27:RD:237:GLU:OE1	2.39	0.59
1:XA:1391:U:H2'	1:XA:1392:G:C8	2.37	0.59
9:XI:66:ARG:HG2	9:XI:66:ARG:HH11	1.68	0.59
33:YN:18:ALA:HB3	33:YN:55:VAL:O	2.02	0.59
18:XR:31:LEU:H	18:XR:31:LEU:HD23	1.67	0.59
28:RE:69:LYS:O	28:RE:71:GLY:N	2.27	0.59
3:QC:60:ALA:O	3:QC:61:ALA:CB	2.50	0.59
35:RP:37:GLY:HA2	35:RP:41:ARG:HE	1.67	0.59
13:QM:45:VAL:HG22	13:QM:45:VAL:O	2.02	0.59
54:Y8:56:GLU:O	54:Y8:59:LYS:N	2.35	0.59
28:YE:51:PHE:HD1	28:YE:52:LEU:HG	1.67	0.59
11:QK:34:ASP:HB3	11:QK:40:ILE:HD11	1.84	0.59
2:XB:188:ALA:HB3	2:XB:200:ILE:HG23	1.84	0.59
31:RH:153:LYS:HZ2	31:RH:153:LYS:HA	1.67	0.59
35:YP:127:ALA:O	35:YP:147:LEU:HD23	2.02	0.59
28:RE:61:ARG:HB2	28:RE:62:PRO:CD	2.33	0.59
8:QH:86:ILE:HG13	8:QH:133:LEU:HD22	1.84	0.59
30:RG:13:GLU:O	30:RG:14:GLU:CB	2.44	0.59
25:RA:2287:A:H62	25:RA:2344:U:H3	1.50	0.59
10:QJ:31:GLY:HA3	10:QJ:78:ASN:ND2	2.18	0.59
27:RD:25:THR:HG21	27:RD:81:ALA:HA	1.84	0.59
41:YV:35:LEU:HB2	41:YV:37:VAL:HG23	1.85	0.59
5:XE:72:GLN:O	5:XE:73:ASN:HB3	2.02	0.59
11:XK:41:THR:HG21	11:XK:71:LYS:HB2	1.83	0.59
39:YT:57:PHE:CD2	39:YT:58:ASN:N	2.66	0.59
25:YA:2292:C:P	38:YS:17:ARG:HH22	2.26	0.59
28:YE:116:VAL:O	28:YE:117:MET:CB	2.49	0.59
25:RA:2292:C:P	38:RS:17:ARG:HH22	2.25	0.59
40:YU:76:TYR:CZ	40:YU:80:ILE:HG13	2.37	0.59
29:YF:123:LEU:HD12	29:YF:124:LEU:N	2.17	0.59
8:QH:41:ARG:HH11	8:QH:41:ARG:HB3	1.65	0.59
27:RD:172:TYR:CD1	27:RD:186:HIS:HA	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:RN:16:ILE:O	33:RN:55:VAL:HG22	2.01	0.59
27:RD:166:GLN:HE21	27:RD:166:GLN:CA	2.14	0.59
25:RA:414:C:O2	25:RA:1864:U:O2'	2.18	0.59
6:QF:44:GLY:HA2	6:QF:59:TYR:CZ	2.37	0.59
1:QA:1172:C:H2'	1:QA:1173:G:C8	2.36	0.59
35:YP:55:ARG:HD2	35:YP:56:SER:O	2.01	0.59
44:YY:4:LYS:O	44:YY:5:MET:HB2	2.01	0.59
25:YA:2469:A:H5''	25:YA:2470:G:C8	2.37	0.59
14:QN:44:LEU:HD12	14:QN:48:ALA:HB2	1.84	0.59
47:R1:87:PRO:O	47:R1:91:LYS:N	2.31	0.59
19:XS:5:LEU:CD2	50:Y4:67:TYR:CZ	2.85	0.59
19:XS:40:ILE:HD11	19:XS:62:ILE:HG21	1.85	0.59
35:RP:106:LEU:O	35:RP:107:LYS:CB	2.46	0.59
2:QB:188:ALA:HB3	2:QB:200:ILE:HG23	1.83	0.59
33:YN:42:TRP:O	40:YU:64:ARG:NH2	2.35	0.59
54:R8:22:VAL:CG2	54:R8:53:PRO:HB2	2.32	0.59
36:RQ:63:LYS:HE2	36:RQ:65:PHE:CE1	2.37	0.59
52:Y6:41:PRO:HG2	52:Y6:45:LYS:N	2.10	0.59
52:R6:13:CYS:O	52:R6:21:TYR:HA	2.02	0.59
7:QG:66:VAL:O	7:QG:70:LYS:HG3	2.02	0.59
7:QG:23:VAL:HG12	7:QG:27:ILE:CD1	2.32	0.59
7:XG:23:VAL:HG12	7:XG:27:ILE:CD1	2.32	0.59
5:QE:72:GLN:O	5:QE:73:ASN:HB3	2.02	0.59
31:YH:4:ILE:N	31:YH:4:ILE:HD13	2.17	0.59
2:QB:124:SER:HB2	2:QB:125:PRO:HD2	1.85	0.59
29:YF:11:VAL:HG11	29:YF:18:ARG:HE	1.67	0.59
20:QT:58:LYS:O	20:QT:62:LEU:HD12	2.02	0.59
9:QI:111:ARG:HG2	9:QI:112:LYS:N	2.16	0.59
11:QK:91:ARG:HH22	18:QR:88:LYS:HZ3	1.50	0.59
15:XO:5:LYS:O	15:XO:8:LYS:HG2	2.02	0.59
5:QE:33:VAL:HG11	5:QE:109:ILE:HA	1.83	0.59
1:XA:939:G:H5''	7:XG:102:ARG:HH22	1.67	0.59
31:RH:82:GLY:O	31:RH:135:GLY:O	2.20	0.59
1:QA:1329:A:P	13:QM:28:ALA:HB3	2.43	0.59
3:XC:60:ALA:O	3:XC:61:ALA:CB	2.50	0.59
19:QS:16:LEU:O	19:QS:20:LEU:HG	2.01	0.59
27:YD:174:ILE:N	27:YD:174:ILE:HD12	2.16	0.59
25:RA:558:G:P	33:RN:111:PRO:HD2	2.43	0.59
31:YH:86:GLU:O	31:YH:131:VAL:O	2.20	0.59
27:RD:54:ARG:HH11	27:RD:54:ARG:CG	2.14	0.59
13:XM:93:ARG:NH1	25:YA:887:A:OP1	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RP:79:ARG:HD3	35:RP:110:TYR:HE1	1.67	0.59
11:QK:51:LYS:CA	11:QK:55:LYS:HD3	2.21	0.59
40:RU:58:ARG:HA	40:RU:61:TRP:CE3	2.37	0.59
25:RA:24:G:O2'	42:RW:78:GLU:O	2.19	0.59
40:YU:58:ARG:HA	40:YU:61:TRP:CE3	2.37	0.59
25:YA:2287:A:N6	25:YA:2344:U:H3	2.00	0.59
8:XH:86:ILE:HG22	8:XH:93:VAL:HG21	1.84	0.59
37:YR:92:GLY:H	37:YR:94:TYR:HE2	1.49	0.59
20:XT:96:GLY:O	20:XT:97:ALA:HB3	2.02	0.59
33:RN:9:VAL:HG21	33:RN:48:MET:HB3	1.85	0.59
4:QD:173:TRP:O	4:QD:186:LEU:HB2	2.02	0.59
12:QL:48:PRO:CD	12:QL:49:ASN:N	2.57	0.59
8:XH:41:ARG:HH11	8:XH:41:ARG:HB3	1.66	0.59
6:XF:26:ILE:O	6:XF:30:LEU:HG	2.02	0.59
17:XQ:76:LEU:HD12	17:XQ:77:VAL:H	1.67	0.59
1:XA:1226:C:H2'	13:XM:103:THR:HB	1.84	0.59
9:QI:9:ARG:HB3	9:QI:14:VAL:HG13	1.85	0.59
23:XY:30:C:H2'	23:XY:31:G:C8	2.38	0.59
25:RA:654(A):G:OP2	25:RA:654(A):G:H3'	2.03	0.59
25:YA:2031:A:N3	25:YA:2455:G:O2'	2.31	0.59
46:Y0:50:ASN:HB3	46:Y0:63:VAL:HG22	1.83	0.59
45:RZ:5:LEU:HD11	45:RZ:39:VAL:HB	1.84	0.59
44:YY:95:LYS:HD3	44:YY:95:LYS:H	1.67	0.59
25:RA:2635:C:H5''	28:RE:78:LEU:HA	1.85	0.59
1:QA:690:G:H2'	1:QA:691:G:O4'	2.03	0.59
2:QB:69:LEU:O	2:QB:162:ILE:HA	2.02	0.59
33:YN:41:ASP:O	33:YN:48:MET:HE3	2.02	0.59
33:YN:6:PRO:HG3	33:YN:41:ASP:HB2	1.83	0.59
40:YU:92:ARG:HH11	40:YU:95:LEU:HD12	1.67	0.59
54:R8:22:VAL:HG21	54:R8:53:PRO:HB2	1.83	0.59
30:YG:16:ARG:NH2	30:YG:31:VAL:HG11	2.17	0.59
10:XJ:31:GLY:HA3	10:XJ:78:ASN:ND2	2.18	0.59
20:QT:104:LEU:HD12	20:QT:105:SER:N	2.18	0.59
27:YD:12:SER:C	27:YD:14:ARG:H	2.06	0.59
35:YP:95:VAL:HG13	35:YP:100:LEU:HD21	1.84	0.59
2:XB:124:SER:HB2	2:XB:125:PRO:HD2	1.85	0.59
51:R5:40:LYS:NZ	51:R5:46:CYS:HB3	2.18	0.59
42:RW:66:GLU:O	42:RW:68:ARG:N	2.33	0.59
41:YV:15:GLU:HG3	41:YV:16:PRO:HD2	1.83	0.59
28:RE:36:ARG:H	28:RE:37:ARG:HH21	1.49	0.59
35:YP:39:LYS:CA	35:YP:45:LEU:CD1	2.80	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:149:ALA:O	3:QC:169:ALA:HA	2.02	0.59
50:Y4:22:ILE:HG22	50:Y4:23:GLU:N	2.18	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
17:XQ:92:ARG:HH11	17:XQ:92:ARG:HG3	1.68	0.59
16:XP:43:LYS:HA	16:XP:48:TRP:HB2	1.84	0.59
49:Y3:29:ARG:HH11	49:Y3:29:ARG:CB	2.13	0.59
29:RF:123:LEU:HD12	29:RF:124:LEU:N	2.17	0.59
6:QF:26:ILE:O	6:QF:30:LEU:HG	2.02	0.59
1:QA:475:G:H2'	1:QA:476:G:H8	1.67	0.59
1:QA:501:C:H2'	1:QA:502:G:C8	2.37	0.59
10:QJ:13:HIS:HB3	10:QJ:68:HIS:CE1	2.37	0.59
31:YH:159:GLU:O	31:YH:160:LYS:HG2	2.03	0.59
14:QN:19:ARG:O	14:QN:20:ALA:C	2.40	0.59
26:RB:44:G:H1'	26:RB:47:C:H42	1.68	0.59
7:XG:85:TYR:HE1	7:XG:154:TYR:CE1	2.21	0.59
25:YA:1939:U:OP1	25:YA:2604:U:O2'	2.18	0.59
5:QE:68:GLU:HG3	5:QE:68:GLU:O	2.02	0.59
33:RN:78:TYR:N	33:RN:78:TYR:CD1	2.70	0.59
25:RA:384:U:H2'	25:RA:385:C:H6	1.67	0.59
31:YH:55:PRO:HG2	31:YH:61:HIS:CE1	2.37	0.59
14:YN:15:LYS:HD2	14:YN:16:PHE:CZ	2.36	0.59
4:XD:22:LYS:O	4:XD:113:SER:HB3	2.03	0.59
50:Y4:48:ARG:NH1	50:Y4:52:THR:H	2.01	0.59
19:XS:67:VAL:HG11	50:Y4:59:PHE:O	2.03	0.59
1:QA:1053:G:H2'	1:QA:1199:U:H5	1.67	0.59
37:YR:72:ASP:O	37:YR:76:VAL:HB	2.03	0.59
33:YN:58:ASP:N	33:YN:60:ILE:HD11	2.16	0.59
38:YS:88:ASP:O	38:YS:89:ARG:CB	2.48	0.59
7:XG:66:VAL:O	7:XG:70:LYS:HG3	2.02	0.59
25:RA:2283:C:P	52:R6:5:VAL:HG13	2.43	0.59
44:RY:51:VAL:CG1	44:RY:52:SER:H	2.11	0.59
39:RT:102:ILE:HB	39:RT:110:ILE:HD13	1.84	0.59
27:YD:27:THR:CG2	27:YD:83:GLU:HB3	2.33	0.59
2:QB:115:LEU:HD23	2:QB:153:ARG:HD3	1.84	0.59
28:RE:116:VAL:CG2	28:RE:122:PHE:CD2	2.86	0.59
34:YO:107:ARG:O	34:YO:112:MET:HE3	2.02	0.59
25:YA:2723:C:OP1	37:YR:3:HIS:HD2	1.86	0.59
1:QA:1239:A:O2'	1:QA:1298:C:N4	2.35	0.59
1:XA:501:C:O3'	12:XL:118:SER:HB2	2.03	0.59
11:XK:30:VAL:HG21	11:XK:65:ALA:HA	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:939:G:H5''	7:QG:102:ARG:NH1	2.18	0.59
32:YI:5:LEU:HD11	32:YI:19:VAL:HG12	1.84	0.59
43:YX:49:VAL:CG1	43:YX:83:VAL:HG13	2.33	0.59
3:QC:127:ARG:CG	3:QC:127:ARG:HH11	2.15	0.59
3:XC:127:ARG:HH11	3:XC:127:ARG:CG	2.15	0.59
27:RD:137:PRO:HB2	27:RD:140:THR:CG2	2.33	0.59
25:YA:2469:A:H5''	25:YA:2470:G:H8	1.68	0.59
33:YN:78:TYR:N	33:YN:78:TYR:CD1	2.70	0.59
31:YH:82:GLY:O	31:YH:135:GLY:O	2.20	0.59
25:YA:1430:C:H2'	25:YA:1431:U:C6	2.38	0.59
42:RW:36:LEU:HD11	42:RW:47:VAL:HG12	1.83	0.59
32:YI:40:THR:O	32:YI:44:LEU:HB2	2.03	0.59
12:QL:46:LYS:HG2	12:QL:47:LYS:H	1.67	0.59
14:QN:24:CYS:SG	14:QN:40:CYS:N	2.76	0.59
31:YH:124:GLU:HB3	31:YH:132:ARG:HG3	1.85	0.59
28:RE:93:VAL:N	28:RE:95:ILE:CD1	2.65	0.59
13:XM:8:GLU:OE1	30:YG:115:ARG:NH2	2.35	0.59
2:QB:19:HIS:NE2	2:QB:206:ASP:HB2	2.18	0.59
36:YQ:81:VAL:HG23	36:YQ:82:ARG:H	1.67	0.59
38:RS:89:ARG:O	38:RS:90:GLY:O	2.19	0.59
3:QC:36:ASP:HB3	3:QC:40:ARG:HH12	1.68	0.59
37:RR:79:LEU:HD23	37:RR:79:LEU:C	2.23	0.59
5:QE:79:GLU:HB3	5:QE:92:LYS:HA	1.84	0.59
4:QD:170:VAL:HG22	4:QD:171:GLY:N	2.12	0.59
5:QE:102:ALA:HB2	5:QE:120:THR:OG1	2.03	0.59
3:XC:149:ALA:O	3:XC:169:ALA:HA	2.02	0.59
9:QI:17:VAL:HG13	9:QI:81:ILE:HD13	1.85	0.59
16:QP:43:LYS:HA	16:QP:48:TRP:HB2	1.84	0.59
38:RS:42:ASP:C	38:RS:44:LYS:H	2.06	0.59
8:QH:41:ARG:HH11	8:QH:41:ARG:CG	2.16	0.59
48:Y2:64:LEU:CD2	48:Y2:68:ARG:HD2	2.33	0.59
50:Y4:15:ILE:HG22	50:Y4:19:GLY:O	2.03	0.59
4:QD:163:GLU:C	4:QD:165:MET:H	2.03	0.59
25:RA:1903:G:OP2	27:RD:241:PRO:HB2	2.03	0.59
11:XK:69:ALA:HB1	11:XK:103:LEU:HD21	1.85	0.59
9:QI:66:ARG:HH11	9:QI:66:ARG:HG2	1.68	0.59
12:XL:46:LYS:HG2	12:XL:47:LYS:H	1.67	0.59
12:QL:70:ILE:HD13	12:QL:77:LEU:HD12	1.83	0.59
9:QI:96:LEU:HD23	9:QI:102:LEU:HD12	1.84	0.59
8:XH:12:ARG:HH12	8:XH:27:PRO:HD2	1.67	0.59
1:QA:1078:U:O2'	5:QE:130:ASN:OD1	2.12	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1341:U:OP2	25:YA:1394:U:O2'	2.15	0.59
31:RH:127:GLU:HG2	31:RH:128:PRO:CG	2.33	0.59
50:R4:63:TYR:C	50:R4:65:ASP:H	2.05	0.59
4:XD:11:LEU:HD22	4:XD:66:ARG:CD	2.19	0.59
28:YE:4:ILE:C	28:YE:5:LEU:HD23	2.22	0.59
27:RD:44:ASN:ND2	27:RD:44:ASN:N	2.42	0.59
29:RF:89:VAL:HG12	29:RF:90:PHE:N	2.18	0.59
27:RD:71:ASP:HB3	27:RD:103:ARG:HH22	1.68	0.59
25:RA:2344:U:C2	52:R6:37:ARG:HD3	2.38	0.59
25:RA:747:U:N3	51:R5:2:ALA:N	2.51	0.59
27:RD:12:SER:C	27:RD:14:ARG:H	2.06	0.59
27:YD:177:LEU:HD11	27:YD:183:ARG:HB2	1.85	0.59
51:Y5:40:LYS:NZ	51:Y5:46:CYS:HB3	2.18	0.59
40:RU:52:ARG:NH1	40:RU:52:ARG:HG2	2.18	0.59
1:QA:1175:G:H2'	1:QA:1176:A:C8	2.37	0.59
1:XA:1014:A:H4'	19:XS:14:HIS:CD2	2.38	0.59
33:RN:18:ALA:HB3	33:RN:55:VAL:O	2.03	0.59
6:QF:45:LEU:HD12	6:QF:59:TYR:HD1	1.66	0.59
12:XL:70:ILE:HD13	12:XL:77:LEU:HD12	1.83	0.59
31:RH:55:PRO:HG2	31:RH:61:HIS:CE1	2.37	0.59
25:YA:888:C:H3'	25:YA:889:C:H4'	1.85	0.59
50:Y4:3:GLU:HG3	50:Y4:4:GLY:N	2.18	0.59
5:XE:153:LYS:NZ	5:XE:153:LYS:HB2	2.18	0.59
35:RP:71:VAL:HG13	35:RP:72:PRO:HD3	1.85	0.59
1:XA:276:G:O3'	17:XQ:68:ARG:NH1	2.36	0.59
25:YA:2111:C:N3	25:YA:2118:U:O2'	2.36	0.59
31:YH:126:PRO:CD	31:YH:127:GLU:N	2.64	0.59
1:XA:1104:G:H4'	2:XB:111:ARG:NH1	2.18	0.59
35:RP:138:LEU:O	35:RP:140:ALA:N	2.33	0.59
35:YP:138:LEU:O	35:YP:140:ALA:N	2.33	0.59
41:YV:49:THR:CB	41:YV:50:PRO:HD2	2.25	0.59
2:QB:187:LEU:CD1	2:QB:205:ASP:HA	2.33	0.59
37:RR:72:ASP:O	37:RR:76:VAL:HB	2.02	0.59
39:YT:102:ILE:HB	39:YT:110:ILE:HD11	1.84	0.59
25:RA:1022:G:H22	25:RA:1142(A):A:H2	1.50	0.59
25:RA:483:A:H4'	44:RY:49:VAL:HG13	1.84	0.59
5:QE:42:GLY:CA	5:QE:66:MET:HG2	2.33	0.59
20:XT:84:LEU:O	20:XT:88:VAL:HG23	2.01	0.59
4:XD:114:ARG:NH1	4:XD:114:ARG:HG3	2.13	0.59
41:YV:18:LEU:HB3	41:YV:96:ILE:HG12	1.84	0.59
29:YF:174:VAL:HG13	29:YF:174:VAL:O	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:36:ARG:H	28:YE:37:ARG:HH21	1.49	0.59
5:XE:42:GLY:CA	5:XE:66:MET:HG2	2.32	0.59
1:QA:1238:A:H62	1:QA:1299:A:N6	2.00	0.59
41:RV:1:MET:CE	41:RV:43:GLU:HG2	2.32	0.59
31:RH:92:ILE:HG22	31:RH:93:GLY:N	2.18	0.59
43:RX:49:VAL:CG1	43:RX:83:VAL:HG13	2.33	0.59
27:YD:137:PRO:HB2	27:YD:140:THR:CG2	2.33	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
12:QL:54:LYS:N	12:QL:54:LYS:HD2	2.18	0.59
18:QR:31:LEU:H	18:QR:31:LEU:HD23	1.67	0.59
25:YA:1667:G:O2'	25:YA:1669:A:N6	2.35	0.59
8:QH:12:ARG:HH12	8:QH:27:PRO:HD2	1.67	0.59
1:XA:565:U:H5''	1:XA:566:G:H2'	1.84	0.59
39:YT:66:VAL:HG12	39:YT:67:SER:H	1.67	0.59
25:RA:2689:U:H4'	25:RA:2690:C:O5'	2.03	0.59
30:YG:126:ASP:OD1	30:YG:130:ASN:HB2	2.02	0.59
50:R4:65:ASP:O	50:R4:66:SER:CB	2.51	0.58
28:RE:93:VAL:N	28:RE:95:ILE:HD12	2.17	0.58
35:RP:121:LYS:HG3	35:RP:122:PRO:HD2	1.84	0.58
13:QM:84:ILE:HG23	13:QM:85:GLY:N	2.18	0.58
28:YE:61:ARG:HB2	28:YE:62:PRO:CD	2.33	0.58
29:YF:63:LYS:HE2	29:YF:67:GLN:CB	2.32	0.58
29:RF:63:LYS:HE2	29:RF:67:GLN:CB	2.32	0.58
30:YG:16:ARG:HB3	30:YG:17:PRO:CD	2.33	0.58
38:RS:88:ASP:CG	38:RS:90:GLY:H	2.06	0.58
48:Y2:32:LEU:HD11	48:Y2:54:LYS:HG3	1.84	0.58
37:YR:44:LEU:O	37:YR:48:VAL:HG23	2.02	0.58
50:Y4:39:CYS:O	50:Y4:40:HIS:HB2	2.03	0.58
37:YR:63:ARG:HG3	37:YR:63:ARG:HH11	1.68	0.58
27:YD:27:THR:CG2	27:YD:28:GLU:N	2.66	0.58
31:YH:4:ILE:HG13	31:YH:6:ARG:CD	2.33	0.58
39:RT:36:GLU:HG3	39:RT:41:ARG:HD3	1.85	0.58
11:XK:34:ASP:HB3	11:XK:40:ILE:HD11	1.83	0.58
33:RN:114:ARG:O	33:RN:115:ARG:HB3	2.03	0.58
10:XJ:13:HIS:HB3	10:XJ:68:HIS:CE1	2.37	0.58
17:QQ:92:ARG:HH11	17:QQ:92:ARG:HG3	1.68	0.58
9:QI:40:LEU:HD11	9:QI:70:LYS:HG2	1.84	0.58
2:QB:47:THR:HG22	2:QB:51:LEU:HG	1.85	0.58
6:QF:62:TRP:C	6:QF:63:TYR:HD2	2.06	0.58
4:QD:196:LEU:O	4:QD:198:VAL:N	2.31	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:163:GLU:C	4:XD:165:MET:H	2.03	0.58
4:QD:13:ARG:HA	4:QD:33:MET:HE3	1.85	0.58
25:RA:994:C:H3'	40:RU:54:LYS:HE3	1.83	0.58
16:QP:53:VAL:HG23	16:QP:54:GLU:N	2.18	0.58
39:RT:66:VAL:HG12	39:RT:67:SER:H	1.67	0.58
32:RI:2:LYS:HA	32:RI:20:ASP:HA	1.85	0.58
35:YP:37:GLY:HA2	35:YP:41:ARG:HE	1.68	0.58
31:YH:89:ILE:O	31:YH:91:GLY:N	2.35	0.58
44:RY:96:ILE:CD1	44:RY:98:VAL:HG12	2.32	0.58
44:RY:81:LYS:HD3	44:RY:97:ARG:CD	2.33	0.58
50:Y4:63:TYR:C	50:Y4:65:ASP:H	2.05	0.58
35:RP:127:ALA:O	35:RP:147:LEU:HD23	2.02	0.58
25:RA:2635:C:OP1	28:RE:78:LEU:HD12	2.03	0.58
33:RN:13:TRP:O	33:RN:135:PRO:HD2	2.03	0.58
50:R4:42:PHE:CG	50:R4:43:TYR:N	2.71	0.58
25:RA:2314:C:OP1	30:RG:91:ARG:NH1	2.36	0.58
12:QL:5:PRO:HA	12:QL:9:GLN:NE2	2.17	0.58
39:RT:102:ILE:HB	39:RT:110:ILE:HD11	1.84	0.58
20:QT:37:SER:HB3	20:QT:84:LEU:HD23	1.85	0.58
13:XM:19:LEU:HD22	13:XM:19:LEU:H	1.68	0.58
39:YT:36:GLU:HG3	39:YT:41:ARG:HD3	1.85	0.58
2:XB:47:THR:HG22	2:XB:51:LEU:HG	1.85	0.58
8:XH:41:ARG:HH11	8:XH:41:ARG:CG	2.16	0.58
50:R4:12:ALA:CB	50:R4:29:PRO:HA	2.33	0.58
48:R2:64:LEU:CD2	48:R2:68:ARG:HD2	2.33	0.58
31:YH:92:ILE:HG22	31:YH:93:GLY:N	2.18	0.58
12:XL:18:VAL:O	12:XL:19:ARG:HB2	2.03	0.58
25:RA:1342:A:OP1	43:RX:36:LYS:NZ	2.35	0.58
1:QA:1510:U:H2'	1:QA:1511:G:C8	2.38	0.58
7:QG:85:TYR:HE1	7:QG:154:TYR:CE1	2.20	0.58
28:RE:72:VAL:O	28:RE:73:GLU:O	2.21	0.58
31:RH:86:GLU:O	31:RH:131:VAL:O	2.21	0.58
33:RN:14:VAL:HG12	33:RN:15:LEU:N	2.18	0.58
36:YQ:63:LYS:HD2	45:YZ:175:VAL:HG21	1.85	0.58
48:R2:17:SER:CB	48:R2:18:PRO:HA	2.33	0.58
25:RA:2404:C:H1'	35:RP:67:MET:CE	2.32	0.58
35:YP:65:ARG:HH21	54:Y8:15:LYS:CB	2.17	0.58
5:QE:111:GLU:C	5:QE:113:ALA:H	2.06	0.58
41:RV:41:GLY:H	41:RV:46:VAL:HG13	1.67	0.58
25:YA:1309:G:H4'	53:Y7:7:PRO:HB2	1.84	0.58
1:QA:1152:A:H5''	10:QJ:13:HIS:CD2	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:QP:28:ARG:HH11	16:QP:28:ARG:HG2	1.68	0.58
51:Y5:50:GLY:O	51:Y5:51:TYR:HB2	2.02	0.58
45:RZ:45:ASP:OD1	45:RZ:49:ARG:NE	2.36	0.58
18:QR:36:ASN:ND2	18:QR:36:ASN:O	2.32	0.58
25:RA:288:C:H2'	25:RA:289:A:H8	1.68	0.58
31:YH:126:PRO:CG	31:YH:127:GLU:N	2.65	0.58
2:XB:212:GLN:NE2	2:XB:235:SER:HB2	2.18	0.58
27:RD:92:ILE:HD12	27:RD:104:TYR:CD2	2.39	0.58
40:RU:92:ARG:NH1	40:RU:95:LEU:CD1	2.65	0.58
2:QB:80:ILE:HD11	2:QB:208:ILE:CG2	2.23	0.58
36:YQ:66:ILE:HA	36:YQ:104:PHE:HA	1.85	0.58
52:Y6:27:LYS:HB2	52:Y6:27:LYS:HZ2	1.66	0.58
48:Y2:51:ARG:HA	48:Y2:54:LYS:HB2	1.86	0.58
34:RO:20:MET:O	34:RO:41:ALA:HB1	2.04	0.58
48:R2:69:ARG:CB	48:R2:69:ARG:NH1	2.67	0.58
3:QC:77:ILE:O	3:QC:84:ILE:HG22	2.02	0.58
37:YR:2:ARG:HG2	37:YR:5:LYS:HZ1	1.68	0.58
1:QA:1347:G:C8	9:QI:107:ARG:HB3	2.38	0.58
27:RD:242:ARG:HD2	27:RD:242:ARG:N	2.18	0.58
6:QF:97:PHE:O	18:QR:31:LEU:HD23	2.04	0.58
12:XL:45:PRO:HD3	12:XL:51:ALA:O	2.03	0.58
25:RA:958:U:OP2	36:RQ:14:ARG:NH1	2.28	0.58
25:YA:2506:U:O2	25:YA:2506:U:H2'	2.01	0.58
12:XL:82:VAL:HG23	12:XL:106:ASP:OD2	2.04	0.58
1:QA:1204:A:OP1	14:QN:3:ARG:NH2	2.36	0.58
32:YI:62:LYS:HE3	32:YI:134:PRO:HG2	1.85	0.58
42:YW:80:PRO:O	42:YW:100:THR:HG22	2.04	0.58
13:XM:45:VAL:HG22	13:XM:45:VAL:O	2.02	0.58
1:QA:1023:G:H3'	1:QA:1024:G:H5''	1.84	0.58
14:YN:42:ILE:C	14:YN:43:CYS:O	2.40	0.58
14:YN:44:LEU:HD13	14:YN:53:LEU:HD13	1.84	0.58
31:YH:117:PRO:HB3	31:YH:123:PHE:CD1	2.37	0.58
14:QN:23:ARG:CZ	14:QN:30:ALA:HB2	2.32	0.58
14:QN:23:ARG:H	14:QN:33:VAL:HG11	1.67	0.58
50:R4:48:ARG:NH1	50:R4:52:THR:H	2.01	0.58
19:QS:40:ILE:HD11	19:QS:62:ILE:HG21	1.85	0.58
27:YD:44:ASN:HB3	27:YD:49:ILE:CA	2.27	0.58
50:Y4:65:ASP:O	50:Y4:66:SER:CB	2.51	0.58
2:XB:80:ILE:HG21	2:XB:212:GLN:HA	1.84	0.58
27:RD:35:LYS:CG	27:RD:64:ILE:H	2.14	0.58
26:RB:45:A:O4'	30:RG:95:ARG:NH1	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YN:9:VAL:HG21	33:YN:48:MET:HB3	1.85	0.58
41:YV:38:LEU:HD23	41:YV:39:LEU:N	2.19	0.58
30:RG:16:ARG:NH2	30:RG:31:VAL:HG11	2.17	0.58
36:YQ:79:LEU:HD12	46:Y0:5:LYS:HD3	1.86	0.58
3:XC:36:ASP:HB3	3:XC:40:ARG:HH12	1.68	0.58
48:R2:16:LEU:O	48:R2:17:SER:HB3	2.04	0.58
34:RO:7:TYR:HE1	34:RO:20:MET:HE3	1.68	0.58
51:R5:60:VAL:OXT	51:R5:60:VAL:HG13	2.03	0.58
34:YO:40:VAL:HG12	34:YO:41:ALA:N	2.19	0.58
25:RA:704:G:H1'	25:RA:727:A:N6	2.18	0.58
42:YW:66:GLU:O	42:YW:68:ARG:N	2.33	0.58
30:YG:64:THR:HG23	30:YG:66:GLN:H	1.67	0.58
2:XB:115:LEU:HD23	2:XB:153:ARG:HD3	1.84	0.58
25:RA:2848:G:HO2'	25:RA:2849:U:P	2.26	0.58
9:XI:79:LEU:O	9:XI:82:ALA:HB3	2.03	0.58
25:YA:565:C:OP1	41:YV:82:ARG:NH2	2.37	0.58
9:XI:40:LEU:HD11	9:XI:70:LYS:HG2	1.84	0.58
34:RO:71:ARG:HH11	34:RO:71:ARG:HG3	1.69	0.58
25:YA:1094:U:O2'	25:YA:1096:A:OP1	2.16	0.58
27:YD:165:ILE:HA	27:YD:175:LEU:HD23	1.83	0.58
36:YQ:55:VAL:HG22	36:YQ:56:ARG:N	2.18	0.58
32:RI:124:GLY:H	32:RI:142:VAL:HG23	1.69	0.58
16:XP:28:ARG:HG2	16:XP:28:ARG:HH11	1.68	0.58
1:XA:521:G:H4'	12:XL:73:GLU:HG3	1.86	0.58
7:QG:49:ILE:O	7:QG:53:LYS:HB3	2.04	0.58
1:XA:1048:G:OP1	14:YN:3:ARG:HB3	2.04	0.58
5:XE:68:GLU:HG3	5:XE:68:GLU:O	2.03	0.58
42:RW:95:ILE:O	42:RW:95:ILE:HD12	2.04	0.58
9:XI:114:TYR:O	9:XI:114:TYR:HD2	1.85	0.58
44:RY:95:LYS:H	44:RY:95:LYS:HD3	1.67	0.58
19:XS:68:GLY:HA3	50:Y4:68:ARG:CB	2.29	0.58
28:YE:78:LEU:HD23	28:YE:79:ARG:HD2	1.86	0.58
3:XC:181:ASN:HD22	3:XC:204:LEU:HB2	1.68	0.58
40:RU:92:ARG:HH11	40:RU:95:LEU:HD12	1.67	0.58
38:YS:88:ASP:CG	38:YS:90:GLY:H	2.06	0.58
8:XH:84:ARG:NH1	8:XH:86:ILE:HD13	2.11	0.58
48:R2:16:LEU:CG	48:R2:16:LEU:O	2.49	0.58
48:Y2:17:SER:CB	48:Y2:18:PRO:HA	2.33	0.58
44:YY:51:VAL:CG1	44:YY:52:SER:H	2.11	0.58
17:QQ:32:TYR:O	17:QQ:34:LYS:N	2.37	0.58
29:RF:174:VAL:HG13	29:RF:174:VAL:O	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:XC:77:ILE:O	3:XC:84:ILE:HG22	2.02	0.58
54:R8:46:ARG:O	54:R8:47:LYS:HB3	2.03	0.58
29:RF:11:VAL:HG11	29:RF:18:ARG:HE	1.67	0.58
35:YP:13:ASN:C	35:YP:15:ARG:N	2.54	0.58
2:XB:37:ASN:C	2:XB:39:ILE:H	2.07	0.58
9:QI:79:LEU:O	9:QI:82:ALA:HB3	2.03	0.58
28:RE:6:GLY:HA3	28:RE:26:ILE:HD11	1.85	0.58
35:YP:71:VAL:HG13	35:YP:72:PRO:HD3	1.85	0.58
29:RF:160:ASN:OD1	29:RF:162:LEU:HB2	2.04	0.58
25:RA:1030:G:OP2	36:RQ:128:LYS:HE2	2.03	0.58
1:XA:272:C:H2'	1:XA:273:A:H8	1.68	0.58
43:YX:7:VAL:O	43:YX:30:VAL:HG12	2.04	0.58
22:XV:75:C:OP1	25:YA:2602:A:OP1	2.20	0.58
25:YA:1264:G:H5'	51:Y5:11:THR:HG21	1.85	0.58
1:QA:673:G:H2'	1:QA:674:G:C8	2.38	0.58
44:YY:81:LYS:HD3	44:YY:97:ARG:CD	2.33	0.58
19:QS:9:VAL:HG23	19:QS:9:VAL:O	2.04	0.58
31:YH:85:LYS:HA	31:YH:86:GLU:OE1	2.03	0.58
28:YE:51:PHE:CD1	28:YE:52:LEU:HG	2.38	0.58
29:YF:89:VAL:HG12	29:YF:90:PHE:N	2.18	0.58
26:RB:40:U:O2'	26:RB:45:A:N6	2.31	0.58
2:QB:212:GLN:NE2	2:QB:235:SER:HB2	2.18	0.58
2:XB:140:HIS:HA	2:XB:143:GLU:OE1	2.04	0.58
36:YQ:90:VAL:C	36:YQ:92:GLY:H	2.07	0.58
5:XE:102:ALA:HB2	5:XE:120:THR:OG1	2.03	0.58
1:XA:191:G:C4	20:XT:105:SER:HB3	2.39	0.58
27:YD:242:ARG:HD2	27:YD:242:ARG:N	2.18	0.58
38:YS:42:ASP:C	38:YS:44:LYS:H	2.06	0.58
16:XP:14:ASN:N	16:XP:15:PRO:CD	2.67	0.58
45:YZ:72:ARG:NH2	45:YZ:97:GLU:O	2.27	0.58
31:RH:159:GLU:O	31:RH:160:LYS:HG2	2.03	0.58
35:YP:71:VAL:CG1	35:YP:72:PRO:HD3	2.33	0.58
36:YQ:47:ILE:CD1	36:YQ:70:PRO:HD3	2.34	0.58
4:XD:191:ARG:NH1	4:XD:200:GLU:OE1	2.37	0.58
1:QA:1081:G:OP1	5:QE:16:THR:OG1	2.21	0.58
43:YX:36:LYS:HE3	43:YX:54:VAL:O	2.04	0.58
16:XP:53:VAL:HG23	16:XP:54:GLU:N	2.18	0.58
3:XC:33:LEU:O	3:XC:37:GLN:HG2	2.04	0.58
31:RH:125:VAL:HG12	31:RH:126:PRO:CG	2.34	0.58
4:QD:22:LYS:O	4:QD:113:SER:HB3	2.03	0.58
54:R8:56:GLU:O	54:R8:59:LYS:N	2.35	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:111:ARG:NE	2:XB:111:ARG:HA	2.18	0.58
3:QC:105:GLU:HG2	3:QC:106:VAL:N	2.18	0.58
33:YN:13:TRP:O	33:YN:135:PRO:HD2	2.03	0.58
28:RE:51:PHE:CD1	28:RE:52:LEU:HG	2.39	0.58
50:R4:38:LYS:C	50:R4:40:HIS:N	2.52	0.58
25:YA:1266:G:O4'	42:YW:15:ARG:NH2	2.36	0.58
14:YN:21:TYR:HE2	14:YN:23:ARG:HH21	1.52	0.58
8:XH:86:ILE:HG13	8:XH:133:LEU:HD22	1.84	0.58
5:QE:78:HIS:CE1	5:QE:143:ARG:H	2.20	0.58
38:RS:67:ARG:HH11	38:RS:67:ARG:HB2	1.65	0.58
31:RH:4:ILE:HG13	31:RH:6:ARG:CD	2.33	0.58
48:Y2:69:ARG:CB	48:Y2:69:ARG:NH1	2.67	0.58
25:YA:1728:G:H8	25:YA:1732:A:H62	1.51	0.58
28:YE:111:ARG:NE	28:YE:160:TYR:HE1	2.01	0.58
10:QJ:3:LYS:O	10:QJ:100:THR:HG22	2.04	0.58
50:R4:15:ILE:HG22	50:R4:19:GLY:O	2.03	0.58
1:XA:1112:C:N3	3:XC:178:LEU:HD23	2.19	0.58
1:QA:939:G:H5''	7:QG:102:ARG:HH22	1.68	0.58
12:QL:33:ARG:O	12:QL:85:ILE:HG22	2.03	0.58
25:YA:307:G:H21	25:YA:330:A:H62	1.51	0.58
1:XA:376:G:OP1	16:XP:5:ARG:HB2	2.03	0.58
29:YF:138:GLU:O	29:YF:141:ALA:HB3	2.03	0.58
49:Y3:22:ALA:O	49:Y3:25:ALA:HB3	2.04	0.58
4:QD:156:GLU:O	4:QD:160:GLN:HG3	2.03	0.58
45:RZ:150:LEU:HD21	45:RZ:172:ALA:HB3	1.86	0.58
7:XG:49:ILE:O	7:XG:53:LYS:HB3	2.04	0.58
42:YW:95:ILE:HD12	42:YW:95:ILE:O	2.04	0.58
25:RA:1899:G:H21	25:RA:1902:C:N4	2.01	0.58
2:XB:19:HIS:NE2	2:XB:206:ASP:HB2	2.18	0.58
50:R4:27:THR:O	50:R4:28:LYS:HB3	2.04	0.58
51:Y5:60:VAL:OXT	51:Y5:60:VAL:HG13	2.03	0.58
5:QE:78:HIS:HA	8:QH:105:ARG:HB2	1.84	0.58
31:YH:4:ILE:H	31:YH:4:ILE:HD13	1.68	0.58
13:QM:19:LEU:H	13:QM:19:LEU:HD22	1.68	0.58
37:RR:117:VAL:CG2	37:RR:118:GLU:H	2.15	0.58
16:QP:51:VAL:CG1	16:QP:52:ASP:N	2.65	0.58
25:YA:1007:C:O3'	33:YN:108:PRO:HB3	2.03	0.58
3:XC:76:VAL:HG21	3:XC:103:VAL:CG1	2.34	0.58
50:R4:22:ILE:HG22	50:R4:23:GLU:N	2.18	0.58
2:QB:21:ARG:HG3	2:QB:38:GLY:O	2.01	0.58
13:QM:56:LEU:HD13	13:QM:60:VAL:HG23	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:Y4:12:ALA:CB	50:Y4:29:PRO:HA	2.34	0.58
43:RX:27:THR:HB	43:RX:80:ILE:HB	1.84	0.58
25:RA:2306:C:H2'	25:RA:2307:G:H21	1.68	0.58
3:XC:189:ALA:HB3	3:XC:196:LEU:HB2	1.84	0.58
6:XF:62:TRP:C	6:XF:63:TYR:HD2	2.06	0.58
7:QG:69:VAL:HG11	7:QG:104:LEU:CD2	2.33	0.58
1:XA:1177:G:OP2	9:XI:97:LYS:NZ	2.37	0.58
25:RA:2645:G:H3'	25:RA:2646:C:H5'	1.84	0.58
19:QS:17:GLU:HA	19:QS:20:LEU:HD12	1.86	0.58
35:RP:71:VAL:CG1	35:RP:72:PRO:HD3	2.33	0.58
46:R0:53:MET:HB3	46:R0:59:LEU:HD23	1.85	0.58
25:YA:2401:U:H2'	25:YA:2402:C:H5''	1.85	0.58
45:YZ:126:VAL:HG12	45:YZ:163:LEU:HA	1.86	0.58
43:RX:7:VAL:O	43:RX:30:VAL:HG12	2.04	0.58
48:Y2:15:LYS:H	48:Y2:67:LYS:CE	2.17	0.58
25:YA:1338:G:N7	43:YX:62:LYS:NZ	2.46	0.58
1:XA:828:A:H2'	1:XA:829:G:O4'	2.04	0.58
31:RH:85:LYS:HA	31:RH:86:GLU:OE1	2.04	0.58
8:XH:19:VAL:O	8:XH:20:TYR:HB2	2.04	0.58
1:QA:1053:G:N7	1:QA:1199:U:H3'	2.19	0.58
1:QA:1199:U:H4'	10:QJ:54:PHE:CZ	2.39	0.58
1:QA:963:G:H21	10:QJ:55:LYS:HD3	1.68	0.58
27:RD:27:THR:CG2	27:RD:83:GLU:HB3	2.33	0.58
38:YS:67:ARG:NH1	38:YS:67:ARG:CB	2.64	0.58
31:RH:4:ILE:H	31:RH:4:ILE:HD13	1.68	0.58
37:YR:117:VAL:CG2	37:YR:118:GLU:H	2.15	0.58
41:RV:78:LYS:O	41:RV:79:VAL:HB	2.04	0.58
43:YX:27:THR:HB	43:YX:80:ILE:HB	1.84	0.58
1:XA:737:A:H2'	1:XA:738:C:C6	2.39	0.58
50:R4:15:ILE:HG22	50:R4:20:ASN:HA	1.86	0.58
7:XG:69:VAL:HG11	7:XG:104:LEU:CD2	2.34	0.58
40:RU:24:TYR:HE1	40:RU:39:LEU:HD23	1.69	0.58
25:RA:2331:G:O2'	46:R0:43:THR:HG22	2.03	0.58
28:YE:72:VAL:O	28:YE:73:GLU:O	2.21	0.58
29:YF:160:ASN:OD1	29:YF:162:LEU:HB2	2.04	0.58
50:R4:3:GLU:HG3	50:R4:4:GLY:N	2.19	0.58
30:YG:39:ILE:HG23	30:YG:155:MET:HG3	1.86	0.58
51:R5:50:GLY:O	51:R5:51:TYR:HB2	2.03	0.58
11:QK:21:ILE:HG13	11:QK:30:VAL:HG12	1.86	0.58
11:QK:30:VAL:HG21	11:QK:65:ALA:HA	1.85	0.58
1:XA:31:G:O2'	1:XA:48:C:N4	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:138:GLU:O	29:RF:141:ALA:HB3	2.04	0.58
31:YH:127:GLU:HG2	31:YH:128:PRO:CG	2.32	0.57
47:R1:81:LYS:HZ3	47:R1:81:LYS:HA	0.74	0.57
2:XB:12:GLU:O	2:XB:16:HIS:ND1	2.36	0.57
27:YD:71:ASP:HB3	27:YD:103:ARG:HH22	1.68	0.57
13:QM:81:LEU:HB3	13:QM:89:GLY:CA	2.34	0.57
28:YE:63:LEU:HD13	28:YE:65:GLY:H	1.68	0.57
50:R4:39:CYS:O	50:R4:40:HIS:HB2	2.03	0.57
41:RV:35:LEU:HD21	41:RV:57:VAL:CG2	2.30	0.57
25:RA:2277:G:OP1	36:RQ:85:LYS:HB2	2.04	0.57
36:RQ:90:VAL:C	36:RQ:92:GLY:H	2.07	0.57
33:YN:35:ARG:O	33:YN:37:LYS:N	2.37	0.57
2:QB:37:ASN:C	2:QB:39:ILE:H	2.07	0.57
41:YV:78:LYS:O	41:YV:79:VAL:HB	2.03	0.57
42:RW:1:MET:HE3	42:RW:1:MET:HA	1.85	0.57
25:RA:2219:G:OP1	27:RD:172:TYR:OH	2.20	0.57
25:YA:1103:A:H5'	25:YA:1104:C:H5	1.69	0.57
30:RG:53:LEU:HD23	30:RG:53:LEU:C	2.25	0.57
12:XL:54:LYS:HD2	12:XL:54:LYS:N	2.18	0.57
48:Y2:21:LEU:O	48:Y2:25:VAL:HG23	2.04	0.57
1:XA:688:G:H2'	1:XA:689:C:H6	1.69	0.57
25:RA:774:A:H2	25:RA:787:U:HO2'	1.50	0.57
38:RS:95:HIS:CG	38:RS:96:GLY:H	2.21	0.57
1:QA:620:C:H2'	1:QA:621:A:O4'	2.04	0.57
15:XO:4:THR:HB	15:XO:6:GLU:OE2	2.02	0.57
25:YA:1859:A:N6	25:YA:1883:G:O2'	2.37	0.57
16:XP:76:GLN:HG2	16:XP:76:GLN:O	2.04	0.57
39:RT:82:LEU:HD12	39:RT:82:LEU:N	2.19	0.57
39:YT:82:LEU:N	39:YT:82:LEU:HD12	2.19	0.57
36:RQ:47:ILE:CD1	36:RQ:70:PRO:HD3	2.34	0.57
31:RH:84:SER:O	31:RH:133:VAL:O	2.22	0.57
3:QC:14:ILE:HG12	3:QC:15:THR:N	2.19	0.57
2:XB:97:TRP:HH2	2:XB:176:GLU:HB2	1.69	0.57
27:RD:35:LYS:HG2	27:RD:64:ILE:CA	2.34	0.57
2:QB:80:ILE:HG21	2:QB:212:GLN:HA	1.84	0.57
2:QB:97:TRP:HH2	2:QB:176:GLU:HB2	1.69	0.57
40:YU:92:ARG:C	40:YU:94:ASN:H	2.05	0.57
38:RS:106:ARG:O	38:RS:107:GLU:HB2	2.04	0.57
38:RS:26:LEU:CD2	38:RS:87:PHE:HD1	2.17	0.57
36:RQ:66:ILE:HA	36:RQ:104:PHE:HA	1.85	0.57
28:YE:203:LYS:HE3	28:YE:204:ALA:HB2	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:QP:21:VAL:HG22	16:QP:34:GLU:O	2.04	0.57
25:RA:1340:U:OP2	43:RX:78:LYS:NZ	2.35	0.57
27:RD:147:LEU:HD13	27:RD:155:LEU:CD1	2.29	0.57
27:RD:177:LEU:HD11	27:RD:183:ARG:HB2	1.85	0.57
20:XT:37:SER:HB3	20:XT:84:LEU:HD23	1.85	0.57
38:RS:67:ARG:HH11	38:RS:67:ARG:CB	2.17	0.57
2:QB:140:HIS:HA	2:QB:143:GLU:OE1	2.04	0.57
28:RE:111:ARG:NE	28:RE:160:TYR:HE1	2.01	0.57
1:QA:720:C:H5"	18:QR:52:PRO:HA	1.85	0.57
9:XI:17:VAL:HG13	9:XI:81:ILE:HD13	1.85	0.57
10:XJ:94:VAL:HG12	10:XJ:95:GLU:N	2.19	0.57
15:QO:26:GLU:CD	15:QO:77:ARG:NH1	2.58	0.57
27:RD:263:ARG:HB2	27:RD:263:ARG:HH11	1.67	0.57
25:RA:2485:G:OP1	36:RQ:46:GLN:NE2	2.36	0.57
4:XD:13:ARG:O	4:XD:16:GLY:N	2.29	0.57
28:YE:6:GLY:HA3	28:YE:26:ILE:HD11	1.85	0.57
12:XL:33:ARG:O	12:XL:85:ILE:HG22	2.03	0.57
42:RW:80:PRO:O	42:RW:100:THR:HG22	2.03	0.57
2:XB:106:LYS:O	2:XB:110:GLN:HG3	2.04	0.57
30:RG:39:ILE:HG23	30:RG:155:MET:HG3	1.86	0.57
12:XL:83:VAL:HG22	12:XL:84:LEU:H	1.69	0.57
38:YS:95:HIS:CG	38:YS:96:GLY:H	2.21	0.57
25:YA:2233:U:H2'	25:YA:2234:G:C8	2.39	0.57
4:XD:156:GLU:O	4:XD:160:GLN:HG3	2.03	0.57
48:R2:15:LYS:H	48:R2:67:LYS:NZ	2.02	0.57
48:R2:21:LEU:O	48:R2:25:VAL:HG23	2.04	0.57
47:R1:81:LYS:H	47:R1:81:LYS:HE2	1.62	0.57
11:QK:32:ILE:O	11:QK:40:ILE:HG12	2.04	0.57
33:YN:14:VAL:HG12	33:YN:15:LEU:H	1.69	0.57
27:YD:35:LYS:HG2	27:YD:64:ILE:CA	2.34	0.57
35:RP:59:LEU:HA	35:RP:61:ARG:CZ	2.35	0.57
28:YE:63:LEU:HD12	28:YE:65:GLY:H	1.69	0.57
50:R4:37:SER:HB3	50:R4:42:PHE:CE1	2.38	0.57
40:RU:92:ARG:C	40:RU:94:ASN:H	2.05	0.57
7:XG:62:PHE:HA	7:XG:124:LEU:CD2	2.27	0.57
27:RD:25:THR:HG21	27:RD:81:ALA:HB1	1.86	0.57
51:R5:55:ARG:NH1	51:R5:58:LEU:HD11	2.19	0.57
25:YA:747:U:C4	51:Y5:2:ALA:N	2.73	0.57
25:RA:747:U:C4	51:R5:2:ALA:N	2.72	0.57
13:QM:7:VAL:CG1	30:RG:115:ARG:HH12	2.17	0.57
30:YG:63:ILE:HD11	30:YG:102:PHE:HE2	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:Y0:10:THR:HG22	46:Y0:12:ASN:H	1.70	0.57
33:YN:114:ARG:O	33:YN:115:ARG:HB3	2.03	0.57
11:XK:21:ILE:N	11:XK:21:ILE:HD12	2.19	0.57
34:YO:71:ARG:HH11	34:YO:71:ARG:HG3	1.69	0.57
1:XA:674:G:H2'	1:XA:675:A:C8	2.38	0.57
49:Y3:4:LEU:O	49:Y3:36:VAL:HA	2.04	0.57
1:QA:1080:A:H5''	5:QE:16:THR:HG21	1.86	0.57
40:YU:24:TYR:HE1	40:YU:39:LEU:HD23	1.70	0.57
1:QA:920:U:H2'	1:QA:921:U:C6	2.40	0.57
1:XA:1414:U:H2'	1:XA:1415:G:H8	1.69	0.57
1:QA:10:A:H2'	1:QA:11:G:H8	1.70	0.57
4:QD:100:ARG:HH22	4:QD:137:SER:HB3	1.70	0.57
1:XA:1175:G:H2'	1:XA:1176:A:C8	2.40	0.57
5:QE:153:LYS:NZ	5:QE:153:LYS:HB2	2.18	0.57
25:RA:479:A:N3	25:RA:481:G:H5''	2.19	0.57
47:Y1:86:SER:H	47:Y1:87:PRO:CD	2.16	0.57
2:QB:111:ARG:NE	2:QB:111:ARG:HA	2.19	0.57
25:YA:593:G:O2'	54:Y8:61:LEU:HD13	2.04	0.57
1:XA:1313:U:OP2	50:Y4:67:TYR:OH	2.13	0.57
13:XM:81:LEU:HB3	13:XM:89:GLY:CA	2.34	0.57
3:QC:181:ASN:HD22	3:QC:204:LEU:HB2	1.68	0.57
33:YN:14:VAL:HG12	33:YN:15:LEU:N	2.18	0.57
13:QM:82:MET:O	13:QM:84:ILE:N	2.38	0.57
19:QS:65:ASN:N	19:QS:65:ASN:ND2	2.51	0.57
13:XM:4:ILE:HG22	13:XM:5:ALA:N	2.20	0.57
2:QB:12:GLU:O	2:QB:16:HIS:ND1	2.36	0.57
3:QC:57:ILE:HG23	3:QC:64:VAL:HG13	1.86	0.57
1:XA:1432:G:OP1	39:YT:107:ASP:HB2	2.04	0.57
37:YR:79:LEU:HD23	37:YR:79:LEU:C	2.23	0.57
50:Y4:37:SER:HB3	50:Y4:42:PHE:CE1	2.38	0.57
37:RR:63:ARG:HG3	37:RR:63:ARG:HH11	1.68	0.57
34:YO:20:MET:O	34:YO:41:ALA:HB1	2.04	0.57
25:YA:1799:G:O2'	27:YD:270:ILE:HD11	2.04	0.57
31:RH:41:MET:HE1	31:RH:64:LEU:HB3	1.86	0.57
33:RN:35:ARG:O	33:RN:37:LYS:N	2.37	0.57
28:YE:116:VAL:CG2	28:YE:122:PHE:CD2	2.86	0.57
25:RA:2477:C:H2'	55:R9:1:MET:HG3	1.85	0.57
25:RA:2466:C:OP1	55:R9:4:ARG:HB2	2.04	0.57
25:YA:2477:C:H2'	55:Y9:1:MET:HG3	1.86	0.57
1:QA:1224:G:C6	1:QA:1322:C:H1'	2.39	0.57
12:QL:126:LYS:HB2	12:QL:126:LYS:HZ2	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:YF:192:LEU:HD21	29:YF:194:MET:CE	2.35	0.57
11:XK:91:ARG:HH22	18:XR:88:LYS:HZ3	1.50	0.57
11:QK:69:ALA:HB1	11:QK:103:LEU:HD21	1.85	0.57
1:XA:1298:C:OP2	7:XG:114:ARG:NH2	2.37	0.57
28:YE:152:LYS:HG2	33:YN:78:TYR:CE1	2.39	0.57
25:YA:2698:U:H2'	25:YA:2699:C:C6	2.39	0.57
25:YA:1695:G:H1'	27:YD:8:PRO:O	2.04	0.57
28:YE:41:LYS:HA	28:YE:41:LYS:HE2	1.86	0.57
36:RQ:55:VAL:HG22	36:RQ:56:ARG:N	2.18	0.57
6:XF:39:LYS:HD2	6:XF:64:GLN:NE2	2.19	0.57
25:RA:1085:A:O2'	25:RA:1086:A:OP1	2.22	0.57
37:YR:32:GLY:O	37:YR:115:GLU:HA	2.04	0.57
7:XG:121:ALA:O	7:XG:125:MET:N	2.37	0.57
25:YA:993:G:OP1	40:YU:50:ARG:NH2	2.35	0.57
13:XM:84:ILE:HG23	13:XM:85:GLY:N	2.18	0.57
2:XB:77:ALA:CB	2:XB:211:ILE:HG21	2.35	0.57
3:XC:14:ILE:HG12	3:XC:15:THR:N	2.19	0.57
33:YN:133:GLN:O	33:YN:134:ARG:CB	2.53	0.57
28:RE:74:PRO:HG2	28:RE:77:ILE:HG23	1.86	0.57
30:RG:107:LEU:HD11	30:RG:178:PHE:CE1	2.39	0.57
25:RA:997:G:OP1	40:RU:93:LYS:HD3	2.05	0.57
38:YS:106:ARG:O	38:YS:107:GLU:HB2	2.04	0.57
38:YS:26:LEU:CD2	38:YS:87:PHE:HD1	2.17	0.57
30:RG:16:ARG:HB3	30:RG:17:PRO:CD	2.33	0.57
52:R6:6:ARG:O	52:R6:8:LYS:HD2	2.05	0.57
51:Y5:55:ARG:NH1	51:Y5:58:LEU:HD11	2.19	0.57
48:Y2:16:LEU:O	48:Y2:17:SER:HB3	2.04	0.57
25:RA:2404:C:O3'	35:RP:77:ARG:NH2	2.38	0.57
34:RO:20:MET:HG2	34:RO:21:CYS:N	2.20	0.57
34:RO:40:VAL:HG12	34:RO:41:ALA:N	2.19	0.57
10:QJ:22:LYS:HD2	10:QJ:22:LYS:C	2.25	0.57
1:XA:192:U:H4'	20:XT:102:GLY:O	2.03	0.57
33:RN:42:TRP:O	40:RU:64:ARG:NH2	2.35	0.57
7:XG:37:ASN:HD21	9:XI:40:LEU:HD23	1.69	0.57
11:XK:29:ILE:HG13	11:XK:43:SER:O	2.04	0.57
25:YA:704:G:H2'	25:YA:726:G:N2	2.18	0.57
6:QF:99:ALA:O	6:QF:100:ASN:HB2	2.04	0.57
4:XD:196:LEU:O	4:XD:198:VAL:N	2.31	0.57
2:XB:30:ARG:HH21	2:XB:194:PRO:CG	2.17	0.57
30:RG:39:ILE:CG2	30:RG:155:MET:HG3	2.35	0.57
49:R3:22:ALA:O	49:R3:25:ALA:HB3	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:YZ:52:SER:OG	45:YZ:52:SER:O	2.17	0.57
25:YA:2600:A:N7	27:YD:237:GLU:OE2	2.38	0.57
45:YZ:89:PHE:HE1	45:YZ:96:VAL:HG21	1.69	0.57
4:QD:50:ARG:O	4:QD:50:ARG:HD2	2.05	0.57
55:R9:25:VAL:HB	55:R9:34:GLN:HB2	1.86	0.57
31:RH:125:VAL:HA	31:RH:126:PRO:CB	2.29	0.57
31:RH:124:GLU:HB3	31:RH:132:ARG:HG3	1.84	0.57
2:XB:187:LEU:CD1	2:XB:205:ASP:HA	2.33	0.57
28:RE:51:PHE:HD1	28:RE:52:LEU:HG	1.68	0.57
1:QA:1053:G:H2'	1:QA:1199:U:C5	2.39	0.57
33:RN:133:GLN:O	33:RN:134:ARG:CB	2.53	0.57
38:RS:103:GLU:O	38:RS:106:ARG:CG	2.53	0.57
54:R8:53:PRO:CD	54:R8:54:GLU:H	2.15	0.57
30:RG:63:ILE:HD11	30:RG:102:PHE:HE2	1.69	0.57
28:YE:7:VAL:HG11	39:YT:1:MET:HE3	1.85	0.57
54:Y8:46:ARG:O	54:Y8:47:LYS:HB3	2.03	0.57
3:QC:77:ILE:O	3:QC:83:ARG:HB3	2.05	0.57
7:QG:16:LEU:CD1	9:QI:45:ALA:HB2	2.34	0.57
40:YU:52:ARG:NH1	40:YU:52:ARG:HG2	2.18	0.57
31:YH:3:ARG:HA	31:YH:3:ARG:HE	1.69	0.57
1:QA:266:G:O2'	1:QA:267:C:OP2	2.22	0.57
45:YZ:181:GLU:HG2	45:YZ:183:LEU:HG	1.85	0.57
28:RE:102:VAL:HG13	28:RE:172:VAL:CG2	2.34	0.57
19:XS:15:LEU:N	19:XS:15:LEU:HD23	2.19	0.57
1:XA:1226:C:O2'	13:XM:103:THR:O	2.10	0.57
25:YA:2396:G:H4'	47:Y1:30:VAL:HA	1.87	0.57
43:RX:36:LYS:HE3	43:RX:54:VAL:O	2.04	0.57
30:YG:53:LEU:HD23	30:YG:53:LEU:C	2.25	0.57
38:YS:5:THR:HG23	38:YS:8:GLU:OE2	2.05	0.57
1:QA:976:G:H5''	1:QA:1358:U:O2'	2.04	0.57
25:RA:630:G:N2	25:RA:633:A:OP2	2.34	0.57
1:QA:1435:G:H2'	1:QA:1436:U:C6	2.39	0.57
1:QA:15:G:H4'	5:QE:24:ARG:NH1	2.20	0.57
6:QF:39:LYS:HD2	6:QF:64:GLN:NE2	2.19	0.57
36:RQ:22:LYS:HA	45:RZ:78:LYS:HD2	1.86	0.57
20:QT:10:LEU:HG	20:QT:12:ALA:H	1.70	0.57
25:RA:709:U:H2'	25:RA:710:G:C8	2.40	0.57
5:XE:140:ARG:CB	5:XE:140:ARG:HH11	2.17	0.57
5:XE:140:ARG:HB2	5:XE:140:ARG:HH11	1.69	0.57
16:QP:76:GLN:O	16:QP:76:GLN:HG2	2.05	0.57
10:QJ:64:GLU:OE2	10:QJ:66:ARG:HD2	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:QN:44:LEU:C	14:QN:44:LEU:HD12	2.24	0.57
44:YY:94:LYS:HE3	44:YY:101:LYS:HZ3	1.69	0.57
28:RE:63:LEU:HD13	28:RE:65:GLY:H	1.68	0.57
40:RU:96:ALA:O	40:RU:100:VAL:HG23	2.05	0.57
25:RA:2494:G:H2'	25:RA:2495:G:H8	1.69	0.57
54:R8:33:ASN:O	54:R8:34:TRP:C	2.42	0.57
25:RA:2420:C:N4	54:R8:30:ARG:HD2	2.20	0.57
50:Y4:42:PHE:CG	50:Y4:43:TYR:N	2.72	0.57
30:YG:107:LEU:HD11	30:YG:178:PHE:CE1	2.40	0.57
38:YS:67:ARG:CB	38:YS:67:ARG:HH11	2.17	0.57
33:RN:7:LYS:HG2	33:RN:8:GLN:N	2.20	0.57
33:RN:131:GLN:CG	33:RN:132:ALA:N	2.68	0.57
34:RO:96:THR:O	34:RO:97:ARG:HB3	2.03	0.57
25:RA:2232:U:P	47:R1:40:ARG:HH12	2.27	0.57
33:YN:63:THR:HG22	33:YN:66:LYS:NZ	2.20	0.57
7:XG:16:LEU:CD1	9:XI:45:ALA:HB2	2.34	0.57
12:XL:10:LEU:HB3	17:XQ:32:TYR:CE2	2.40	0.57
10:XJ:3:LYS:O	10:XJ:100:THR:HG22	2.04	0.57
48:R2:31:GLU:O	48:R2:35:LEU:HG	2.05	0.57
47:R1:70:VAL:O	47:R1:74:VAL:HG23	2.05	0.57
6:XF:99:ALA:O	6:XF:100:ASN:HB2	2.04	0.57
18:QR:85:LEU:HD23	18:QR:88:LYS:HD2	1.86	0.57
28:YE:102:VAL:HG13	28:YE:172:VAL:CG2	2.34	0.57
48:R2:15:LYS:H	48:R2:67:LYS:CE	2.17	0.57
25:RA:184:C:H2'	25:RA:185:U:C6	2.39	0.57
26:YB:50:G:OP1	38:YS:63:THR:HG23	2.04	0.57
3:QC:90:GLU:O	3:QC:94:LEU:HG	2.05	0.57
1:QA:243:A:H4'	1:QA:244:U:O5'	2.03	0.57
1:QA:1356:G:H2'	1:QA:1357:A:C8	2.39	0.57
1:XA:974:A:OP2	14:XN:41:ARG:HG2	2.05	0.57
31:RH:126:PRO:CG	31:RH:127:GLU:N	2.65	0.57
47:R1:86:SER:H	47:R1:87:PRO:CD	2.16	0.57
44:YY:97:ARG:O	44:YY:97:ARG:HG2	2.05	0.57
27:YD:34:VAL:CG1	27:YD:34:VAL:O	2.51	0.57
29:YF:32:LEU:HD13	29:YF:105:VAL:CG1	2.33	0.57
52:R6:11:LEU:HD23	52:R6:26:ASN:HB3	1.87	0.57
48:R2:17:SER:HB2	48:R2:18:PRO:HA	1.86	0.57
27:YD:25:THR:HG21	27:YD:82:ILE:H	1.70	0.57
1:XA:1069:C:O3'	5:XE:25:ARG:NH1	2.37	0.57
14:QN:13:THR:N	14:QN:14:PRO:CD	2.68	0.57
25:RA:1309:G:H4'	53:R7:7:PRO:HB2	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:76:VAL:HG21	3:QC:103:VAL:CG1	2.34	0.57
49:Y3:31:LEU:O	49:Y3:32:GLN:HB2	2.04	0.57
49:R3:31:LEU:O	49:R3:32:GLN:HB2	2.04	0.57
17:XQ:32:TYR:O	17:XQ:34:LYS:N	2.37	0.57
47:Y1:70:VAL:O	47:Y1:74:VAL:HG23	2.04	0.57
44:YY:21:LYS:HG3	44:YY:22:GLY:H	1.69	0.57
1:QA:1014:A:H4'	19:QS:14:HIS:CD2	2.39	0.57
26:RB:52:A:H62	38:RS:33:LYS:HG3	1.69	0.57
10:XJ:64:GLU:OE2	10:XJ:66:ARG:HD2	2.05	0.57
38:YS:72:ALA:O	38:YS:76:LYS:HG3	2.04	0.57
33:RN:40:PRO:HB3	40:RU:68:ALA:HB2	1.87	0.57
37:RR:32:GLY:O	37:RR:115:GLU:HA	2.04	0.57
5:QE:140:ARG:HH11	5:QE:140:ARG:HB2	1.69	0.57
53:Y7:31:LEU:O	53:Y7:32:LYS:C	2.43	0.57
23:XY:37:1MG:O2'	25:YA:1913:A:N1	2.35	0.57
2:QB:106:LYS:O	2:QB:110:GLN:HG3	2.05	0.57
4:QD:191:ARG:NH1	4:QD:200:GLU:OE1	2.37	0.57
13:QM:69:GLU:O	13:QM:71:ARG:N	2.38	0.57
13:XM:69:GLU:O	13:XM:71:ARG:N	2.38	0.57
13:XM:82:MET:O	13:XM:84:ILE:N	2.38	0.57
27:YD:36:PRO:HB2	27:YD:61:LEU:HG	1.87	0.57
27:YD:69:ARG:C	27:YD:71:ASP:H	2.08	0.57
28:RE:63:LEU:HD12	28:RE:65:GLY:H	1.69	0.57
33:RN:14:VAL:HG12	33:RN:15:LEU:H	1.69	0.57
26:RB:42:C:O4'	30:RG:69:ALA:HB2	2.04	0.57
40:RU:79:PHE:C	40:RU:79:PHE:CD2	2.78	0.57
33:YN:7:LYS:HG2	33:YN:8:GLN:N	2.20	0.57
40:YU:79:PHE:CD2	40:YU:79:PHE:C	2.78	0.57
25:RA:1006:C:H1'	33:RN:106:MET:HE3	1.87	0.57
33:RN:63:THR:HG22	33:RN:66:LYS:NZ	2.20	0.57
52:R6:48:VAL:HG13	52:R6:49:HIS:N	2.20	0.57
35:YP:64:LYS:C	35:YP:66:GLY:N	2.56	0.57
27:YD:25:THR:HG21	27:YD:81:ALA:HB1	1.86	0.57
10:QJ:74:ILE:HD13	10:QJ:74:ILE:N	2.16	0.57
1:QA:1453:G:H8	20:QT:39:LYS:HZ1	1.52	0.57
25:RA:2452:C:O4'	56:Z6:76:PPU:HB2	2.05	0.57
25:RA:2311:A:C1'	30:RG:82:LEU:HD11	2.34	0.57
34:YO:96:THR:O	34:YO:97:ARG:HB3	2.04	0.57
7:QG:113:GLU:HB2	7:QG:119:ARG:CG	2.35	0.57
10:QJ:94:VAL:HG12	10:QJ:95:GLU:N	2.19	0.57
9:QI:17:VAL:CG1	9:QI:81:ILE:HD13	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:XO:26:GLU:CD	15:XO:77:ARG:NH1	2.58	0.57
1:QA:1446:A:O2'	1:QA:1447:G:O5'	2.22	0.57
1:QA:1391:U:H2'	1:QA:1392:G:C8	2.38	0.57
25:RA:1678:G:H22	25:RA:1989:G:H22	1.53	0.57
25:RA:1695:G:H1'	27:RD:8:PRO:O	2.05	0.57
25:YA:1688:U:O2	25:YA:1700:A:H5''	2.05	0.57
4:QD:119:GLN:HG3	4:QD:123:HIS:CD2	2.40	0.57
37:YR:45:ARG:HA	37:YR:95:THR:HG21	1.87	0.57
25:YA:221:A:H4'	25:YA:222:A:O5'	2.05	0.57
27:RD:239:ARG:O	27:RD:240:ALA:HB2	2.05	0.57
28:RE:41:LYS:HA	28:RE:41:LYS:HE2	1.87	0.57
47:R1:89:GLU:O	47:R1:93:GLU:HB2	2.05	0.57
44:RY:89:PHE:O	44:RY:90:LEU:HD13	2.05	0.57
35:YP:59:LEU:HA	35:YP:61:ARG:CZ	2.34	0.57
54:Y8:33:ASN:O	54:Y8:34:TRP:C	2.42	0.57
3:QC:59:ARG:NH2	3:QC:97:LYS:HE3	2.20	0.57
8:QH:84:ARG:NH1	8:QH:86:ILE:HD13	2.11	0.57
5:XE:111:GLU:C	5:XE:113:ALA:H	2.07	0.57
30:YG:60:LEU:O	30:YG:64:THR:HG22	2.05	0.57
14:YN:13:THR:N	14:YN:14:PRO:CD	2.68	0.57
25:RA:102:G:H4'	25:RA:103:A:O5'	2.05	0.57
1:XA:1305:G:OP1	21:XU:2:GLY:HA2	2.03	0.57
11:QK:29:ILE:HG13	11:QK:43:SER:O	2.04	0.57
38:RS:32:LEU:O	38:RS:62:LYS:HE2	2.05	0.57
25:RA:118:A:N3	25:RA:178:G:H1'	2.20	0.57
29:YF:118:ALA:O	29:YF:121:GLY:N	2.33	0.57
16:QP:14:ASN:N	16:QP:15:PRO:CD	2.67	0.57
11:QK:69:ALA:HB1	11:QK:103:LEU:CD2	2.35	0.57
2:QB:30:ARG:HH21	2:QB:194:PRO:CG	2.17	0.57
11:QK:21:ILE:HD12	11:QK:21:ILE:N	2.19	0.57
40:RU:68:ALA:O	40:RU:71:GLN:HB2	2.04	0.57
1:XA:1055:A:H4'	3:XC:161:GLU:OE2	2.05	0.57
14:YN:29:ARG:HG3	14:YN:29:ARG:HH11	1.70	0.57
1:QA:719:C:O2'	18:QR:49:LYS:HB3	2.04	0.57
4:XD:100:ARG:HH22	4:XD:137:SER:HB3	1.70	0.57
16:XP:7:ALA:O	16:XP:9:PHE:CD2	2.58	0.57
33:RN:82:LEU:HD12	33:RN:83:LYS:H	1.70	0.57
19:QS:5:LEU:HD21	50:R4:66:SER:HB2	1.87	0.56
31:YH:84:SER:O	31:YH:133:VAL:O	2.22	0.56
25:RA:2638:G:HO2'	25:RA:2639:A:H8	1.53	0.56
19:XS:9:VAL:O	19:XS:9:VAL:HG23	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:7:PRO:O	3:QC:11:ARG:HG2	2.05	0.56
3:XC:11:ARG:HH21	3:XC:180:ALA:HB3	1.70	0.56
27:RD:35:LYS:CE	27:RD:104:TYR:HB2	2.35	0.56
50:Y4:27:THR:O	50:Y4:28:LYS:HB3	2.04	0.56
25:RA:1266:G:C5	42:RW:15:ARG:NH1	2.72	0.56
36:RQ:80:GLU:OE1	46:R0:7:LEU:HB3	2.05	0.56
13:XM:49:THR:HB	13:XM:52:GLU:HG3	1.86	0.56
39:YT:105:LEU:C	39:YT:107:ASP:H	2.08	0.56
16:XP:21:VAL:HG22	16:XP:34:GLU:O	2.04	0.56
52:Y6:14:THR:O	52:Y6:49:HIS:HA	2.05	0.56
53:Y7:48:LYS:HG2	53:Y7:49:ARG:N	2.19	0.56
33:RN:112:LEU:O	33:RN:114:ARG:O	2.23	0.56
18:QR:57:GLY:O	18:QR:58:LEU:C	2.44	0.56
55:R9:1:MET:HB3	55:R9:4:ARG:CZ	2.35	0.56
33:RN:56:ASN:N	33:RN:125:GLY:O	2.35	0.56
25:RA:1812:A:O2'	27:RD:45:ASN:HB2	2.05	0.56
1:XA:792:A:H4'	1:XA:793:U:O5'	2.04	0.56
15:QO:53:HIS:CE1	15:QO:57:LEU:HD11	2.40	0.56
25:YA:2438:U:O3'	25:YA:2439:A:H3'	2.04	0.56
16:QP:7:ALA:O	16:QP:9:PHE:CD2	2.58	0.56
4:XD:50:ARG:O	4:XD:50:ARG:HD2	2.05	0.56
25:RA:871:U:H4'	36:RQ:69:PHE:CE2	2.39	0.56
7:QG:121:ALA:O	7:QG:125:MET:N	2.37	0.56
45:RZ:111:VAL:HG22	45:RZ:112:ARG:H	1.70	0.56
1:QA:1316:G:N2	1:QA:1319:A:H5''	2.19	0.56
19:QS:5:LEU:CD2	50:R4:67:TYR:CZ	2.88	0.56
19:QS:40:ILE:HG12	19:QS:41:VAL:N	2.20	0.56
27:YD:92:ILE:HD12	27:YD:104:TYR:CD2	2.39	0.56
27:YD:69:ARG:HD3	27:YD:105:ILE:HD11	1.87	0.56
2:QB:77:ALA:CB	2:QB:211:ILE:HG21	2.35	0.56
37:RR:70:LEU:HD13	37:RR:75:LEU:HD11	1.88	0.56
40:YU:83:LEU:HD12	40:YU:113:ALA:HB2	1.86	0.56
48:Y2:17:SER:HB2	48:Y2:18:PRO:HA	1.86	0.56
31:YH:77:LYS:HZ3	31:YH:77:LYS:CB	2.11	0.56
20:QT:47:GLY:C	20:QT:49:ALA:H	2.07	0.56
20:QT:53:LEU:HA	20:QT:56:MET:HB3	1.87	0.56
17:QQ:6:LEU:O	17:QQ:58:GLU:HA	2.05	0.56
21:XU:6:ARG:HH21	21:XU:15:ARG:HE	1.52	0.56
21:XU:7:ARG:O	21:XU:8:THR:HG23	2.05	0.56
8:XH:49:GLU:HG3	8:XH:51:VAL:CG1	2.35	0.56
25:YA:910:A:C5	36:YQ:13:GLN:HG3	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:76:ARG:HD2	4:XD:207:TYR:HE2	1.66	0.56
49:Y3:7:LYS:NZ	49:Y3:32:GLN:HE21	2.03	0.56
2:XB:60:ASP:HB3	2:XB:64:ARG:CZ	2.34	0.56
50:Y4:15:ILE:HG22	50:Y4:20:ASN:HA	1.86	0.56
12:QL:58:VAL:O	12:QL:65:GLU:HA	2.06	0.56
8:QH:119:LEU:HD12	8:QH:124:ALA:HA	1.87	0.56
38:RS:72:ALA:O	38:RS:76:LYS:HG3	2.04	0.56
25:YA:1204:A:H1'	25:YA:1206:G:C8	2.40	0.56
29:RF:24:LEU:HB3	29:RF:115:ALA:HB2	1.87	0.56
7:QG:18:TYR:HD2	7:QG:59:LEU:HD22	1.70	0.56
12:QL:45:PRO:HD3	12:QL:51:ALA:O	2.04	0.56
1:XA:991:U:O4	1:XA:1212:U:O2'	2.18	0.56
1:XA:719:C:C2	18:XR:50:ILE:HD13	2.40	0.56
1:XA:864:A:H5'	5:XE:86:ALA:HB2	1.87	0.56
53:R7:19:ARG:HH11	53:R7:19:ARG:HG2	1.70	0.56
31:YH:125:VAL:HG12	31:YH:126:PRO:CG	2.34	0.56
47:Y1:89:GLU:O	47:Y1:93:GLU:HB2	2.05	0.56
36:RQ:59:ARG:C	36:RQ:60:ARG:CG	2.74	0.56
13:QM:73:GLU:O	13:QM:77:ASN:N	2.33	0.56
25:YA:593:G:H2'	25:YA:594:U:C6	2.41	0.56
2:XB:80:ILE:CG2	2:XB:212:GLN:HA	2.36	0.56
3:XC:105:GLU:HG2	3:XC:106:VAL:N	2.18	0.56
28:RE:78:LEU:HD23	28:RE:79:ARG:HD2	1.86	0.56
29:RF:46:ARG:NH1	29:RF:46:ARG:HG2	2.00	0.56
13:QM:84:ILE:CG2	13:QM:85:GLY:N	2.68	0.56
1:QA:963:G:N3	10:QJ:55:LYS:NZ	2.50	0.56
13:QM:4:ILE:HG22	13:QM:5:ALA:N	2.19	0.56
41:RV:38:LEU:HD23	41:RV:39:LEU:N	2.19	0.56
38:YS:103:GLU:O	38:YS:106:ARG:CG	2.52	0.56
54:R8:52:LYS:H	54:R8:53:PRO:HD2	1.66	0.56
48:R2:51:ARG:HA	48:R2:54:LYS:HB2	1.86	0.56
3:QC:59:ARG:HH12	3:QC:97:LYS:HE3	1.70	0.56
52:R6:42:TRP:CD1	52:R6:42:TRP:N	2.73	0.56
52:R6:14:THR:O	52:R6:49:HIS:HA	2.06	0.56
50:Y4:38:LYS:C	50:Y4:40:HIS:N	2.52	0.56
16:XP:4:ILE:HA	16:XP:20:VAL:O	2.05	0.56
35:RP:65:ARG:HH21	54:R8:15:LYS:CB	2.17	0.56
27:YD:183:ARG:HD2	27:YD:270:ILE:HG12	1.88	0.56
30:RG:41:GLN:HB3	30:RG:43:LEU:HD13	1.87	0.56
5:XE:78:HIS:CE1	5:XE:143:ARG:H	2.20	0.56
42:RW:65:LEU:O	42:RW:66:GLU:C	2.43	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:XK:34:ASP:N	11:XK:40:ILE:HD11	2.20	0.56
21:QU:7:ARG:O	21:QU:8:THR:HG23	2.05	0.56
11:XK:32:ILE:O	11:XK:40:ILE:HG12	2.04	0.56
7:XG:42:ILE:O	7:XG:117:ALA:HB2	2.05	0.56
25:RA:2451:A:N6	56:Z6:76:PPU:HE2	2.20	0.56
31:YH:41:MET:HE1	31:YH:64:LEU:HB3	1.87	0.56
28:RE:37:ARG:NE	28:RE:37:ARG:N	2.53	0.56
25:YA:263:C:H2'	25:YA:264:C:O4'	2.04	0.56
29:RF:198:ALA:CA	29:RF:201:VAL:HG12	2.35	0.56
1:XA:1348:U:H4'	9:XI:120:ARG:HD2	1.87	0.56
9:XI:10:ARG:CD	9:XI:105:ASP:HB2	2.35	0.56
35:RP:31:ALA:O	35:RP:32:THR:HG23	2.05	0.56
41:YV:76:LYS:O	41:YV:79:VAL:HG12	2.05	0.56
3:XC:57:ILE:HG23	3:XC:64:VAL:HG13	1.86	0.56
3:XC:59:ARG:HH12	3:XC:97:LYS:HE3	1.70	0.56
7:XG:148:ASN:C	7:XG:150:ALA:H	2.08	0.56
2:XB:55:PHE:HA	2:XB:58:ILE:HB	1.88	0.56
29:RF:192:LEU:HD21	29:RF:194:MET:CE	2.35	0.56
38:YS:32:LEU:O	38:YS:62:LYS:HE2	2.05	0.56
48:Y2:31:GLU:O	48:Y2:35:LEU:HG	2.05	0.56
1:QA:1224:G:O2'	1:QA:1322:C:OP2	2.23	0.56
9:QI:10:ARG:CD	9:QI:105:ASP:HB2	2.35	0.56
20:QT:82:SER:O	20:QT:86:ARG:HB2	2.06	0.56
2:QB:60:ASP:HB3	2:QB:64:ARG:CZ	2.35	0.56
25:YA:83:G:N2	25:YA:103:A:OP2	2.31	0.56
33:YN:56:ASN:N	33:YN:125:GLY:O	2.35	0.56
3:QC:188:LEU:O	3:QC:189:ALA:HB2	2.05	0.56
27:RD:236:GLY:O	27:RD:237:GLU:OE1	2.23	0.56
28:YE:69:LYS:C	28:YE:71:GLY:H	2.08	0.56
31:RH:3:ARG:HA	31:RH:3:ARG:HE	1.69	0.56
1:QA:671:G:H2'	1:QA:672:U:C6	2.40	0.56
49:R3:4:LEU:O	49:R3:36:VAL:HA	2.04	0.56
8:XH:38:ILE:HD12	8:XH:118:VAL:HG12	1.87	0.56
28:RE:152:LYS:HG2	33:RN:78:TYR:CE1	2.40	0.56
1:XA:390:C:O3'	16:XP:28:ARG:NH2	2.36	0.56
43:YX:35:THR:HG22	43:YX:38:GLU:OE1	2.05	0.56
30:YG:39:ILE:CG2	30:YG:155:MET:HG3	2.35	0.56
33:YN:82:LEU:HD12	33:YN:83:LYS:H	1.70	0.56
25:RA:796:C:H2'	25:RA:797:C:C6	2.40	0.56
25:RA:328:U:H4'	44:RY:68:HIS:CD2	2.40	0.56
40:YU:68:ALA:O	40:YU:71:GLN:HB2	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:R7:13:ALA:O	53:R7:17:GLY:HA3	2.05	0.56
39:YT:134:GLU:O	39:YT:135:ALA:HB3	2.05	0.56
1:XA:188:U:H2'	1:XA:189:U:H5''	1.87	0.56
36:YQ:37:LEU:HD21	36:YQ:130:LYS:HE3	1.87	0.56
8:XH:82:HIS:HD2	8:XH:83:ILE:N	2.03	0.56
25:RA:1496:A:H8	25:RA:1577:C:HO2'	1.52	0.56
25:YA:1932:A:H2'	25:YA:1933:G:O4'	2.05	0.56
12:QL:82:VAL:HG23	12:QL:106:ASP:OD2	2.04	0.56
7:XG:18:TYR:HD2	7:XG:59:LEU:HD22	1.70	0.56
8:QH:77:GLU:HG2	8:QH:78:GLN:H	1.70	0.56
4:XD:42:GLN:O	4:XD:42:GLN:HG2	2.05	0.56
1:QA:1231:G:O3'	9:QL:126:SER:OG	2.23	0.56
55:Y9:2:LYS:HD2	55:Y9:33:LYS:O	2.05	0.56
14:QN:25:VAL:N	14:QN:38:GLY:O	2.38	0.56
44:RY:97:ARG:HG2	44:RY:97:ARG:O	2.05	0.56
2:XB:102:LEU:HB3	2:XB:180:LEU:CD1	2.36	0.56
3:XC:7:PRO:O	3:XC:11:ARG:HG2	2.05	0.56
35:YP:115:LEU:HD12	35:YP:116:GLY:N	2.21	0.56
31:RH:77:LYS:HZ3	31:RH:77:LYS:CB	2.03	0.56
36:YQ:79:LEU:CG	36:YQ:79:LEU:O	2.52	0.56
16:QP:4:ILE:HA	16:QP:20:VAL:O	2.05	0.56
10:XJ:22:LYS:HD2	10:XJ:22:LYS:C	2.25	0.56
28:RE:183:LEU:N	28:RE:183:LEU:HD12	2.20	0.56
3:QC:77:ILE:C	3:QC:83:ARG:HB3	2.26	0.56
1:XA:339:C:H5	34:YO:97:ARG:HH12	1.52	0.56
25:YA:1796:U:H2'	25:YA:1797:C:H6	1.70	0.56
15:QO:24:SER:O	15:QO:28:GLN:HG3	2.06	0.56
39:YT:26:ASP:CB	39:YT:91:ARG:HA	2.36	0.56
6:XF:91:VAL:CG1	18:XR:72:ARG:HH12	2.18	0.56
20:XT:82:SER:O	20:XT:86:ARG:HB2	2.05	0.56
34:YO:3:GLN:CB	34:YO:4:PRO:HD2	2.35	0.56
5:QE:82:VAL:CG1	5:QE:83:GLU:N	2.68	0.56
47:R1:53:VAL:HG12	47:R1:54:ALA:N	2.21	0.56
17:QQ:50:LYS:HG3	17:QQ:51:TYR:CE1	2.40	0.56
9:XI:33:PHE:CE2	9:XI:47:LEU:HD21	2.40	0.56
28:RE:174:ASP:CG	28:RE:175:VAL:N	2.58	0.56
1:XA:1219:U:OP1	14:YN:19:ARG:NH2	2.30	0.56
12:QL:18:VAL:O	12:QL:19:ARG:HB2	2.04	0.56
1:QA:1219:U:OP1	14:QN:19:ARG:NH2	2.25	0.56
27:YD:2:ALA:O	27:YD:3:VAL:HB	2.06	0.56
25:YA:330:A:HO2'	25:YA:331:A:H8	1.53	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:QF:97:PHE:CD2	6:QF:97:PHE:C	2.76	0.56
28:YE:32:PRO:O	28:YE:34:VAL:HG13	2.06	0.56
25:YA:99:U:H4'	25:YA:101:G:C5'	2.35	0.56
6:XF:92:LYS:HZ2	6:XF:92:LYS:HB2	1.70	0.56
4:QD:42:GLN:O	4:QD:42:GLN:HG2	2.05	0.56
40:YU:104:GLN:N	40:YU:104:GLN:OE1	2.35	0.56
25:YA:1364:G:N7	47:Y1:2:SER:N	2.52	0.56
55:Y9:25:VAL:HB	55:Y9:34:GLN:HB2	1.87	0.56
38:RS:5:THR:HG23	38:RS:8:GLU:OE2	2.05	0.56
1:XA:1016:A:H2'	1:XA:1017:G:O4'	2.05	0.56
17:XQ:84:LEU:C	17:XQ:86:GLU:H	2.08	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	2.08	0.56
50:Y4:64:GLY:C	50:Y4:66:SER:H	2.08	0.56
28:YE:74:PRO:HG2	28:YE:77:ILE:HG23	1.87	0.56
3:QC:114:PRO:O	3:QC:118:GLN:HG3	2.06	0.56
25:RA:587:C:OP2	35:RP:21:ARG:NH2	2.38	0.56
31:RH:153:LYS:CB	31:RH:154:PRO:CD	2.69	0.56
25:RA:2250:G:C2	36:RQ:82:ARG:HB3	2.40	0.56
36:RQ:79:LEU:O	36:RQ:79:LEU:CG	2.52	0.56
8:XH:7:ALA:HB2	8:XH:85:ARG:HD3	1.87	0.56
51:R5:55:ARG:HD3	51:R5:56:LYS:N	2.21	0.56
27:RD:183:ARG:HD2	27:RD:270:ILE:HG12	1.88	0.56
38:YS:14:VAL:HG13	38:YS:15:ARG:N	2.21	0.56
28:RE:117:MET:HG3	28:RE:117:MET:O	2.06	0.56
28:YE:37:ARG:NE	28:YE:37:ARG:N	2.54	0.56
27:RD:80:ALA:HB3	27:RD:94:LEU:HD13	1.87	0.56
15:QO:76:GLU:C	15:QO:78:TYR:H	2.08	0.56
39:RT:26:ASP:CB	39:RT:91:ARG:HA	2.36	0.56
47:Y1:76:ARG:NH1	47:Y1:76:ARG:HG2	2.20	0.56
37:RR:84:ALA:HB3	37:RR:85:PRO:HD3	1.87	0.56
1:XA:186:C:H5'	20:XT:78:ALA:HB1	1.88	0.56
1:QA:1297:C:O2'	7:QG:114:ARG:NH2	2.39	0.56
15:XO:76:GLU:C	15:XO:78:TYR:H	2.08	0.56
1:QA:501:C:OP1	12:QL:117:ARG:NH2	2.35	0.56
41:RV:1:MET:HE2	41:RV:43:GLU:HG2	1.87	0.56
9:QI:9:ARG:HB2	9:QI:14:VAL:HG22	1.88	0.56
1:QA:372:C:H42	1:QA:389:A:H62	1.53	0.56
25:YA:559:G:H22	40:YU:49:HIS:CE1	2.24	0.56
12:XL:111:LYS:O	12:XL:112:ASP:HB2	2.05	0.56
5:QE:99:GLY:O	5:QE:117:ASP:HA	2.06	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
15:XO:53:HIS:CE1	15:XO:57:LEU:HD11	2.40	0.56
3:XC:90:GLU:O	3:XC:94:LEU:HG	2.05	0.56
1:XA:280:C:C2	17:XQ:38:ARG:HG3	2.40	0.56
17:QQ:84:LEU:C	17:QQ:86:GLU:H	2.08	0.56
54:R8:50:LEU:HD12	54:R8:51:ALA:H	1.70	0.56
10:QJ:24:VAL:HG21	10:QJ:37:PRO:HG3	1.86	0.56
3:QC:6:HIS:CD2	3:QC:7:PRO:HD2	2.41	0.56
3:XC:180:ALA:O	3:XC:181:ASN:HB3	2.06	0.56
27:YD:35:LYS:CE	27:YD:104:TYR:HB2	2.35	0.56
50:R4:41:PRO:O	50:R4:42:PHE:CB	2.54	0.56
29:RF:32:LEU:HD13	29:RF:105:VAL:CG1	2.33	0.56
8:QH:7:ALA:HB2	8:QH:85:ARG:HD3	1.87	0.56
34:RO:19:ILE:O	34:RO:19:ILE:HD13	2.06	0.56
20:QT:94:ALA:O	20:QT:95:ALA:CB	2.54	0.56
30:RG:60:LEU:O	30:RG:64:THR:HG22	2.05	0.56
1:QA:1288:A:N3	1:QA:1352:C:O2'	2.37	0.56
33:YN:112:LEU:O	33:YN:114:ARG:O	2.23	0.56
3:QC:134:ILE:CD1	3:QC:153:VAL:HG21	2.35	0.56
35:RP:14:LYS:O	35:RP:16:ARG:N	2.39	0.56
41:RV:76:LYS:O	41:RV:79:VAL:HG12	2.05	0.56
1:XA:1002:G:H2'	1:XA:1003:G:C8	2.39	0.56
25:YA:395:U:H2'	25:YA:396:G:N7	2.21	0.56
3:XC:188:LEU:O	3:XC:189:ALA:HB2	2.05	0.56
11:XK:21:ILE:HG13	11:XK:30:VAL:HG12	1.86	0.56
18:XR:85:LEU:HD23	18:XR:88:LYS:HD2	1.86	0.56
11:XK:69:ALA:HB1	11:XK:103:LEU:CD2	2.35	0.56
19:XS:17:GLU:HA	19:XS:20:LEU:HD12	1.86	0.56
28:RE:69:LYS:C	28:RE:71:GLY:H	2.09	0.56
33:YN:40:PRO:HB3	40:YU:68:ALA:HB2	1.86	0.56
25:RA:323:G:H2'	29:RF:169:ASN:OD1	2.04	0.56
54:Y8:50:LEU:HD12	54:Y8:51:ALA:H	1.70	0.56
25:RA:1857:G:O2'	25:RA:1885:A:N6	2.37	0.56
32:RI:98:ALA:HB2	32:RI:111:PRO:HB3	1.87	0.56
1:QA:668:G:O2'	15:QO:46:HIS:HB3	2.04	0.56
39:RT:134:GLU:O	39:RT:135:ALA:HB3	2.05	0.56
4:XD:119:GLN:HG3	4:XD:123:HIS:CD2	2.40	0.56
55:R9:2:LYS:HD2	55:R9:33:LYS:O	2.04	0.56
25:YA:451:C:H4'	29:YF:52:LYS:NZ	2.21	0.56
53:Y7:12:ARG:NH2	53:Y7:44:PRO:HB3	2.21	0.56
44:RY:95:LYS:O	44:RY:95:LYS:HE3	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:XM:84:ILE:CG2	13:XM:85:GLY:N	2.68	0.56
13:XM:89:GLY:O	13:XM:92:HIS:HB2	2.06	0.56
25:YA:2636:U:OP1	28:YE:79:ARG:HA	2.06	0.56
10:XJ:35:SER:O	10:XJ:72:VAL:HG13	2.05	0.56
35:YP:59:LEU:HD23	35:YP:59:LEU:O	2.06	0.56
2:XB:178:ARG:HD2	8:XH:71:GLY:C	2.25	0.56
25:YA:2787:C:HO2'	25:YA:2810:A:HO2'	1.53	0.56
35:YP:19:VAL:CG2	35:YP:20:GLY:H	1.98	0.56
14:XN:23:ARG:H	14:XN:33:VAL:HG11	1.71	0.56
52:Y6:11:LEU:HD23	52:Y6:26:ASN:HB3	1.87	0.56
52:Y6:6:ARG:O	52:Y6:8:LYS:HD2	2.05	0.56
7:XG:62:PHE:O	7:XG:66:VAL:HG23	2.06	0.56
2:XB:7:VAL:HG22	2:XB:8:LYS:N	2.21	0.56
25:RA:1454:U:H5'	37:RR:63:ARG:NE	2.12	0.56
34:RO:107:ARG:O	34:RO:112:MET:HE3	2.05	0.56
28:YE:183:LEU:HD12	28:YE:183:LEU:N	2.20	0.56
48:Y2:41:ILE:HD11	48:Y2:44:LEU:CG	2.36	0.56
25:RA:2377:A:H2	38:RS:18:ILE:HD11	1.70	0.56
29:YF:197:ASP:O	29:YF:199:TRP:N	2.38	0.56
30:YG:128:ARG:HG3	30:YG:128:ARG:NH2	2.17	0.56
16:XP:47:ASP:C	16:XP:49:LEU:H	2.09	0.56
13:XM:56:LEU:HD13	13:XM:60:VAL:HG23	1.86	0.56
1:QA:1348:U:C4	1:QA:1374:A:H2	2.23	0.56
5:XE:82:VAL:CG1	5:XE:83:GLU:N	2.68	0.56
4:QD:165:MET:HA	4:QD:165:MET:CE	2.36	0.56
9:QI:33:PHE:CE2	9:QI:47:LEU:HD21	2.40	0.56
25:RA:857:C:OP2	46:R0:77:ARG:NH2	2.39	0.56
19:QS:15:LEU:N	19:QS:15:LEU:HD23	2.20	0.56
25:RA:1678:G:N2	25:RA:1989:G:H22	2.03	0.56
1:QA:1069:C:O2'	5:QE:25:ARG:NH1	2.38	0.56
14:QN:15:LYS:O	14:QN:16:PHE:O	2.24	0.56
25:YA:2469:A:H2	25:YA:2481:G:H21	1.54	0.56
45:RZ:110:GLY:HA2	45:RZ:111:VAL:O	2.05	0.56
28:RE:32:PRO:O	28:RE:34:VAL:HG13	2.06	0.56
32:RI:92:VAL:HG13	32:RI:120:ILE:HG23	1.86	0.56
1:QA:1292:U:OP1	7:QG:41:ARG:NH2	2.39	0.56
53:R7:12:ARG:NH2	53:R7:44:PRO:HB3	2.21	0.56
53:Y7:13:ALA:O	53:Y7:17:GLY:HA3	2.05	0.56
12:XL:79:GLU:HG2	12:XL:79:GLU:O	2.05	0.56
4:XD:110:PHE:CE2	4:XD:148:VAL:HG23	2.41	0.56
41:RV:27:ALA:O	41:RV:28:GLU:O	2.24	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:25:ARG:NH1	4:XD:30:LYS:HG3	2.20	0.56
44:YY:95:LYS:O	44:YY:95:LYS:HE3	2.06	0.56
50:R4:48:ARG:HH12	50:R4:52:THR:HG22	1.71	0.56
19:XS:67:VAL:N	50:Y4:59:PHE:CZ	2.74	0.56
50:Y4:48:ARG:O	50:Y4:50:VAL:N	2.38	0.56
3:QC:45:LYS:HD2	3:QC:46:GLU:HG3	1.87	0.56
25:RA:588:U:H2'	25:RA:589:C:C6	2.40	0.56
13:QM:89:GLY:O	13:QM:92:HIS:HB2	2.06	0.56
3:QC:95:THR:CG2	3:QC:96:GLY:H	2.10	0.56
2:QB:7:VAL:HG22	2:QB:8:LYS:N	2.21	0.56
28:YE:195:LEU:HD12	28:YE:196:VAL:H	1.71	0.56
25:YA:1600:C:H4'	53:Y7:49:ARG:HE	1.69	0.56
3:XC:77:ILE:C	3:XC:83:ARG:HB3	2.26	0.56
29:RF:9:ILE:HD11	29:RF:125:LEU:CG	2.36	0.56
25:RA:2198:A:HO2'	25:RA:2199:A:P	2.29	0.56
49:R3:59:VAL:CG1	49:R3:60:GLU:N	2.69	0.56
8:QH:38:ILE:HD12	8:QH:118:VAL:HG12	1.87	0.56
9:QI:114:TYR:CD2	9:QI:114:TYR:O	2.58	0.56
6:XF:97:PHE:O	18:XR:31:LEU:HD23	2.04	0.56
43:RX:35:THR:HG22	43:RX:38:GLU:OE1	2.05	0.56
5:QE:140:ARG:HH11	5:QE:140:ARG:CB	2.18	0.56
38:RS:5:THR:OG1	38:RS:7:TYR:HB3	2.06	0.56
12:QL:83:VAL:HG22	12:QL:84:LEU:H	1.70	0.56
1:QA:1158:C:H4'	2:QB:133:LYS:HZ1	1.71	0.56
4:QD:110:PHE:CE2	4:QD:148:VAL:HG23	2.41	0.56
6:QF:33:TYR:HE2	6:QF:74:ASP:HB3	1.71	0.56
2:XB:169:LYS:HD3	2:XB:169:LYS:O	2.05	0.56
3:QC:33:LEU:O	3:QC:37:GLN:HG2	2.04	0.56
27:YD:239:ARG:O	27:YD:240:ALA:HB2	2.05	0.56
10:XJ:24:VAL:HG21	10:XJ:37:PRO:HG3	1.86	0.56
13:QM:49:THR:HB	13:QM:52:GLU:HG3	1.87	0.56
30:RG:120:LEU:HB3	30:RG:131:TYR:OH	2.05	0.56
2:QB:102:LEU:HB3	2:QB:180:LEU:CD1	2.36	0.56
40:YU:96:ALA:O	40:YU:100:VAL:HG23	2.05	0.56
36:RQ:12:GLN:OE1	36:RQ:72:LYS:HD2	2.06	0.56
48:R2:50:ILE:CD1	48:R2:51:ARG:N	2.61	0.56
50:Y4:41:PRO:O	50:Y4:42:PHE:CB	2.54	0.56
25:RA:2415:G:H4'	35:RP:66:GLY:C	2.27	0.56
7:XG:20:ASP:HB3	7:XG:23:VAL:HG23	1.88	0.56
29:YF:155:LEU:CD1	29:YF:174:VAL:HG13	2.32	0.56
9:XI:17:VAL:CG1	9:XI:81:ILE:HD13	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:QK:50:TYR:HH	11:QK:59:TYR:HE2	1.54	0.56
25:YA:1287:A:N7	37:YR:107:ASP:HB2	2.20	0.56
4:XD:165:MET:HA	4:XD:165:MET:CE	2.36	0.56
38:YS:5:THR:OG1	38:YS:7:TYR:HB3	2.06	0.56
17:QQ:84:LEU:C	17:QQ:86:GLU:N	2.60	0.56
20:QT:74:LYS:C	20:QT:76:ALA:H	2.09	0.56
10:QJ:89:ASP:C	10:QJ:90:LEU:HD12	2.26	0.56
1:QA:17:U:H2'	1:QA:18:C:C6	2.40	0.56
27:RD:221:VAL:HG22	27:RD:226:MET:HE2	1.88	0.56
7:QG:73:MET:HG2	7:QG:90:GLU:HA	1.87	0.56
10:QJ:35:SER:O	10:QJ:72:VAL:HG13	2.06	0.56
19:XS:65:ASN:N	19:XS:65:ASN:ND2	2.52	0.56
3:XC:114:PRO:O	3:XC:118:GLN:HG3	2.05	0.56
27:RD:69:ARG:C	27:RD:71:ASP:H	2.08	0.56
13:QM:80:ARG:O	13:QM:84:ILE:HB	2.06	0.56
13:XM:8:GLU:OE1	30:YG:115:ARG:CZ	2.53	0.56
28:RE:203:LYS:HE3	28:RE:204:ALA:HB2	1.86	0.56
54:R8:30:ARG:O	54:R8:31:HIS:CB	2.54	0.56
2:XB:217:ARG:HA	2:XB:220:ASP:OD2	2.06	0.56
44:RY:62:GLU:O	44:RY:63:LYS:O	2.24	0.56
52:Y6:48:VAL:HG13	52:Y6:49:HIS:N	2.20	0.56
5:XE:92:LYS:O	5:XE:118:ILE:HD12	2.06	0.56
40:RU:105:VAL:HA	41:RV:44:LYS:HE3	1.88	0.56
8:QH:49:GLU:HG3	8:QH:51:VAL:CG1	2.35	0.56
8:XH:49:GLU:O	8:XH:51:VAL:N	2.39	0.56
29:RF:108:LYS:HZ3	29:RF:108:LYS:HA	1.71	0.56
7:QG:42:ILE:O	7:QG:117:ALA:HB2	2.05	0.56
1:XA:695:A:H61	1:XA:797:C:H1'	1.70	0.56
25:YA:2291:U:H2'	25:YA:2292:C:C6	2.40	0.56
11:QK:41:THR:HG21	11:QK:71:LYS:CB	2.36	0.56
28:YE:117:MET:O	28:YE:117:MET:HG3	2.06	0.56
38:RS:18:ILE:C	38:RS:19:LYS:O	2.44	0.56
35:RP:15:ARG:O	35:RP:17:LYS:N	2.39	0.56
11:QK:125:PHE:N	11:QK:125:PHE:CD1	2.74	0.56
35:YP:14:LYS:O	35:YP:16:ARG:N	2.39	0.56
27:RD:94:LEU:HD22	27:RD:95:LEU:H	1.69	0.56
7:QG:148:ASN:C	7:QG:150:ALA:H	2.08	0.56
16:QP:48:TRP:O	16:QP:49:LEU:HB2	2.06	0.56
34:RO:3:GLN:CB	34:RO:4:PRO:HD2	2.35	0.56
31:RH:59:ARG:HH11	31:RH:59:ARG:CG	2.19	0.56
6:XF:41:GLU:HG2	6:XF:43:LEU:HD11	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:501:C:O3'	12:QL:118:SER:HB2	2.06	0.56
43:RX:65:ARG:HD3	43:RX:65:ARG:H	1.71	0.56
49:Y3:59:VAL:CG1	49:Y3:60:GLU:N	2.69	0.56
36:RQ:37:LEU:HD21	36:RQ:130:LYS:HE3	1.87	0.56
25:RA:1428:C:N4	25:RA:1570:A:OP2	2.33	0.56
14:QN:44:LEU:CD1	14:QN:48:ALA:HB2	2.36	0.55
2:XB:204:ASN:HD22	2:XB:205:ASP:N	2.04	0.55
13:QM:81:LEU:HB3	13:QM:89:GLY:HA2	1.89	0.55
26:RB:42:C:O2	30:RG:92:VAL:HA	2.06	0.55
30:YG:120:LEU:HB3	30:YG:131:TYR:OH	2.05	0.55
7:QG:62:PHE:HA	7:QG:124:LEU:CD2	2.27	0.55
44:YY:48:ALA:H	44:YY:60:PHE:HA	1.71	0.55
44:YY:62:GLU:O	44:YY:63:LYS:O	2.24	0.55
39:RT:105:LEU:C	39:RT:107:ASP:H	2.08	0.55
27:RD:155:LEU:HD23	27:RD:177:LEU:CD2	2.36	0.55
40:YU:105:VAL:HA	41:YV:44:LYS:HE3	1.88	0.55
8:XH:102:ARG:NH1	8:XH:105:ARG:NH2	2.54	0.55
21:QU:6:ARG:HH21	21:QU:15:ARG:HE	1.53	0.55
19:QS:18:LYS:O	19:QS:22:LEU:HD13	2.06	0.55
11:XK:41:THR:HG21	11:XK:71:LYS:CB	2.36	0.55
48:Y2:43:GLN:O	48:Y2:44:LEU:CG	2.54	0.55
3:XC:77:ILE:O	3:XC:83:ARG:HB3	2.05	0.55
29:YF:198:ALA:CA	29:YF:201:VAL:HG12	2.34	0.55
35:YP:15:ARG:O	35:YP:17:LYS:N	2.39	0.55
16:XP:48:TRP:O	16:XP:49:LEU:HB2	2.06	0.55
15:XO:24:SER:O	15:XO:28:GLN:HG3	2.06	0.55
49:R3:7:LYS:NZ	49:R3:32:GLN:HE21	2.03	0.55
45:YZ:125:LEU:HG	45:YZ:164:ALA:HB3	1.87	0.55
10:QJ:26:ALA:HA	10:QJ:29:ARG:NH2	2.21	0.55
12:XL:58:VAL:O	12:XL:65:GLU:HA	2.05	0.55
49:Y3:4:LEU:HD21	49:Y3:39:ASP:OD1	2.06	0.55
25:RA:558:G:OP1	33:RN:111:PRO:HD2	2.06	0.55
12:XL:83:VAL:HG22	12:XL:84:LEU:N	2.21	0.55
30:YG:135:LEU:HD12	30:YG:135:LEU:N	2.21	0.55
12:QL:111:LYS:O	12:QL:112:ASP:HB2	2.05	0.55
1:QA:833:U:H2'	1:QA:834:C:C6	2.42	0.55
32:RI:30:LEU:HB3	32:RI:36:ALA:HB3	1.88	0.55
8:QH:128:GLY:O	8:QH:129:VAL:HG13	2.06	0.55
47:Y1:91:LYS:CG	47:Y1:92:LYS:H	2.15	0.55
44:YY:84:ARG:NH1	44:YY:97:ARG:HB2	2.11	0.55
10:QJ:6:ILE:CG2	10:QJ:98:ILE:HG13	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:XS:40:ILE:HG12	19:XS:41:VAL:N	2.20	0.55
3:QC:180:ALA:O	3:QC:181:ASN:HB3	2.06	0.55
2:XB:68:ILE:HD12	2:XB:68:ILE:N	2.21	0.55
3:XC:45:LYS:HD2	3:XC:46:GLU:HG3	1.87	0.55
27:RD:31:LYS:O	27:RD:35:LYS:O	2.24	0.55
27:RD:35:LYS:NZ	27:RD:64:ILE:O	2.32	0.55
2:XB:178:ARG:HH21	8:XH:74:PRO:CB	2.07	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
36:YQ:12:GLN:OE1	36:YQ:72:LYS:HD2	2.06	0.55
8:QH:19:VAL:O	8:QH:20:TYR:HB2	2.05	0.55
16:QP:59:TRP:CE3	16:QP:59:TRP:HA	2.42	0.55
2:XB:96:ARG:H	2:XB:96:ARG:CD	2.16	0.55
35:RP:39:LYS:CA	35:RP:45:LEU:CD1	2.80	0.55
38:RS:14:VAL:HG13	38:RS:15:ARG:N	2.21	0.55
5:QE:126:ARG:HG3	5:QE:126:ARG:NH1	2.19	0.55
18:XR:57:GLY:O	18:XR:58:LEU:C	2.43	0.55
25:YA:565:C:H2'	25:YA:566:U:O4'	2.06	0.55
49:Y3:35:ARG:HB3	49:Y3:37:LEU:CD2	2.37	0.55
3:XC:59:ARG:NH2	3:XC:97:LYS:HE3	2.20	0.55
49:Y3:8:LEU:HD22	49:Y3:31:LEU:CD2	2.37	0.55
1:XA:452:A:H4'	16:XP:72:ARG:NH2	2.21	0.55
42:YW:1:MET:C	42:YW:64:MET:HE1	2.27	0.55
28:YE:174:ASP:CG	28:YE:175:VAL:N	2.58	0.55
10:XJ:26:ALA:HA	10:XJ:29:ARG:NH2	2.21	0.55
42:YW:20:VAL:C	42:YW:22:ASP:N	2.60	0.55
16:XP:53:VAL:HG23	16:XP:54:GLU:H	1.71	0.55
48:Y2:15:LYS:H	48:Y2:67:LYS:NZ	2.02	0.55
45:YZ:121:HIS:ND1	45:YZ:123:ASP:O	2.39	0.55
32:RI:116:LEU:O	32:RI:118:LYS:N	2.39	0.55
10:XJ:89:ASP:C	10:XJ:90:LEU:HD12	2.26	0.55
25:RA:2361:A:O5'	54:R8:27:THR:OG1	2.24	0.55
33:YN:101:HIS:C	33:YN:101:HIS:CD2	2.79	0.55
2:QB:46:LYS:HA	2:QB:49:GLU:OE1	2.05	0.55
25:YA:612:G:H2'	25:YA:613:U:O2	2.06	0.55
8:XH:77:GLU:HG2	8:XH:78:GLN:H	1.71	0.55
25:YA:1464:C:HO2'	25:YA:1528:A:H8	1.53	0.55
4:XD:28:SER:CB	4:XD:29:PRO:CD	2.84	0.55
44:RY:95:LYS:NZ	44:RY:95:LYS:HB2	2.21	0.55
44:YY:89:PHE:O	44:YY:90:LEU:HD13	2.05	0.55
3:XC:6:HIS:CD2	3:XC:7:PRO:HD2	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:69:ARG:HD3	27:RD:105:ILE:HD11	1.87	0.55
50:R4:9:LEU:H	50:R4:27:THR:HG22	1.71	0.55
2:QB:204:ASN:HD22	2:QB:205:ASP:N	2.04	0.55
40:YU:73:GLY:O	40:YU:74:LEU:HB3	2.07	0.55
41:RV:49:THR:CB	41:RV:50:PRO:HD2	2.25	0.55
36:RQ:63:LYS:HD2	45:RZ:175:VAL:HG21	1.88	0.55
39:YT:107:ASP:O	39:YT:111:ARG:NH1	2.39	0.55
17:XQ:6:LEU:O	17:XQ:58:GLU:HA	2.05	0.55
38:YS:59:LYS:CG	38:YS:60:GLY:H	2.11	0.55
5:QE:144:THR:O	5:QE:148:VAL:HG23	2.06	0.55
5:XE:144:THR:O	5:XE:148:VAL:HG23	2.06	0.55
21:XU:6:ARG:O	21:XU:8:THR:N	2.39	0.55
25:YA:67:U:N3	25:YA:74:A:H2	1.98	0.55
19:XS:18:LYS:O	19:XS:22:LEU:HD13	2.06	0.55
1:XA:1129:C:H4'	1:XA:1130:A:H5'	1.88	0.55
35:YP:39:LYS:N	35:YP:45:LEU:HD11	2.21	0.55
35:RP:13:ASN:C	35:RP:15:ARG:N	2.54	0.55
1:XA:458:C:H2'	1:XA:464:G:H8	1.70	0.55
15:QO:65:ARG:NH1	15:QO:65:ARG:HB2	2.20	0.55
11:XK:20:TYR:HB2	11:XK:31:THR:O	2.06	0.55
28:RE:26:ILE:C	28:RE:26:ILE:HD13	2.26	0.55
16:QP:53:VAL:HG23	16:QP:54:GLU:H	1.70	0.55
9:QI:128:ARG:NH2	22:QV:35:A:OP2	2.39	0.55
1:QA:966:G:O2'	9:QI:127:LYS:O	2.24	0.55
25:RA:1771:C:HO2'	25:RA:1786:A:H8	1.54	0.55
27:YD:221:VAL:HG22	27:YD:226:MET:HE2	1.88	0.55
20:XT:94:ALA:O	20:XT:95:ALA:CB	2.54	0.55
30:YG:180:PHE:C	30:YG:182:LYS:H	2.09	0.55
36:YQ:25:ASP:N	36:YQ:102:VAL:HG23	2.22	0.55
25:RA:1264:G:H3'	25:RA:1265:A:H5''	1.87	0.55
25:YA:278:A:O2'	25:YA:279:C:O4'	2.25	0.55
8:XH:128:GLY:O	8:XH:129:VAL:HG13	2.06	0.55
20:XT:43:LEU:HA	20:XT:46:GLU:HB3	1.88	0.55
25:RA:666:G:H4'	35:RP:49:ARG:NH1	2.21	0.55
28:RE:4:ILE:HD13	28:RE:5:LEU:H	1.71	0.55
3:XC:112:SER:OG	3:XC:115:LEU:HG	2.06	0.55
27:RD:36:PRO:HB2	27:RD:61:LEU:HG	1.87	0.55
28:RE:14:ILE:HD11	39:RT:14:TYR:CZ	2.42	0.55
42:YW:14:PRO:HG2	42:YW:78:GLU:OE2	2.07	0.55
40:YU:92:ARG:NH1	41:YV:11:GLN:HB2	2.22	0.55
2:QB:217:ARG:HA	2:QB:220:ASP:OD2	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:76:C:O2'	48:Y2:62:THR:HG21	2.06	0.55
42:YW:65:LEU:O	42:YW:66:GLU:C	2.43	0.55
33:YN:131:GLN:CG	33:YN:132:ALA:N	2.68	0.55
35:YP:31:ALA:O	35:YP:32:THR:HG23	2.05	0.55
16:QP:47:ASP:C	16:QP:49:LEU:H	2.09	0.55
25:YA:1903:G:OP1	27:YD:241:PRO:HG2	2.07	0.55
54:R8:63:PRO:O	54:R8:64:TYR:HB2	2.07	0.55
7:XG:50:ILE:CB	7:XG:58:PRO:HB3	2.37	0.55
44:RY:21:LYS:HG3	44:RY:22:GLY:H	1.69	0.55
1:XA:1399:C:C2	1:XA:1502:A:N6	2.74	0.55
25:YA:807:U:OP2	35:YP:41:ARG:NH1	2.39	0.55
25:RA:898:C:H2'	25:RA:899:A:H5'	1.88	0.55
1:QA:826:C:H2'	1:QA:827:U:O2	2.06	0.55
2:QB:169:LYS:O	2:QB:169:LYS:HD3	2.05	0.55
8:QH:82:HIS:HD2	8:QH:83:ILE:N	2.03	0.55
2:XB:46:LYS:HA	2:XB:49:GLU:OE1	2.05	0.55
28:YE:3:GLY:HA3	28:YE:81:ILE:HD12	1.88	0.55
27:YD:43:ARG:CB	27:YD:54:ARG:HB2	2.37	0.55
3:QC:112:SER:OG	3:QC:115:LEU:HG	2.06	0.55
25:RA:587:C:H4'	25:RA:588:U:O5'	2.06	0.55
11:QK:34:ASP:N	11:QK:40:ILE:HD11	2.20	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
3:QC:20:SER:CB	3:QC:40:ARG:HH22	2.14	0.55
44:YY:61:ILE:HG23	44:YY:62:GLU:H	1.71	0.55
52:Y6:42:TRP:CD1	52:Y6:42:TRP:N	2.74	0.55
20:XT:53:LEU:HA	20:XT:56:MET:HB3	1.87	0.55
8:QH:49:GLU:O	8:QH:51:VAL:N	2.39	0.55
36:YQ:64:ILE:HA	36:YQ:106:VAL:CG1	2.33	0.55
29:RF:28:ILE:HD12	29:RF:28:ILE:O	2.06	0.55
25:RA:2848:G:O2'	25:RA:2849:U:OP2	2.20	0.55
11:XK:125:PHE:HD1	11:XK:125:PHE:H	1.54	0.55
9:XI:82:ALA:O	9:XI:86:VAL:HB	2.06	0.55
25:YA:2009:G:OP1	42:YW:41:LYS:HE2	2.07	0.55
37:YR:84:ALA:HB3	37:YR:85:PRO:HD3	1.88	0.55
27:RD:118:VAL:HG22	27:RD:119:ALA:H	1.72	0.55
17:XQ:50:LYS:HG3	17:XQ:51:TYR:CE1	2.41	0.55
49:R3:4:LEU:HD21	49:R3:39:ASP:OD1	2.06	0.55
28:RE:67:PHE:O	28:RE:69:LYS:N	2.39	0.55
40:RU:27:LEU:O	40:RU:29:SER:N	2.40	0.55
1:XA:791:G:H2'	1:XA:792:A:H5'	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:542:G:OP1	4:XD:10:ARG:NH2	2.33	0.55
25:RA:1858:G:O2'	25:RA:1884:A:N6	2.39	0.55
25:YA:848:G:H2'	25:YA:849:A:C8	2.42	0.55
1:XA:1211:U:H4'	1:XA:1213:A:H1'	1.88	0.55
34:RO:79:PHE:HD2	39:RT:72:VAL:HG22	1.72	0.55
20:XT:74:LYS:C	20:XT:76:ALA:H	2.10	0.55
25:RA:1329:U:H5''	25:RA:1330:C:H5	1.71	0.55
25:RA:1338:G:N7	43:RX:62:LYS:NZ	2.50	0.55
25:YA:1062:G:H2'	25:YA:1063:G:C8	2.42	0.55
5:XE:99:GLY:O	5:XE:117:ASP:HA	2.06	0.55
42:RW:88:ARG:HB3	42:RW:92:ARG:HB3	1.88	0.55
41:YV:29:PRO:HA	41:YV:61:VAL:CG2	2.37	0.55
14:QN:25:VAL:HG23	14:QN:38:GLY:C	2.21	0.55
44:YY:91:GLU:HG3	44:YY:92:ASN:H	1.72	0.55
19:QS:7:LYS:HG3	19:QS:8:GLY:N	2.22	0.55
25:RA:593:G:H2'	25:RA:594:U:C6	2.42	0.55
35:YP:49:ARG:NE	54:Y8:59:LYS:HG2	2.22	0.55
28:YE:4:ILE:HD13	28:YE:5:LEU:H	1.71	0.55
28:YE:20:ALA:O	28:YE:21:VAL:CG2	2.49	0.55
33:YN:44:PRO:HG2	33:YN:45:ASN:H	1.71	0.55
2:XB:214:ILE:HA	2:XB:217:ARG:NH2	2.22	0.55
16:XP:59:TRP:HA	16:XP:59:TRP:CE3	2.42	0.55
39:RT:6:LEU:O	39:RT:7:ILE:C	2.44	0.55
7:QG:20:ASP:HB3	7:QG:23:VAL:HG23	1.88	0.55
35:RP:88:LEU:C	35:RP:90:ARG:N	2.60	0.55
30:RG:114:ILE:HD11	30:RG:140:ILE:HD12	1.89	0.55
2:XB:142:LEU:HD23	2:XB:142:LEU:C	2.27	0.55
7:QG:46:ALA:HB2	7:QG:117:ALA:HB1	1.88	0.55
11:XK:125:PHE:N	11:XK:125:PHE:CD1	2.74	0.55
28:RE:195:LEU:HD12	28:RE:196:VAL:H	1.71	0.55
38:YS:111:GLU:HA	38:YS:111:GLU:OE1	2.07	0.55
11:QK:125:PHE:H	11:QK:125:PHE:HD1	1.54	0.55
9:QI:82:ALA:O	9:QI:86:VAL:HB	2.07	0.55
29:RF:129:PHE:O	29:RF:130:ALA:CB	2.55	0.55
29:RF:118:ALA:O	29:RF:121:GLY:N	2.33	0.55
42:RW:1:MET:C	42:RW:64:MET:HE1	2.27	0.55
3:XC:188:LEU:N	3:XC:188:LEU:HD22	2.22	0.55
28:YE:26:ILE:HD13	28:YE:26:ILE:C	2.26	0.55
25:RA:1794:U:H2'	25:RA:1795:C:C6	2.41	0.55
25:RA:1043:C:H42	25:RA:1112:G:H1	1.54	0.55
1:QA:1118:C:OP1	9:QI:9:ARG:HD3	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:851:U:H1'	49:Y3:46:ASN:HD21	1.71	0.55
1:QA:420:U:H4'	1:QA:421:U:H5	1.71	0.55
1:QA:980:C:H5'	1:QA:981:U:OP2	2.07	0.55
25:RA:1149:G:H2'	25:RA:1150:C:C6	2.42	0.55
25:YA:1416:G:H2'	25:YA:1417:C:C6	2.41	0.55
6:XF:33:TYR:HE2	6:XF:74:ASP:HB3	1.71	0.55
40:RU:104:GLN:N	40:RU:104:GLN:OE1	2.35	0.55
36:RQ:25:ASP:N	36:RQ:102:VAL:HG23	2.21	0.55
7:XG:73:MET:HG2	7:XG:90:GLU:HA	1.88	0.55
1:QA:6:G:H4'	1:QA:298:A:H4'	1.88	0.55
4:XD:31:CYS:O	4:XD:32:ALA:HB3	2.07	0.55
25:RA:270(T):G:C5'	47:R1:97:LEU:HD22	2.36	0.55
19:QS:41:VAL:CB	19:QS:42:PRO:CA	2.76	0.55
40:YU:6:THR:O	40:YU:9:VAL:HG23	2.07	0.55
25:YA:607:U:OP1	29:YF:102:PRO:HA	2.06	0.55
13:XM:81:LEU:HB3	13:XM:89:GLY:HA2	1.88	0.55
25:RA:2313:C:H2'	25:RA:2314:C:C6	2.41	0.55
38:YS:107:GLU:N	38:YS:110:LEU:HD11	2.22	0.55
8:QH:23:SER:HB2	8:QH:61:VAL:O	2.07	0.55
52:R6:20:ASN:CG	52:R6:21:TYR:H	2.09	0.55
4:XD:94:LEU:CD1	4:XD:94:LEU:H	2.08	0.55
27:RD:28:GLU:O	27:RD:29:PRO:C	2.45	0.55
35:RP:2:LYS:O	35:RP:5:ASP:HB2	2.06	0.55
5:QE:7:GLU:HG2	5:QE:112:LEU:HD22	1.88	0.55
29:YF:28:ILE:O	29:YF:28:ILE:HD12	2.06	0.55
10:XJ:4:ILE:CB	10:XJ:74:ILE:HD11	2.36	0.55
38:RS:36:TYR:HD2	38:RS:52:SER:CB	2.18	0.55
27:YD:94:LEU:HD22	27:YD:95:LEU:H	1.69	0.55
2:XB:41:ILE:HD12	2:XB:41:ILE:N	2.22	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
34:YO:4:PRO:O	34:YO:5:GLN:HB2	2.06	0.55
15:XO:65:ARG:NH1	15:XO:65:ARG:HB2	2.20	0.55
42:YW:20:VAL:C	42:YW:22:ASP:H	2.10	0.55
34:RO:68:GLU:HA	34:RO:78:ARG:HB3	1.89	0.55
17:QQ:62:SER:HB3	17:QQ:72:ARG:HH21	1.72	0.55
17:XQ:84:LEU:C	17:XQ:86:GLU:N	2.59	0.55
9:XI:126:SER:O	9:XI:128:ARG:N	2.35	0.55
4:QD:126:ILE:HG22	4:QD:127:THR:N	2.22	0.55
4:XD:126:ILE:HG22	4:XD:127:THR:N	2.22	0.55
34:RO:1:MET:HE2	34:RO:67:LYS:HG2	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RI:31:LEU:HD21	32:RI:38:LEU:HG	1.88	0.55
33:YN:109:LYS:N	33:YN:109:LYS:HD2	2.22	0.55
34:YO:79:PHE:HD2	39:YT:72:VAL:HG22	1.72	0.55
44:YY:95:LYS:HA	44:YY:101:LYS:H	1.72	0.55
50:R4:65:ASP:O	50:R4:66:SER:HB3	2.07	0.55
28:RE:3:GLY:HA3	28:RE:81:ILE:HD12	1.88	0.55
28:YE:53:PRO:O	28:YE:74:PRO:HA	2.07	0.55
28:YE:21:VAL:HG23	28:YE:22:PRO:HD3	1.89	0.55
50:Y4:9:LEU:H	50:Y4:27:THR:HG22	1.71	0.55
40:RU:74:LEU:HD13	40:RU:79:PHE:HB2	1.89	0.55
40:RU:92:ARG:NH1	41:RV:11:GLN:HB2	2.22	0.55
40:YU:58:ARG:O	40:YU:62:ILE:HG13	2.06	0.55
8:XH:23:SER:HB2	8:XH:61:VAL:O	2.07	0.55
51:Y5:55:ARG:HD3	51:Y5:56:LYS:N	2.21	0.55
25:YA:2445:G:OP1	29:YF:74:ARG:NH2	2.40	0.55
10:QJ:32:ALA:O	10:QJ:33:GLN:O	2.25	0.55
44:RY:48:ALA:H	44:RY:60:PHE:HA	1.72	0.55
8:XH:102:ARG:NH1	8:XH:105:ARG:NH1	2.55	0.55
48:R2:41:ILE:HD11	48:R2:44:LEU:CG	2.36	0.55
25:YA:1309:G:OP1	53:Y7:9:ARG:HD3	2.06	0.55
38:RS:13:ARG:O	38:RS:13:ARG:HD2	2.06	0.55
18:XR:58:LEU:H	18:XR:58:LEU:HD12	1.72	0.55
10:XJ:16:LEU:O	10:XJ:16:LEU:HD13	2.07	0.55
10:QJ:16:LEU:O	10:QJ:16:LEU:HD13	2.07	0.55
30:RG:3:LEU:HD12	30:RG:4:ASP:N	2.19	0.55
25:RA:2023:G:H5'	25:RA:2617:C:H4'	1.87	0.55
1:XA:1226:C:OP2	13:XM:103:THR:OG1	2.20	0.55
28:YE:67:PHE:O	28:YE:69:LYS:N	2.39	0.55
39:YT:16:ARG:HG2	39:YT:18:ASP:OD1	2.06	0.55
4:XD:10:ARG:HH11	4:XD:10:ARG:HG3	1.72	0.55
9:XI:128:ARG:NH2	22:XV:35:A:OP2	2.40	0.55
26:RB:50:G:OP1	38:RS:63:THR:HG23	2.07	0.55
25:RA:1782:C:H1'	25:RA:2609:U:H5''	1.89	0.55
1:QA:522:C:H41	12:QL:53:ARG:HH22	1.54	0.55
25:YA:617:G:OP1	29:YF:40:GLN:NE2	2.39	0.55
39:YT:123:GLN:O	39:YT:125:ARG:N	2.40	0.55
6:XF:52:ILE:O	6:XF:53:ALA:HB3	2.07	0.55
1:QA:652:U:H1'	1:QA:653:A:H2	1.71	0.55
25:YA:2656:U:H3	25:YA:2665:A:H2	1.55	0.55
33:RN:109:LYS:HD2	33:RN:109:LYS:N	2.22	0.55
53:Y7:19:ARG:HH11	53:Y7:19:ARG:HG2	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:YF:24:LEU:HB3	29:YF:115:ALA:HB2	1.87	0.55
42:YW:88:ARG:HB3	42:YW:92:ARG:HB3	1.88	0.55
44:YY:95:LYS:CB	44:YY:100:ALA:HA	2.13	0.55
1:QA:1266:G:N2	1:QA:1269:A:OP2	2.30	0.55
13:XM:80:ARG:O	13:XM:84:ILE:HB	2.06	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
50:Y4:71:ARG:CG	50:Y4:71:ARG:NH1	2.61	0.55
2:XB:187:LEU:HD22	2:XB:201:ILE:O	2.07	0.55
2:XB:16:HIS:CE1	2:XB:209:ARG:HH21	2.25	0.55
28:RE:21:VAL:HG23	28:RE:22:PRO:HD3	1.89	0.55
40:RU:73:GLY:O	40:RU:74:LEU:HB3	2.07	0.55
38:RS:74:ALA:HB1	38:RS:107:GLU:HB3	1.89	0.55
26:RB:55:U:C5'	30:RG:28:VAL:HG21	2.36	0.55
16:XP:21:VAL:O	16:XP:33:ILE:N	2.39	0.55
5:QE:92:LYS:O	5:QE:118:ILE:HD12	2.06	0.55
34:YO:19:ILE:HD13	34:YO:19:ILE:O	2.06	0.55
34:YO:20:MET:HG2	34:YO:21:CYS:N	2.20	0.55
20:XT:47:GLY:C	20:XT:49:ALA:H	2.08	0.55
5:XE:7:GLU:HG2	5:XE:112:LEU:HD22	1.88	0.55
38:YS:18:ILE:C	38:YS:19:LYS:O	2.44	0.55
35:RP:39:LYS:N	35:RP:45:LEU:HD11	2.21	0.55
31:RH:12:PRO:O	31:RH:13:LYS:HB2	2.07	0.55
1:XA:1186:G:O3'	9:XI:113:LYS:NZ	2.36	0.55
9:XI:45:ALA:O	9:XI:48:GLU:HG2	2.07	0.55
9:QI:40:LEU:HD11	9:QI:70:LYS:CG	2.37	0.55
15:QO:29:VAL:HG11	15:QO:67:LEU:HD21	1.89	0.55
48:Y2:31:GLU:HB2	48:Y2:53:LEU:HD11	1.89	0.55
25:YA:2724:C:OP1	28:YE:118:LYS:NZ	2.34	0.55
25:YA:2349:G:OP2	54:Y8:42:ARG:HD3	2.07	0.55
3:QC:188:LEU:HD22	3:QC:188:LEU:N	2.21	0.55
3:XC:107:GLN:CD	3:XC:107:GLN:N	2.61	0.55
42:YW:25:ARG:HH11	42:YW:25:ARG:CB	2.20	0.55
25:YA:389:G:N1	35:YP:71:VAL:HG12	2.21	0.55
27:RD:2:ALA:O	27:RD:3:VAL:HB	2.06	0.55
6:XF:92:LYS:HB2	6:XF:92:LYS:NZ	2.22	0.55
25:RA:1264:G:H5'	51:R5:11:THR:HG21	1.89	0.55
1:XA:1301:U:H3'	1:XA:1302:U:H5'	1.87	0.55
25:YA:207:A:H2'	25:YA:208:C:O4'	2.06	0.55
37:RR:12:ARG:HG3	37:RR:12:ARG:HH11	1.71	0.55
36:YQ:21:THR:O	36:YQ:22:LYS:O	2.25	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:QL:79:GLU:HG2	12:QL:79:GLU:O	2.06	0.55
25:RA:922:U:H2'	25:RA:923:C:C6	2.42	0.55
39:YT:29:ARG:HB2	39:YT:29:ARG:HH11	1.72	0.55
29:RF:147:GLY:O	29:RF:148:LEU:HD23	2.07	0.55
14:QN:22:THR:HB	14:QN:33:VAL:HG11	1.89	0.55
47:Y1:83:GLU:OE1	47:Y1:85:LEU:HD23	2.07	0.55
25:YA:242:G:H5''	54:Y8:3:LYS:HE3	1.89	0.55
28:YE:54:GLN:NE2	28:YE:54:GLN:N	2.55	0.55
3:QC:11:ARG:HH21	3:QC:180:ALA:HB3	1.70	0.55
2:XB:170:GLU:HA	2:XB:172:ILE:HD12	1.89	0.55
35:RP:59:LEU:HD23	35:RP:59:LEU:O	2.06	0.55
30:YG:114:ILE:HD11	30:YG:140:ILE:HD12	1.89	0.55
26:RB:42:C:H2'	26:RB:43:C:O4'	2.06	0.55
29:YF:32:LEU:HD12	29:YF:36:VAL:HG23	1.89	0.55
36:RQ:79:LEU:HD12	46:R0:5:LYS:HD3	1.89	0.55
52:Y6:20:ASN:CG	52:Y6:21:TYR:H	2.09	0.55
41:RV:99:ILE:CD1	41:RV:99:ILE:N	2.65	0.55
10:XJ:19:SER:O	10:XJ:23:ILE:HG13	2.07	0.55
8:QH:102:ARG:HH11	8:QH:105:ARG:CZ	2.19	0.55
35:YP:2:LYS:O	35:YP:5:ASP:HB2	2.06	0.55
31:RH:8:PRO:O	31:RH:9:ILE:HG23	2.07	0.55
35:YP:88:LEU:C	35:YP:90:ARG:N	2.60	0.55
25:RA:1309:G:OP1	53:R7:9:ARG:HD3	2.07	0.55
38:YS:36:TYR:HD2	38:YS:52:SER:CB	2.18	0.55
30:RG:7:LEU:HD12	30:RG:104:GLU:HA	1.88	0.55
16:XP:43:LYS:HA	16:XP:48:TRP:CB	2.37	0.55
48:R2:47:ASN:ND2	48:R2:47:ASN:N	2.54	0.55
25:YA:2811:G:O6	25:YA:2889:C:N4	2.29	0.55
7:QG:50:ILE:CB	7:QG:58:PRO:HB3	2.37	0.55
42:RW:25:ARG:HH11	42:RW:25:ARG:CB	2.20	0.55
1:QA:939:G:H5''	7:QG:102:ARG:NH2	2.22	0.55
9:QI:66:ARG:NH1	9:QI:66:ARG:HG2	2.22	0.55
1:QA:792:A:H4'	1:QA:793:U:O5'	2.06	0.55
35:RP:24:GLY:O	35:RP:25:SER:HB3	2.06	0.55
33:RN:101:HIS:C	33:RN:101:HIS:CD2	2.79	0.55
1:XA:976:G:H5''	1:XA:1358:U:O2'	2.06	0.55
25:YA:1354:A:OP1	27:YD:38:LYS:HE2	2.07	0.55
21:XU:21:TYR:O	21:XU:22:ARG:HB2	2.06	0.55
1:QA:429:U:H4'	1:QA:430:A:OP1	2.06	0.54
44:YY:95:LYS:HD3	44:YY:95:LYS:N	2.23	0.54
35:RP:49:ARG:NE	54:R8:59:LYS:HG2	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:176:ILE:HG22	28:YE:179:GLU:H	1.72	0.54
40:RU:6:THR:O	40:RU:9:VAL:HG23	2.07	0.54
27:RD:43:ARG:CB	27:RD:54:ARG:HB2	2.37	0.54
35:RP:106:LEU:O	35:RP:107:LYS:HD3	2.07	0.54
25:YA:587:C:OP2	35:YP:21:ARG:NH2	2.40	0.54
40:RU:58:ARG:O	40:RU:62:ILE:HG13	2.07	0.54
41:YV:49:THR:CB	41:YV:50:PRO:CD	2.83	0.54
2:QB:80:ILE:CG2	2:QB:212:GLN:HA	2.35	0.54
2:QB:68:ILE:HD12	2:QB:68:ILE:N	2.21	0.54
25:YA:2250:G:C5	36:YQ:82:ARG:HD2	2.42	0.54
41:RV:49:THR:CB	41:RV:50:PRO:CD	2.83	0.54
54:Y8:30:ARG:O	54:Y8:31:HIS:CB	2.55	0.54
1:XA:1431:C:H2'	1:XA:1432:G:O4'	2.07	0.54
25:YA:1359:A:N6	25:YA:1372:U:C4	2.74	0.54
39:RT:107:ASP:O	39:RT:111:ARG:NH1	2.40	0.54
1:QA:192:U:C4'	20:QT:103:GLY:HA2	2.37	0.54
17:QQ:33:GLY:O	17:QQ:34:LYS:O	2.25	0.54
30:YG:41:GLN:HB3	30:YG:43:LEU:HD13	1.87	0.54
8:XH:102:ARG:HH11	8:XH:105:ARG:CZ	2.19	0.54
1:XA:1320:C:H42	19:XS:36:ARG:HG3	1.70	0.54
53:R7:48:LYS:HG2	53:R7:49:ARG:N	2.19	0.54
25:RA:1007:C:OP1	33:RN:35:ARG:NH1	2.40	0.54
3:XC:43:LEU:O	3:XC:47:LEU:HB3	2.07	0.54
3:QC:134:ILE:HG21	3:QC:168:ALA:HB3	1.89	0.54
2:QB:41:ILE:N	2:QB:41:ILE:HD12	2.21	0.54
9:XI:40:LEU:HD11	9:XI:70:LYS:CG	2.37	0.54
15:QO:77:ARG:HA	15:QO:80:ALA:CB	2.36	0.54
42:RW:70:TYR:N	42:RW:70:TYR:CD2	2.75	0.54
49:R3:8:LEU:HD22	49:R3:31:LEU:CD2	2.36	0.54
7:QG:50:ILE:O	7:QG:50:ILE:HG22	2.07	0.54
43:YX:65:ARG:HD3	43:YX:65:ARG:H	1.70	0.54
32:YI:21:VAL:HG22	32:YI:22:LYS:H	1.71	0.54
42:RW:80:PRO:O	42:RW:100:THR:CG2	2.55	0.54
25:RA:1203:G:H3'	25:RA:1204:A:H5''	1.89	0.54
12:QL:83:VAL:HG22	12:QL:84:LEU:N	2.21	0.54
25:RA:878:A:N6	25:RA:899:A:O2'	2.40	0.54
43:RX:5:TYR:HE2	48:R2:30:ARG:HH11	1.55	0.54
25:RA:2790:A:H2'	25:RA:2791:C:H5''	1.88	0.54
30:RG:135:LEU:N	30:RG:135:LEU:HD12	2.21	0.54
25:RA:1364:G:N7	47:R1:2:SER:N	2.56	0.54
25:RA:1049:C:H2'	25:RA:1050:A:H5''	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:695:G:OP1	25:RA:1380:G:H4'	2.07	0.54
37:YR:12:ARG:HH11	37:YR:12:ARG:HG3	1.71	0.54
20:XT:10:LEU:HG	20:XT:12:ALA:H	1.70	0.54
46:Y0:22:GLY:N	46:Y0:39:ARG:O	2.35	0.54
31:RH:128:PRO:CD	31:RH:129:THR:N	2.71	0.54
36:RQ:58:PHE:O	36:RQ:59:ARG:C	2.43	0.54
4:XD:19:LEU:HD23	4:XD:19:LEU:N	2.23	0.54
27:YD:31:LYS:O	27:YD:35:LYS:O	2.24	0.54
35:RP:84:ASN:ND2	35:RP:115:LEU:HD12	2.22	0.54
35:YP:106:LEU:O	35:YP:107:LYS:HD3	2.07	0.54
40:RU:58:ARG:NH1	40:RU:93:LYS:HE2	2.22	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
34:YO:53:LYS:HD2	34:YO:56:ASP:OD1	2.08	0.54
2:QB:214:ILE:HA	2:QB:217:ARG:NH2	2.22	0.54
10:XJ:32:ALA:O	10:XJ:33:GLN:O	2.25	0.54
27:RD:25:THR:HG21	27:RD:81:ALA:CB	2.38	0.54
39:YT:6:LEU:O	39:YT:7:ILE:C	2.44	0.54
31:YH:26:VAL:CG1	31:YH:27:LYS:N	2.63	0.54
33:RN:44:PRO:HG2	33:RN:45:ASN:H	1.71	0.54
3:QC:43:LEU:O	3:QC:47:LEU:HB3	2.08	0.54
29:RF:197:ASP:O	29:RF:198:ALA:HB3	2.06	0.54
8:XH:97:VAL:CG1	8:XH:98:LYS:N	2.70	0.54
11:QK:125:PHE:N	11:QK:125:PHE:HD1	2.05	0.54
9:QI:70:LYS:O	9:QI:74:ILE:HG13	2.07	0.54
16:QP:43:LYS:HA	16:QP:48:TRP:CB	2.37	0.54
47:Y1:53:VAL:O	47:Y1:54:ALA:C	2.45	0.54
44:YY:2:ARG:NH1	44:YY:2:ARG:HG2	2.22	0.54
39:YT:98:LYS:HB3	39:YT:100:TYR:CE1	2.43	0.54
9:XI:66:ARG:HG2	9:XI:66:ARG:NH1	2.21	0.54
9:XI:9:ARG:HB2	9:XI:14:VAL:HG22	1.88	0.54
16:XP:28:ARG:HG2	16:XP:28:ARG:NH1	2.22	0.54
40:YU:27:LEU:O	40:YU:29:SER:N	2.40	0.54
32:RI:99:GLU:OE2	32:RI:103:ARG:NH2	2.38	0.54
6:QF:52:ILE:O	6:QF:53:ALA:HB3	2.07	0.54
42:YW:9:TYR:H	42:YW:102:HIS:CE1	2.25	0.54
25:YA:26:G:H1'	25:YA:515:A:H61	1.72	0.54
25:RA:1567:A:H5'	27:RD:58:HIS:ND1	2.22	0.54
1:XA:1053:G:N7	1:XA:1199:U:H3'	2.21	0.54
47:Y1:92:LYS:O	47:Y1:94:LEU:N	2.41	0.54
44:YY:97:ARG:NH2	44:YY:98:VAL:CB	2.65	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:86:GLU:HG3	31:YH:165:ALA:CB	2.38	0.54
13:XM:73:GLU:O	13:XM:77:ASN:N	2.33	0.54
3:QC:181:ASN:HD21	3:QC:204:LEU:CD1	2.11	0.54
1:QA:1053:G:N7	1:QA:1200:C:H5''	2.22	0.54
33:YN:42:TRP:CD1	40:YU:63:VAL:HG11	2.42	0.54
41:YV:52:VAL:O	41:YV:54:GLY:N	2.39	0.54
38:RS:107:GLU:N	38:RS:110:LEU:HD11	2.22	0.54
34:RO:53:LYS:HD2	34:RO:56:ASP:OD1	2.08	0.54
51:Y5:55:ARG:HD3	51:Y5:56:LYS:H	1.73	0.54
16:QP:21:VAL:O	16:QP:33:ILE:N	2.39	0.54
35:RP:65:ARG:HH21	54:R8:15:LYS:HB2	1.72	0.54
35:YP:65:ARG:HH21	54:Y8:15:LYS:HB2	1.72	0.54
10:QJ:19:SER:O	10:QJ:23:ILE:HG13	2.07	0.54
13:XM:121:LYS:N	13:XM:121:LYS:HE2	2.23	0.54
29:RF:197:ASP:O	29:RF:199:TRP:N	2.38	0.54
9:XI:70:LYS:O	9:XI:74:ILE:HG13	2.07	0.54
6:QF:91:VAL:CG1	18:QR:72:ARG:HH12	2.18	0.54
13:QM:121:LYS:N	13:QM:121:LYS:HE2	2.22	0.54
1:XA:258:G:H2'	1:XA:259:G:H8	1.73	0.54
47:R1:53:VAL:O	47:R1:54:ALA:C	2.45	0.54
41:RV:22:VAL:CG1	41:RV:23:GLU:N	2.71	0.54
4:QD:13:ARG:HD2	4:QD:40:PRO:HD3	1.89	0.54
2:XB:134:GLU:O	2:XB:138:LEU:HD12	2.07	0.54
39:RT:16:ARG:HG2	39:RT:18:ASP:OD1	2.06	0.54
25:YA:573:G:N1	25:YA:2031:A:OP2	2.26	0.54
16:QP:28:ARG:HG2	16:QP:28:ARG:NH1	2.22	0.54
9:XI:114:TYR:CD2	9:XI:114:TYR:O	2.59	0.54
1:QA:243:A:N6	1:QA:281:G:O2'	2.40	0.54
1:QA:1129:C:H4'	1:QA:1130:A:H5'	1.90	0.54
25:RA:1444(A):A:H4'	25:RA:1460:A:O2'	2.06	0.54
29:RF:62:ARG:NH1	29:RF:62:ARG:HB3	2.22	0.54
53:R7:18:PHE:CD2	53:R7:18:PHE:C	2.81	0.54
32:YI:33:ARG:HB3	32:YI:35:LEU:HG	1.89	0.54
25:RA:1434:A:H61	25:RA:1558:A:N6	2.04	0.54
14:QN:24:CYS:SG	14:QN:39:LEU:CA	2.94	0.54
47:R1:91:LYS:CE	47:R1:91:LYS:HA	2.38	0.54
44:RY:91:GLU:HG3	44:RY:92:ASN:H	1.72	0.54
44:RY:95:LYS:HD3	44:RY:95:LYS:N	2.23	0.54
44:YY:95:LYS:NZ	44:YY:95:LYS:HB2	2.21	0.54
31:RH:86:GLU:HG3	31:RH:165:ALA:CB	2.38	0.54
50:Y4:47:GLN:O	50:Y4:48:ARG:HB2	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:14:ILE:HG23	28:YE:15:PHE:N	2.22	0.54
1:QA:1053:G:O6	1:QA:1199:U:H2'	2.08	0.54
50:R4:37:SER:HB3	50:R4:42:PHE:CD1	2.43	0.54
29:RF:67:GLN:O	29:RF:68:LYS:CB	2.39	0.54
37:YR:28:LEU:HD13	37:YR:28:LEU:O	2.08	0.54
16:QP:4:ILE:N	16:QP:4:ILE:HD12	2.23	0.54
25:YA:2415:G:O3'	35:YP:66:GLY:HA3	2.07	0.54
39:RT:3:ARG:HG3	39:RT:7:ILE:CG1	2.36	0.54
31:YH:8:PRO:O	31:YH:9:ILE:HG23	2.08	0.54
27:YD:155:LEU:HD23	27:YD:177:LEU:CD2	2.36	0.54
8:QH:51:VAL:HG11	8:QH:60:ARG:CG	2.37	0.54
30:RG:116:ASP:O	30:RG:117:PHE:CB	2.50	0.54
4:XD:153:ARG:NH1	4:XD:181:MET:CG	2.71	0.54
29:YF:129:PHE:O	29:YF:130:ALA:CB	2.55	0.54
12:XL:10:LEU:HD13	17:XQ:32:TYR:CE2	2.42	0.54
4:QD:197:PRO:HD3	6:XF:16:GLN:CG	2.37	0.54
42:RW:20:VAL:C	42:RW:22:ASP:H	2.10	0.54
3:XC:92:ALA:HB2	3:XC:99:VAL:CG1	2.37	0.54
14:YN:15:LYS:O	14:YN:16:PHE:O	2.24	0.54
25:RA:1902:C:H5'	27:RD:246:PRO:HD3	1.90	0.54
36:RQ:21:THR:O	36:RQ:22:LYS:O	2.25	0.54
1:XA:966:G:O2'	9:XI:127:LYS:O	2.25	0.54
25:RA:2327:A:H2'	25:RA:2328:A:C8	2.43	0.54
41:YV:27:ALA:O	41:YV:28:GLU:O	2.24	0.54
25:RA:2150:U:H2'	25:RA:2151:G:C8	2.42	0.54
2:QB:83:MET:O	2:QB:85:ALA:N	2.41	0.54
21:QU:21:TYR:O	21:QU:22:ARG:HB2	2.05	0.54
41:RV:29:PRO:HA	41:RV:61:VAL:CG2	2.37	0.54
22:QV:17:C:OP1	22:QV:61:C:H5'	2.07	0.54
53:Y7:18:PHE:CD2	53:Y7:18:PHE:C	2.81	0.54
25:YA:2757:A:OP1	55:Y9:19:ARG:HA	2.07	0.54
47:R1:83:GLU:CG	47:R1:84:GLY:N	2.71	0.54
4:QD:19:LEU:HD23	4:QD:19:LEU:N	2.23	0.54
13:XM:65:LYS:CE	50:Y4:50:VAL:HG11	2.37	0.54
31:YH:153:LYS:CE	31:YH:153:LYS:HA	2.38	0.54
35:YP:140:ALA:O	35:YP:141:ALA:HB2	2.08	0.54
14:YN:6:LEU:CD2	14:YN:23:ARG:NH2	2.70	0.54
27:RD:227:ASN:HB3	27:RD:228:PRO:CD	2.30	0.54
8:QH:101:PRO:HG2	8:QH:133:LEU:HD11	1.89	0.54
8:QH:97:VAL:CG1	8:QH:98:LYS:N	2.70	0.54
7:QG:62:PHE:O	7:QG:66:VAL:HG23	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:XP:3:LYS:O	16:XP:21:VAL:HA	2.08	0.54
44:RY:47:LYS:O	44:RY:49:VAL:HG23	2.08	0.54
44:RY:61:ILE:HG23	44:RY:62:GLU:H	1.71	0.54
44:YY:47:LYS:O	44:YY:49:VAL:HG23	2.07	0.54
12:XL:6:THR:OG1	12:XL:9:GLN:HG3	2.08	0.54
28:RE:186:GLY:O	28:RE:188:VAL:N	2.41	0.54
4:QD:166:LYS:CD	27:YD:134:ARG:HH11	2.18	0.54
30:YG:83:ARG:HG3	30:YG:86:MET:HE1	1.89	0.54
36:RQ:39:PRO:HB3	36:RQ:99:PRO:HD3	1.90	0.54
30:YG:3:LEU:HD12	30:YG:4:ASP:N	2.19	0.54
30:YG:7:LEU:HD12	30:YG:104:GLU:HA	1.88	0.54
49:R3:35:ARG:HB3	49:R3:37:LEU:CD2	2.37	0.54
15:QO:21:ASP:OD1	15:QO:24:SER:HB2	2.07	0.54
15:XO:21:ASP:OD1	15:XO:24:SER:HB2	2.07	0.54
54:Y8:32:LEU:O	54:Y8:36:LYS:HE3	2.07	0.54
47:Y1:53:VAL:HG12	47:Y1:54:ALA:N	2.21	0.54
3:XC:195:VAL:CG1	3:XC:196:LEU:N	2.71	0.54
3:QC:107:GLN:N	3:QC:107:GLN:CD	2.61	0.54
4:QD:33:MET:HE1	4:QD:37:PRO:HA	1.88	0.54
8:XH:119:LEU:HD12	8:XH:124:ALA:HA	1.88	0.54
42:YW:80:PRO:O	42:YW:100:THR:CG2	2.55	0.54
1:XA:302:G:O3'	12:XL:17:LYS:HE2	2.06	0.54
25:YA:2543:G:H2'	25:YA:2544:G:C8	2.43	0.54
18:QR:39:VAL:HA	18:QR:42:ARG:NH1	2.23	0.54
53:R7:31:LEU:O	53:R7:32:LYS:C	2.43	0.54
27:RD:233:HIS:CD2	27:RD:233:HIS:N	2.75	0.54
25:RA:2853:C:H2'	25:RA:2854:G:H8	1.71	0.54
20:QT:43:LEU:HA	20:QT:46:GLU:HB3	1.88	0.54
39:RT:29:ARG:HB2	39:RT:29:ARG:HH11	1.72	0.54
1:XA:1314:C:OP2	19:XS:4:SER:OG	2.25	0.54
35:RP:125:VAL:O	35:RP:145:PRO:HD2	2.08	0.54
35:YP:114:ILE:HD11	35:YP:130:PHE:HE1	1.70	0.54
30:RG:139:LEU:HD22	30:RG:146:TYR:HD1	1.73	0.54
40:RU:95:LEU:HD12	41:RV:11:GLN:HE21	1.72	0.54
52:Y6:17:LYS:O	52:Y6:18:ARG:HB2	2.08	0.54
27:RD:183:ARG:NH1	27:RD:183:ARG:HG2	2.11	0.54
25:RA:1693:U:H1'	27:RD:14:ARG:NH2	2.22	0.54
51:Y5:44:THR:O	51:Y5:46:CYS:N	2.41	0.54
42:RW:38:TYR:OH	51:R5:47:PRO:HG3	2.08	0.54
7:XG:46:ALA:HB2	7:XG:117:ALA:HB1	1.88	0.54
27:YD:206:LEU:O	27:YD:211:ARG:NH1	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:211:ARG:HD2	27:YD:214:TRP:CZ3	2.43	0.54
14:YN:13:THR:N	14:YN:14:PRO:HD2	2.22	0.54
38:RS:111:GLU:OE1	38:RS:111:GLU:HA	2.06	0.54
1:QA:103:C:P	20:QT:17:ARG:HH21	2.30	0.54
25:YA:2466:C:H5'	55:Y9:5:ALA:HB3	1.90	0.54
1:QA:1226:C:O2'	13:QM:111:LYS:NZ	2.40	0.54
10:QJ:101:VAL:O	10:QJ:101:VAL:HG22	2.07	0.54
48:R2:31:GLU:HB2	48:R2:53:LEU:HD11	1.89	0.54
27:YD:118:VAL:HG22	27:YD:119:ALA:H	1.72	0.54
19:XS:15:LEU:H	19:XS:15:LEU:CD2	2.21	0.54
1:XA:272:C:H2'	1:XA:273:A:C8	2.43	0.54
8:XH:77:GLU:HG2	8:XH:78:GLN:N	2.22	0.54
25:YA:1061:U:H3'	25:YA:1062:G:H5''	1.90	0.54
39:RT:123:GLN:O	39:RT:125:ARG:N	2.40	0.54
52:R6:12:GLU:HG2	52:R6:52:VAL:O	2.07	0.54
29:YF:62:ARG:HB3	29:YF:62:ARG:NH1	2.22	0.54
42:RW:9:TYR:H	42:RW:102:HIS:CE1	2.26	0.54
35:YP:24:GLY:O	35:YP:25:SER:HB3	2.06	0.54
45:RZ:108:PRO:HA	45:RZ:142:SER:HA	1.90	0.54
1:QA:31:G:O2'	1:QA:48:C:N4	2.39	0.54
31:YH:126:PRO:HD2	31:YH:127:GLU:H	1.72	0.54
47:R1:60:PHE:HE2	47:R1:91:LYS:HZ1	1.54	0.54
28:RE:176:ILE:HG22	28:RE:179:GLU:H	1.72	0.54
3:XC:109:PRO:O	3:XC:115:LEU:HD12	2.08	0.54
33:YN:7:LYS:HD3	33:YN:9:VAL:CA	2.38	0.54
40:YU:86:ALA:HB1	40:YU:88:ILE:HD11	1.90	0.54
8:XH:101:PRO:HG2	8:XH:133:LEU:HD11	1.89	0.54
25:RA:2404:C:H1'	35:RP:67:MET:HE1	1.88	0.54
27:YD:25:THR:HG23	27:YD:25:THR:O	2.07	0.54
25:YA:747:U:N3	51:Y5:2:ALA:N	2.56	0.54
27:YD:183:ARG:HG2	27:YD:183:ARG:NH1	2.12	0.54
2:QB:142:LEU:HD23	2:QB:142:LEU:C	2.27	0.54
21:QU:6:ARG:O	21:QU:8:THR:N	2.39	0.54
13:QM:34:LEU:CD1	13:QM:41:PRO:HG3	2.38	0.54
1:XA:986:A:H1'	19:XS:54:GLY:O	2.07	0.54
25:YA:264:C:C2'	25:YA:265:A:H5''	2.37	0.54
25:YA:265:A:O2'	25:YA:266:G:H4'	2.08	0.54
38:YS:13:ARG:HD2	38:YS:13:ARG:O	2.06	0.54
18:XR:51:LEU:HD22	18:XR:55:ARG:HD2	1.89	0.54
29:YF:127:GLU:O	29:YF:129:PHE:N	2.39	0.54
10:XJ:101:VAL:HG22	10:XJ:101:VAL:O	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2867:G:O2'	25:RA:2868:A:O5'	2.26	0.54
25:YA:1899:G:H21	25:YA:1902:C:H41	1.53	0.54
9:XI:13:ALA:HB2	9:XI:67:GLY:C	2.28	0.54
25:YA:469:G:O6	53:Y7:37:LYS:HE2	2.07	0.54
25:YA:1085:A:O2'	25:YA:1086:A:OP1	2.22	0.54
7:XG:102:ARG:O	7:XG:106:GLN:HG3	2.08	0.54
40:YU:24:TYR:O	40:YU:29:SER:HB3	2.08	0.54
25:RA:1056:G:O2'	25:RA:1086:A:O2'	2.26	0.54
25:RA:320:A:N3	29:RF:169:ASN:ND2	2.55	0.54
36:YQ:60:ARG:HH11	45:YZ:113:ALA:HB3	1.73	0.54
35:RP:124:LYS:HA	35:RP:143:GLY:O	2.08	0.54
32:RI:133:HIS:HB2	32:RI:134:PRO:HD2	1.90	0.54
25:YA:1678:G:H22	25:YA:1989:G:H22	1.55	0.54
1:QA:601:C:H2'	1:QA:602:A:C8	2.43	0.54
49:Y3:2:PRO:O	49:Y3:3:ARG:O	2.25	0.54
11:XK:24:SER:HB3	11:XK:27:ASN:O	2.08	0.54
27:YD:124:PRO:HB2	27:YD:126:GLN:NE2	2.22	0.54
28:YE:134:ILE:HD12	28:YE:134:ILE:C	2.28	0.54
18:XR:29:PHE:CD2	18:XR:29:PHE:N	2.76	0.54
22:QV:10:G:N2	22:QV:26:G:H1'	2.23	0.54
35:YP:124:LYS:HA	35:YP:143:GLY:O	2.08	0.54
4:QD:23:GLY:HA3	4:QD:112:VAL:CG2	2.38	0.54
13:XM:66:LEU:O	13:XM:67:GLU:C	2.46	0.54
1:XA:1312:G:P	50:Y4:58:ARG:HH12	2.30	0.54
50:Y4:65:ASP:O	50:Y4:66:SER:HB3	2.07	0.54
28:YE:51:PHE:O	28:YE:74:PRO:HB3	2.08	0.54
3:QC:109:PRO:O	3:QC:115:LEU:HD12	2.08	0.54
10:XJ:61:GLU:HG3	14:YN:58:LYS:HE2	1.90	0.54
35:YP:112:LEU:HD13	35:YP:112:LEU:C	2.29	0.54
15:QO:87:ILE:CG2	15:QO:88:ARG:H	2.00	0.54
2:QB:16:HIS:CE1	2:QB:209:ARG:HH21	2.25	0.54
28:RE:101:ARG:HB3	28:RE:201:THR:OG1	2.08	0.54
16:QP:3:LYS:O	16:QP:21:VAL:HA	2.08	0.54
12:QL:10:LEU:HD13	17:QQ:32:TYR:CD2	2.41	0.54
41:RV:45:THR:O	41:RV:45:THR:HG22	2.08	0.54
1:XA:1364:U:HO2'	1:XA:1365:G:P	2.30	0.54
8:XH:51:VAL:HG11	8:XH:60:ARG:CG	2.38	0.54
33:RN:42:TRP:CD1	40:RU:63:VAL:HG11	2.42	0.54
25:YA:2683:C:OP1	39:YT:53:ARG:NH2	2.40	0.54
41:YV:66:ARG:HH11	41:YV:66:ARG:CB	2.20	0.54
30:YG:81:LYS:O	30:YG:82:LEU:CB	2.56	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:179:GLU:CD	29:RF:179:GLU:H	2.11	0.54
49:Y3:56:VAL:CG1	49:Y3:57:GLU:H	2.20	0.54
3:XC:134:ILE:CD1	3:XC:153:VAL:HG21	2.35	0.54
36:YQ:39:PRO:HB3	36:YQ:99:PRO:HD3	1.90	0.54
2:QB:55:PHE:HA	2:QB:58:ILE:HB	1.88	0.54
37:RR:1:MET:O	37:RR:2:ARG:HG3	2.08	0.54
34:RO:4:PRO:O	34:RO:5:GLN:HB2	2.06	0.54
54:R8:32:LEU:O	54:R8:36:LYS:HE3	2.07	0.54
27:RD:158:ALA:HB3	27:RD:161:THR:HG21	1.90	0.54
7:XG:137:LYS:O	7:XG:141:VAL:HG23	2.08	0.54
25:RA:2208:U:O2'	27:RD:151:LYS:HG2	2.08	0.54
34:YO:68:GLU:HA	34:YO:78:ARG:HB3	1.88	0.54
37:YR:38:VAL:HG22	37:YR:112:ALA:HB2	1.90	0.54
12:QL:83:VAL:CG2	12:QL:100:ILE:HG23	2.38	0.54
22:QV:40:C:H2'	22:QV:41:C:H6	1.73	0.54
25:YA:2327:A:H2'	25:YA:2328:A:C8	2.43	0.54
25:RA:2074:U:H2'	25:RA:2075:U:C6	2.43	0.54
2:XB:83:MET:O	2:XB:85:ALA:N	2.41	0.54
6:QF:78:GLU:OE2	6:QF:81:ILE:HD12	2.08	0.54
31:RH:91:GLY:O	31:RH:94:TYR:HB2	2.08	0.54
47:R1:83:GLU:OE1	47:R1:85:LEU:HD23	2.07	0.54
36:RQ:60:ARG:HH12	36:RQ:113:GLN:HE22	1.55	0.54
44:RY:87:LYS:HB2	44:RY:87:LYS:NZ	2.23	0.54
50:R4:51:ASP:O	50:R4:51:ASP:OD1	2.25	0.54
2:XB:102:LEU:HB3	2:XB:180:LEU:HD12	1.90	0.54
35:RP:112:LEU:C	35:RP:112:LEU:HD13	2.29	0.54
28:RE:53:PRO:O	28:RE:74:PRO:HA	2.07	0.54
39:RT:14:TYR:H	39:RT:14:TYR:HD1	1.56	0.54
8:XH:20:TYR:HD1	8:XH:65:TYR:HD2	1.55	0.54
14:XN:22:THR:HB	14:XN:33:VAL:HG11	1.88	0.54
27:RD:227:ASN:CB	27:RD:228:PRO:HD2	2.24	0.54
52:R6:17:LYS:O	52:R6:18:ARG:HB2	2.08	0.54
35:RP:64:LYS:HG3	54:R8:25:MET:SD	2.48	0.54
28:YE:25:VAL:HG11	39:YT:11:GLU:HG2	1.90	0.54
51:R5:55:ARG:HD3	51:R5:56:LYS:H	1.73	0.54
7:XG:13:GLN:O	7:XG:24:THR:HG21	2.08	0.54
8:QH:102:ARG:NH1	8:QH:105:ARG:NH1	2.55	0.54
38:RS:67:ARG:NH1	38:RS:67:ARG:CB	2.64	0.54
31:RH:26:VAL:CG1	31:RH:27:LYS:N	2.64	0.54
25:RA:2845:G:H5''	39:RT:55:ASN:HA	1.88	0.54
39:YT:55:ASN:O	39:YT:57:PHE:O	2.26	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:186:GLY:O	28:YE:188:VAL:N	2.40	0.54
48:Y2:41:ILE:HD11	48:Y2:44:LEU:HB2	1.90	0.54
10:XJ:16:LEU:O	10:XJ:20:ALA:HB2	2.08	0.54
7:XG:113:GLU:HB2	7:XG:119:ARG:CG	2.35	0.54
25:RA:2022:U:O2'	25:RA:2617:C:H5'	2.07	0.54
9:QI:99:LEU:O	9:QI:101:PHE:N	2.41	0.54
55:Y9:1:MET:HB3	55:Y9:4:ARG:CZ	2.37	0.54
6:XF:89:MET:HG2	6:XF:89:MET:O	2.08	0.54
7:XG:50:ILE:O	7:XG:50:ILE:HG22	2.07	0.54
7:XG:12:LEU:N	7:XG:12:LEU:HD22	2.23	0.54
6:QF:92:LYS:NZ	6:QF:92:LYS:HB2	2.22	0.54
37:RR:38:VAL:HG22	37:RR:112:ALA:HB2	1.90	0.54
34:YO:78:ARG:O	39:YT:73:GLU:HG3	2.08	0.54
25:YA:2642:G:H4'	33:YN:78:TYR:CE2	2.43	0.54
35:YP:37:GLY:C	35:YP:41:ARG:HD3	2.29	0.54
12:XL:83:VAL:CG2	12:XL:100:ILE:HG23	2.38	0.54
1:QA:719:C:C2	18:QR:50:ILE:HD13	2.43	0.54
1:QA:986:A:H1'	19:QS:54:GLY:O	2.08	0.54
1:XA:1095:U:P	1:XA:1108:G:H1	2.30	0.54
27:YD:158:ALA:HB3	27:YD:161:THR:HG21	1.90	0.54
18:XR:39:VAL:HA	18:XR:42:ARG:NH1	2.23	0.54
1:XA:607:A:C2	16:XP:31:LYS:HB2	2.43	0.54
52:Y6:12:GLU:HG2	52:Y6:52:VAL:O	2.07	0.54
1:XA:993:G:O6	1:XA:1045:C:N4	2.27	0.54
11:QK:24:SER:HB3	11:QK:27:ASN:O	2.08	0.54
1:XA:22:G:H4'	1:XA:885:G:C8	2.42	0.54
37:RR:45:ARG:HA	37:RR:95:THR:HG21	1.87	0.54
37:YR:91:GLN:O	37:YR:91:GLN:HG2	2.08	0.54
34:YO:49:ARG:NH1	34:YO:49:ARG:HB3	2.23	0.54
25:RA:2212:A:H1'	25:RA:2215:G:C5	2.42	0.54
25:YA:918:A:N3	26:YB:80:U:O2'	2.35	0.54
31:YH:91:GLY:O	31:YH:94:TYR:HB2	2.08	0.54
47:R1:92:LYS:O	47:R1:94:LEU:N	2.41	0.54
44:YY:87:LYS:NZ	44:YY:87:LYS:HB2	2.23	0.54
27:YD:34:VAL:C	27:YD:35:LYS:HG3	2.28	0.54
35:YP:84:ASN:ND2	35:YP:115:LEU:HD12	2.22	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
2:QB:170:GLU:HA	2:QB:172:ILE:HD12	1.90	0.54
36:RQ:81:VAL:C	36:RQ:82:ARG:CG	2.76	0.54
52:R6:27:LYS:HZ2	52:R6:27:LYS:HB2	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:QL:6:THR:OG1	12:QL:9:GLN:HG3	2.08	0.54
27:RD:25:THR:CG2	27:RD:81:ALA:HB1	2.38	0.54
27:YD:28:GLU:O	27:YD:29:PRO:C	2.45	0.54
7:QG:13:GLN:O	7:QG:24:THR:HG21	2.08	0.54
29:YF:53:THR:C	29:YF:55:GLY:H	2.11	0.54
33:RN:70:LYS:C	33:RN:71:ILE:HD13	2.27	0.54
9:XI:99:LEU:O	9:XI:101:PHE:N	2.41	0.54
3:XC:134:ILE:HG21	3:XC:168:ALA:HB3	1.89	0.54
27:YD:80:ALA:HB3	27:YD:94:LEU:HD13	1.88	0.54
4:QD:79:PHE:CE2	4:QD:83:SER:HB2	2.43	0.54
9:XI:47:LEU:HB3	9:XI:50:LEU:HD12	1.90	0.54
3:QC:92:ALA:HB2	3:QC:99:VAL:CG1	2.38	0.54
6:QF:41:GLU:HG2	6:QF:43:LEU:HD11	1.88	0.54
7:QG:12:LEU:HD22	7:QG:12:LEU:N	2.22	0.54
35:RP:37:GLY:HA2	35:RP:41:ARG:NE	2.23	0.54
25:YA:813:U:H2'	25:YA:814:C:C6	2.43	0.54
25:RA:2573:C:N4	56:Z6:75:C:O2'	2.38	0.54
35:YP:92:GLU:HA	35:YP:123:LEU:CD2	2.38	0.54
25:RA:1636:C:H2'	25:RA:1637:A:C8	2.43	0.54
1:XA:1435:G:H2'	1:XA:1436:U:C6	2.43	0.54
25:RA:623:G:H2'	25:RA:624:C:C6	2.43	0.54
34:YO:1:MET:HE2	34:YO:67:LYS:HG2	1.89	0.54
41:YV:45:THR:O	41:YV:45:THR:HG22	2.08	0.54
13:QM:77:ASN:OD1	50:R4:71:ARG:CZ	2.55	0.53
50:Y4:63:TYR:C	50:Y4:65:ASP:N	2.61	0.53
3:QC:51:GLY:O	3:QC:70:VAL:HG13	2.08	0.53
10:QJ:61:GLU:HG3	14:QN:58:LYS:HE2	1.90	0.53
28:RE:14:ILE:CG1	28:RE:15:PHE:H	2.08	0.53
28:YE:14:ILE:HD11	39:YT:14:TYR:CZ	2.42	0.53
28:YE:101:ARG:HB3	28:YE:201:THR:OG1	2.08	0.53
12:QL:10:LEU:HB3	17:QQ:32:TYR:CE2	2.44	0.53
1:XA:1459:C:OP1	20:XT:27:LYS:NZ	2.41	0.53
27:RD:211:ARG:HD2	27:RD:214:TRP:CZ3	2.43	0.53
14:QN:13:THR:N	14:QN:14:PRO:HD2	2.22	0.53
34:RO:113:LYS:HG2	34:RO:117:LEU:CD1	2.38	0.53
16:QP:75:ARG:C	16:QP:77:ALA:H	2.11	0.53
9:XI:53:VAL:CB	9:XI:95:LYS:HE3	2.36	0.53
48:Y2:47:ASN:N	48:Y2:47:ASN:ND2	2.54	0.53
25:YA:2567:G:H2'	25:YA:2568:C:C6	2.43	0.53
25:RA:263:C:H2'	25:RA:264:C:O4'	2.08	0.53
3:QC:195:VAL:CG1	3:QC:196:LEU:N	2.71	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:QG:102:ARG:O	7:QG:106:GLN:HG3	2.08	0.53
31:RH:139:GLN:O	31:RH:143:GLN:HB2	2.09	0.53
8:QH:77:GLU:HG2	8:QH:78:GLN:N	2.22	0.53
33:RN:109:LYS:HD2	33:RN:109:LYS:H	1.73	0.53
25:RA:2146:C:H4'	25:RA:2147:G:C8	2.44	0.53
27:YD:85:ASP:OD2	27:YD:88:ARG:HG2	2.07	0.53
25:RA:2166:G:N2	25:RA:2168:G:OP1	2.41	0.53
33:RN:137:LYS:HG3	33:RN:138:LEU:N	2.23	0.53
43:YX:5:TYR:HE2	48:Y2:30:ARG:HH11	1.56	0.53
25:RA:2506:U:O2	25:RA:2506:U:H2'	2.07	0.53
40:RU:47:TYR:CD2	40:RU:47:TYR:C	2.81	0.53
39:RT:88:ILE:C	39:RT:88:ILE:HD12	2.29	0.53
25:YA:229:A:OP1	25:YA:229:A:H4'	2.07	0.53
39:YT:88:ILE:HD12	39:YT:88:ILE:C	2.29	0.53
1:QA:45:U:H2'	1:QA:46:G:C8	2.43	0.53
47:Y1:87:PRO:O	47:Y1:91:LYS:N	2.31	0.53
25:RA:593:G:O3'	54:R8:61:LEU:HD22	2.08	0.53
3:QC:53:ALA:HB2	3:QC:115:LEU:HD21	1.90	0.53
3:XC:53:ALA:HB2	3:XC:115:LEU:HD21	1.90	0.53
35:RP:140:ALA:O	35:RP:141:ALA:HB2	2.08	0.53
2:QB:187:LEU:HD22	2:QB:201:ILE:O	2.07	0.53
40:YU:74:LEU:HD13	40:YU:79:PHE:HB2	1.89	0.53
34:YO:12:ASP:CG	34:YO:14:THR:HG23	2.29	0.53
34:YO:12:ASP:OD1	34:YO:85:VAL:HG13	2.08	0.53
52:Y6:11:LEU:CD1	52:Y6:51:GLU:HG3	2.39	0.53
39:YT:105:LEU:O	39:YT:107:ASP:N	2.41	0.53
13:XM:57:ARG:HH21	50:Y4:34:GLU:HA	1.74	0.53
37:RR:53:HIS:HA	37:RR:56:LYS:HD3	1.90	0.53
51:R5:60:VAL:CG1	51:R5:60:VAL:OXT	2.56	0.53
52:Y6:13:CYS:O	52:Y6:14:THR:HB	2.08	0.53
5:XE:101:ILE:O	5:XE:101:ILE:HG12	2.08	0.53
17:QQ:5:VAL:O	17:QQ:6:LEU:HD23	2.09	0.53
25:RA:2277:G:H5'	36:RQ:85:LYS:HG3	1.89	0.53
31:YH:12:PRO:O	31:YH:13:LYS:HB2	2.07	0.53
25:RA:2844:G:H3'	25:RA:2845:G:H8	1.73	0.53
48:R2:43:GLN:O	48:R2:44:LEU:CG	2.54	0.53
29:YF:197:ASP:O	29:YF:198:ALA:HB3	2.06	0.53
12:XL:42:THR:HA	12:XL:53:ARG:O	2.08	0.53
33:YN:70:LYS:C	33:YN:71:ILE:HD13	2.28	0.53
15:XO:77:ARG:HA	15:XO:80:ALA:CB	2.37	0.53
13:XM:39:ILE:HD11	13:XM:56:LEU:HB2	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:Y7:10:ARG:NH1	53:Y7:14:LYS:HE3	2.23	0.53
1:QA:266:G:H5"	1:QA:267:C:H5	1.71	0.53
51:Y5:16:ARG:NH1	51:Y5:17:ASP:OD1	2.41	0.53
4:XD:120:LEU:HD22	4:XD:125:HIS:CB	2.38	0.53
25:YA:746:A:C5	25:YA:2611:U:H5"	2.43	0.53
19:QS:15:LEU:CD2	19:QS:15:LEU:H	2.21	0.53
9:QI:13:ALA:HA	9:QI:66:ARG:O	2.08	0.53
17:XQ:65:ILE:HD12	17:XQ:65:ILE:H	1.73	0.53
34:RO:78:ARG:O	39:RT:73:GLU:HG3	2.08	0.53
44:YY:5:MET:HE1	44:YY:32:PRO:HB3	1.91	0.53
25:YA:1678:G:N2	25:YA:1989:G:H22	2.06	0.53
29:YF:147:GLY:O	29:YF:148:LEU:HD23	2.08	0.53
25:RA:864:G:H1'	25:RA:914:C:H42	1.74	0.53
32:YI:4:ILE:HG12	32:YI:18:VAL:HG22	1.90	0.53
1:XA:1190:G:OP1	3:XC:5:ILE:HD12	2.08	0.53
1:XA:963:G:H21	10:XJ:55:LYS:CE	2.21	0.53
14:QN:23:ARG:O	14:QN:24:CYS:C	2.46	0.53
47:Y1:91:LYS:CE	47:Y1:91:LYS:HA	2.38	0.53
13:QM:66:LEU:O	13:QM:67:GLU:C	2.46	0.53
13:QM:76:ALA:O	13:QM:79:LYS:HB3	2.09	0.53
54:R8:58:ILE:O	54:R8:61:LEU:HG	2.08	0.53
31:RH:153:LYS:CE	31:RH:153:LYS:HA	2.37	0.53
25:YA:2633:G:H1'	28:YE:62:PRO:HG2	1.90	0.53
30:YG:139:LEU:HD22	30:YG:146:TYR:HD1	1.73	0.53
50:R4:37:SER:C	50:R4:39:CYS:N	2.62	0.53
38:YS:74:ALA:HB1	38:YS:107:GLU:HB3	1.89	0.53
37:YR:70:LEU:HD13	37:YR:75:LEU:HD11	1.88	0.53
1:QA:590:C:OP1	8:QH:29:SER:HA	2.08	0.53
39:YT:110:ILE:HG23	39:YT:111:ARG:N	2.24	0.53
52:R6:13:CYS:O	52:R6:14:THR:HB	2.08	0.53
37:RR:28:LEU:HD13	37:RR:28:LEU:O	2.08	0.53
34:YO:7:TYR:C	34:YO:8:LEU:HD22	2.29	0.53
21:XU:14:TRP:CZ3	21:XU:15:ARG:HD3	2.43	0.53
27:RD:206:LEU:O	27:RD:211:ARG:NH1	2.38	0.53
13:XM:34:LEU:CD1	13:XM:41:PRO:HG3	2.38	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
41:YV:81:TYR:C	41:YV:82:ARG:HG3	2.27	0.53
1:XA:347:G:O2'	1:XA:348:G:H5"	2.08	0.53
25:RA:222:A:H3'	25:RA:421:U:H5"	1.91	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:Y8:63:PRO:O	54:Y8:64:TYR:HB2	2.07	0.53
54:R8:29:LYS:HB2	54:R8:44:LYS:HG2	1.90	0.53
1:QA:266:G:H5'	1:QA:268:C:H41	1.72	0.53
15:QO:7:GLU:O	15:QO:11:VAL:HG23	2.08	0.53
2:QB:134:GLU:HB3	2:QB:138:LEU:CD1	2.39	0.53
2:QB:134:GLU:O	2:QB:138:LEU:HD12	2.07	0.53
29:RF:116:ASP:OD1	29:RF:119:ARG:NH2	2.41	0.53
3:QC:3:ASN:H	3:QC:3:ASN:ND2	2.05	0.53
18:QR:25:THR:C	18:QR:26:LEU:HD23	2.29	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
43:RX:53:LYS:NZ	43:RX:55:ASN:HD21	2.06	0.53
35:RP:37:GLY:C	35:RP:41:ARG:HD3	2.29	0.53
40:RU:24:TYR:O	40:RU:29:SER:HB3	2.08	0.53
1:XA:134:A:H61	16:XP:25:ARG:NH1	2.05	0.53
27:RD:124:PRO:HB2	27:RD:126:GLN:NE2	2.22	0.53
25:RA:524:U:H2'	25:RA:525:U:C6	2.44	0.53
27:RD:85:ASP:OD2	27:RD:88:ARG:HG2	2.07	0.53
40:YU:47:TYR:C	40:YU:47:TYR:CD2	2.81	0.53
1:QA:842:C:O2'	1:QA:848:C:N4	2.42	0.53
25:YA:540:G:H5'	25:YA:541:C:OP2	2.09	0.53
25:YA:1998:G:OP2	28:YE:136:ARG:NH2	2.37	0.53
44:YY:90:LEU:HD22	44:YY:90:LEU:H	1.73	0.53
27:YD:35:LYS:CG	27:YD:64:ILE:H	2.15	0.53
2:XB:178:ARG:HD2	8:XH:71:GLY:HA2	1.89	0.53
51:R5:16:ARG:NH1	51:R5:17:ASP:OD1	2.41	0.53
50:Y4:37:SER:C	50:Y4:39:CYS:N	2.62	0.53
48:Y2:16:LEU:CG	48:Y2:16:LEU:O	2.49	0.53
44:RY:44:ILE:CG1	44:RY:45:VAL:N	2.70	0.53
34:RO:7:TYR:C	34:RO:8:LEU:HD22	2.29	0.53
27:RD:25:THR:HG23	27:RD:25:THR:O	2.07	0.53
51:R5:44:THR:O	51:R5:46:CYS:N	2.41	0.53
4:XD:173:TRP:CD1	4:XD:174:LEU:HG	2.44	0.53
4:QD:173:TRP:CD1	4:QD:174:LEU:HG	2.44	0.53
29:YF:179:GLU:H	29:YF:179:GLU:CD	2.11	0.53
9:QI:28:VAL:HG13	9:QI:63:ILE:HG21	1.89	0.53
18:QR:58:LEU:H	18:QR:58:LEU:HD12	1.72	0.53
2:QB:75:LYS:C	2:QB:75:LYS:HD3	2.28	0.53
31:YH:59:ARG:CG	31:YH:59:ARG:HH11	2.20	0.53
41:YV:22:VAL:CG1	41:YV:23:GLU:N	2.71	0.53
4:QD:198:VAL:HG12	4:QD:199:ASN:H	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:24:TRP:CE2	2:QB:26:PRO:HD3	2.44	0.53
25:RA:458:G:O2'	25:RA:469:G:O6	2.23	0.53
29:RF:34:TRP:CH2	35:RP:8:PRO:HB3	2.43	0.53
25:RA:639:U:H2'	25:RA:640:C:C6	2.44	0.53
9:QI:4:TYR:CE2	9:QI:88:TYR:HB2	2.44	0.53
42:YW:28:SER:HB3	42:YW:31:GLU:HB2	1.91	0.53
25:YA:307:G:H21	25:YA:330:A:N6	2.07	0.53
45:YZ:124:ILE:HG22	45:YZ:126:VAL:HG13	1.90	0.53
12:QL:42:THR:HA	12:QL:53:ARG:O	2.08	0.53
25:YA:2224:G:OP1	27:YD:268:ARG:HD3	2.09	0.53
25:RA:1588:C:H2'	25:RA:1589:C:C6	2.44	0.53
49:R3:2:PRO:O	49:R3:3:ARG:O	2.25	0.53
1:XA:1513:A:H2'	1:XA:1514:C:C6	2.43	0.53
37:RR:91:GLN:O	37:RR:91:GLN:HG2	2.08	0.53
34:RO:49:ARG:HB3	34:RO:49:ARG:NH1	2.23	0.53
25:RA:2758:A:C4	31:RH:67:LEU:HD21	2.43	0.53
1:XA:7:G:H5'	1:XA:298:A:O4'	2.08	0.53
14:XN:40:CYS:SG	14:XN:42:ILE:N	2.81	0.53
44:RY:84:ARG:NH1	44:RY:97:ARG:HB2	2.11	0.53
19:XS:63:THR:O	19:XS:66:MET:HG2	2.09	0.53
5:QE:12:LEU:O	5:QE:13:ILE:HD12	2.08	0.53
2:QB:5:ILE:N	2:QB:5:ILE:HD13	2.24	0.53
34:RO:12:ASP:OD1	34:RO:85:VAL:HG13	2.08	0.53
29:RF:32:LEU:HD12	29:RF:36:VAL:HG23	1.89	0.53
25:YA:2286:A:H4'	25:YA:2287:A:O4'	2.07	0.53
41:YV:41:GLY:HA3	41:YV:46:VAL:CG1	2.38	0.53
35:YP:88:LEU:HD23	35:YP:89:ALA:N	2.24	0.53
20:XT:30:LYS:HE2	20:XT:72:LEU:HD12	1.91	0.53
41:RV:66:ARG:HH11	41:RV:66:ARG:CB	2.20	0.53
25:YA:1600:C:OP1	43:YX:58:HIS:NE2	2.33	0.53
38:RS:10:ARG:O	38:RS:14:VAL:HG12	2.09	0.53
9:XI:28:VAL:HG13	9:XI:63:ILE:HG21	1.89	0.53
25:RA:662:G:H5''	35:RP:15:ARG:O	2.08	0.53
4:QD:153:ARG:NH1	4:QD:181:MET:CG	2.71	0.53
25:RA:2466:C:H5'	55:R9:5:ALA:HB3	1.90	0.53
25:YA:2466:C:OP1	55:Y9:4:ARG:HB2	2.08	0.53
3:QC:173:VAL:O	3:QC:173:VAL:HG12	2.08	0.53
15:XO:29:VAL:HG11	15:XO:67:LEU:HD21	1.89	0.53
17:XQ:33:GLY:O	17:XQ:34:LYS:O	2.26	0.53
38:RS:25:ARG:CB	38:RS:25:ARG:HH11	2.22	0.53
41:RV:7:THR:CG2	41:RV:22:VAL:HG11	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:469:G:O6	53:R7:37:LYS:HE2	2.07	0.53
26:RB:44:G:H1'	26:RB:47:C:N4	2.24	0.53
43:RX:36:LYS:HA	43:RX:39:ILE:HD12	1.90	0.53
5:QE:140:ARG:NH1	5:QE:140:ARG:HB2	2.23	0.53
25:YA:1417:C:H2'	25:YA:1418:G:O4'	2.09	0.53
25:RA:74:A:H4'	25:RA:75:G:O5'	2.07	0.53
22:QV:69:C:H2'	22:QV:70:G:C8	2.44	0.53
25:RA:784:A:N7	27:RD:229:VAL:HG21	2.23	0.53
25:YA:1769:G:O2'	25:YA:1958:C:OP1	2.24	0.53
25:RA:1081:U:H3'	25:RA:1082:U:H4'	1.91	0.53
25:YA:2758:A:C4	31:YH:67:LEU:HD21	2.44	0.53
33:YN:137:LYS:HG3	33:YN:138:LEU:N	2.23	0.53
14:YN:41:ARG:HE	14:YN:42:ILE:CG1	2.22	0.53
54:Y8:58:ILE:O	54:Y8:61:LEU:HG	2.08	0.53
13:XM:76:ALA:O	13:XM:79:LYS:HB3	2.09	0.53
13:XM:81:LEU:HD13	13:XM:88:ARG:HD2	1.90	0.53
19:XS:7:LYS:HG3	19:XS:8:GLY:N	2.22	0.53
50:Y4:49:PHE:CD1	50:Y4:49:PHE:N	2.77	0.53
33:YN:134:ARG:N	33:YN:135:PRO:CD	2.58	0.53
35:YP:79:ARG:HD3	35:YP:110:TYR:CE1	2.43	0.53
34:RO:12:ASP:CG	34:RO:14:THR:HG23	2.29	0.53
34:RO:14:THR:HG21	34:RO:86:ILE:HD13	1.91	0.53
37:YR:67:LEU:HD13	37:YR:76:VAL:CG2	2.27	0.53
26:RB:55:U:H2'	26:RB:56:G:C8	2.43	0.53
39:RT:105:LEU:O	39:RT:107:ASP:N	2.41	0.53
27:YD:25:THR:HG21	27:YD:81:ALA:CB	2.38	0.53
5:QE:101:ILE:HG12	5:QE:101:ILE:O	2.08	0.53
36:YQ:76:LYS:O	36:YQ:88:GLY:HA3	2.09	0.53
4:QD:166:LYS:HD2	27:YD:134:ARG:HH12	1.72	0.53
11:XK:125:PHE:N	11:XK:125:PHE:HD1	2.05	0.53
43:RX:60:ARG:NH1	53:R7:47:ARG:HH22	2.07	0.53
25:RA:1600:C:H4'	53:R7:49:ARG:HE	1.73	0.53
3:QC:78:GLY:HA3	3:QC:83:ARG:CB	2.38	0.53
41:RV:81:TYR:C	41:RV:82:ARG:HG3	2.27	0.53
36:RQ:119:ARG:NH1	36:RQ:119:ARG:HG2	2.20	0.53
10:QJ:16:LEU:O	10:QJ:20:ALA:HB2	2.08	0.53
13:QM:39:ILE:HD11	13:QM:56:LEU:HB2	1.90	0.53
16:QP:72:ARG:HD3	16:QP:73:LEU:HD23	1.91	0.53
33:RN:120:LEU:CD1	33:RN:122:VAL:HG23	2.38	0.53
32:RI:11:ASN:O	32:RI:12:LEU:HB2	2.09	0.53
2:XB:24:TRP:CE2	2:XB:26:PRO:HD3	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
39:RT:98:LYS:HB3	39:RT:100:TYR:CE1	2.43	0.53
25:RA:859:G:N2	25:RA:917:A:OP2	2.33	0.53
7:XG:85:TYR:HE1	7:XG:154:TYR:HE1	1.56	0.53
33:RN:78:TYR:N	33:RN:78:TYR:HD1	2.07	0.53
11:QK:20:TYR:HB2	11:QK:31:THR:O	2.07	0.53
45:RZ:27:VAL:HG13	45:RZ:87:ASP:HB3	1.91	0.53
1:QA:1336:C:H1'	1:QA:1337:G:C2	2.44	0.53
25:YA:2059:A:H5'	25:YA:2060:A:OP2	2.09	0.53
42:RW:43:GLY:O	42:RW:44:ALA:C	2.46	0.53
25:YA:1404:C:O2'	25:YA:1405:U:H5'	2.08	0.53
45:RZ:117:LEU:HA	45:RZ:174:VAL:HA	1.91	0.53
25:RA:1268:A:H2'	25:RA:1269:A:O4'	2.08	0.53
28:RE:134:ILE:HD12	28:RE:134:ILE:C	2.28	0.53
7:XG:95:ARG:CZ	7:XG:99:LEU:HD11	2.38	0.53
44:RY:97:ARG:NH2	44:RY:98:VAL:CB	2.66	0.53
2:XB:206:ASP:O	2:XB:207:ALA:HB3	2.08	0.53
27:RD:34:VAL:C	27:RD:35:LYS:HG3	2.28	0.53
28:RE:14:ILE:HG23	28:RE:15:PHE:N	2.22	0.53
13:QM:3:ARG:HA	13:QM:9:ILE:CG2	2.22	0.53
40:RU:86:ALA:HB1	40:RU:88:ILE:HD11	1.90	0.53
41:YV:48:GLY:O	41:YV:49:THR:O	2.26	0.53
41:RV:48:GLY:O	41:RV:49:THR:O	2.26	0.53
52:R6:11:LEU:CD1	52:R6:51:GLU:HG3	2.39	0.53
52:R6:9:LEU:HD13	52:R6:26:ASN:ND2	2.24	0.53
51:Y5:60:VAL:OXT	51:Y5:60:VAL:CG1	2.56	0.53
2:QB:87:ARG:HH11	2:QB:223:ILE:HD12	1.73	0.53
50:Y4:37:SER:HB3	50:Y4:42:PHE:CD1	2.43	0.53
27:YD:25:THR:CG2	27:YD:81:ALA:HB1	2.38	0.53
28:RE:25:VAL:HG11	39:RT:11:GLU:HG2	1.90	0.53
34:YO:2:ILE:HD12	34:YO:2:ILE:N	2.24	0.53
46:Y0:11:ARG:O	46:Y0:14:ARG:NH2	2.42	0.53
31:YH:40:GLU:O	31:YH:41:MET:HB2	2.09	0.53
48:R2:41:ILE:HD11	48:R2:44:LEU:HB2	1.90	0.53
43:YX:60:ARG:NH1	53:Y7:47:ARG:HH22	2.07	0.53
18:QR:51:LEU:HD22	18:QR:55:ARG:HD2	1.89	0.53
30:YG:125:PHE:C	30:YG:127:GLY:H	2.12	0.53
4:XD:79:PHE:CE2	4:XD:83:SER:HB2	2.44	0.53
27:YD:77:ALA:HB2	27:YD:97:TYR:CG	2.44	0.53
5:QE:36:ASP:OD1	5:QE:37:ARG:N	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:172:PRO:HB2	4:XD:193:ASP:OD2	2.08	0.53
6:QF:75:LEU:HD23	6:QF:79:LEU:HG	1.91	0.53
50:R4:15:ILE:HD13	50:R4:15:ILE:H	1.74	0.53
47:Y1:20:ARG:NH1	47:Y1:20:ARG:HG2	2.24	0.53
7:QG:137:LYS:O	7:QG:141:VAL:HG23	2.07	0.53
17:QQ:11:VAL:HG22	17:QQ:20:THR:O	2.09	0.53
1:QA:129(A):G:N2	1:QA:188:U:O2'	2.42	0.53
25:RA:249:C:O2	54:R8:12:LYS:HE3	2.09	0.53
4:XD:23:GLY:HA3	4:XD:112:VAL:CG2	2.38	0.53
25:RA:1952:A:N3	25:RA:2560:C:O2'	2.37	0.53
1:QA:1111:A:N1	3:QC:177:THR:HG23	2.23	0.53
2:QB:233:SER:OG	2:QB:234:PRO:HD2	2.09	0.53
25:RA:2261:C:C6	46:R0:16:SER:HB3	2.43	0.53
1:XA:981:U:H5	1:XA:982:U:HO2'	1.55	0.53
42:YW:43:GLY:O	42:YW:44:ALA:C	2.46	0.53
25:RA:155:C:H42	25:RA:171:G:H1	1.57	0.53
25:YA:1448:G:H5'	25:YA:1543:A:OP1	2.08	0.53
4:QD:147:ALA:HA	4:QD:182:LYS:HA	1.91	0.53
31:YH:125:VAL:HA	31:YH:126:PRO:CB	2.29	0.53
13:QM:65:LYS:HZ3	50:R4:52:THR:HG21	1.72	0.53
50:Y4:56:VAL:HA	50:Y4:60:GLN:CB	2.28	0.53
27:RD:36:PRO:HA	27:RD:62:TYR:O	2.09	0.53
35:YP:125:VAL:O	35:YP:145:PRO:HD2	2.08	0.53
28:RE:20:ALA:O	28:RE:21:VAL:CG2	2.48	0.53
28:YE:64:LYS:C	28:YE:66:HIS:H	2.12	0.53
1:XA:690:G:H22	11:XK:55:LYS:NZ	2.07	0.53
26:RB:42:C:H41	30:RG:91:ARG:NH2	2.06	0.53
41:RV:51:VAL:CG1	41:RV:52:VAL:H	2.22	0.53
42:RW:14:PRO:O	42:RW:17:VAL:N	2.42	0.53
33:YN:22:THR:CG2	33:YN:23:LEU:N	2.61	0.53
52:Y6:9:LEU:HD13	52:Y6:26:ASN:ND2	2.24	0.53
35:YP:64:LYS:HG3	54:Y8:25:MET:SD	2.48	0.53
17:XQ:5:VAL:O	17:XQ:6:LEU:HD23	2.08	0.53
2:QB:96:ARG:H	2:QB:96:ARG:CD	2.16	0.53
21:QU:14:TRP:CZ3	21:QU:15:ARG:HD3	2.43	0.53
31:YH:12:PRO:HG3	31:YH:48:GLY:O	2.09	0.53
1:XA:953:G:N7	13:XM:104:ARG:NH2	2.55	0.53
38:YS:10:ARG:O	38:YS:14:VAL:HG12	2.09	0.53
3:XC:78:GLY:HA3	3:XC:83:ARG:CB	2.38	0.53
29:RF:129:PHE:O	29:RF:142:TRP:CD1	2.62	0.53
15:XO:26:GLU:HA	15:XO:81:LEU:HD22	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:YR:1:MET:O	37:YR:2:ARG:HG3	2.08	0.53
9:XI:4:TYR:CE2	9:XI:88:TYR:HB2	2.44	0.53
29:YF:116:ASP:OD1	29:YF:119:ARG:NH2	2.41	0.53
33:YN:19:GLU:HA	33:YN:59:LYS:HB2	1.91	0.53
33:RN:19:GLU:HA	33:RN:59:LYS:HB2	1.91	0.53
23:XY:29:U:H2'	23:XY:30:C:H6	1.74	0.53
25:YA:25:U:H5''	42:YW:80:PRO:HD3	1.90	0.53
40:YU:39:LEU:O	40:YU:40:PHE:C	2.48	0.53
46:R0:11:ARG:O	46:R0:14:ARG:NH2	2.42	0.53
45:RZ:163:LEU:H	45:RZ:163:LEU:HD12	1.72	0.53
31:YH:128:PRO:CD	31:YH:129:THR:N	2.71	0.53
44:RY:95:LYS:HA	44:RY:101:LYS:H	1.72	0.53
50:R4:54:GLY:O	50:R4:71:ARG:HA	2.08	0.53
19:XS:11:VAL:O	19:XS:11:VAL:HG13	2.09	0.53
2:XB:75:LYS:C	2:XB:75:LYS:HD3	2.29	0.53
3:XC:51:GLY:O	3:XC:70:VAL:HG13	2.09	0.53
35:YP:125:VAL:O	35:YP:125:VAL:HG13	2.09	0.53
13:QM:92:HIS:CD2	13:QM:98:VAL:HG21	2.43	0.53
54:R8:52:LYS:N	54:R8:53:PRO:HD2	2.22	0.53
25:YA:2250:G:C2	36:YQ:82:ARG:HB3	2.43	0.53
8:XH:87:SER:HA	8:XH:93:VAL:HG23	1.91	0.53
27:RD:25:THR:HG21	27:RD:82:ILE:H	1.70	0.53
39:YT:3:ARG:HG3	39:YT:7:ILE:CG1	2.36	0.53
51:R5:55:ARG:HG3	51:R5:57:VAL:H	1.73	0.53
27:RD:155:LEU:CD1	27:RD:155:LEU:N	2.71	0.53
25:YA:747:U:N1	51:Y5:2:ALA:HB3	2.24	0.53
20:QT:30:LYS:HE2	20:QT:72:LEU:HD12	1.91	0.53
10:XJ:74:ILE:HD13	10:XJ:74:ILE:N	2.16	0.53
31:RH:40:GLU:O	31:RH:41:MET:HB2	2.08	0.53
4:QD:108:LEU:HD11	4:QD:174:LEU:CD2	2.37	0.53
38:RS:56:LEU:O	38:RS:58:LEU:HD22	2.08	0.53
4:QD:206:PHE:HD2	4:QD:207:TYR:CD1	2.27	0.53
28:YE:119:ARG:HD3	28:YE:160:TYR:HB2	1.91	0.53
39:YT:34:VAL:CG1	39:YT:36:GLU:HG2	2.39	0.53
9:QI:53:VAL:CB	9:QI:95:LYS:HE3	2.36	0.53
27:YD:263:ARG:HB2	27:YD:263:ARG:HH11	1.68	0.53
15:XO:62:GLN:N	15:XO:65:ARG:HH12	2.06	0.53
6:XF:69:GLU:C	6:XF:71:ARG:H	2.13	0.53
1:XA:1200:C:O2'	1:XA:1201:A:OP2	2.20	0.53
41:YV:7:THR:CG2	41:YV:22:VAL:HG11	2.39	0.53
26:YB:12:C:O2'	46:Y0:74:ARG:HG3	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:XO:7:GLU:O	15:XO:11:VAL:HG23	2.08	0.53
5:XE:87:SER:HB3	5:XE:131:ILE:CD1	2.39	0.53
43:YX:53:LYS:NZ	43:YX:55:ASN:HD21	2.06	0.53
1:QA:246:A:N6	1:QA:281:G:H1'	2.24	0.53
1:QA:7:G:H5'	1:QA:298:A:O4'	2.09	0.53
1:XA:116:A:H61	1:XA:313:A:H1'	1.74	0.53
25:RA:678:C:H2'	25:RA:679:C:C6	2.44	0.53
31:YH:139:GLN:O	31:YH:143:GLN:HB2	2.09	0.53
1:QA:816:A:OP1	1:QA:1526:G:O2'	2.26	0.53
25:YA:2776:A:H3'	25:YA:2776:A:OP1	2.08	0.53
42:RW:8:ARG:HH11	42:RW:8:ARG:HG3	1.73	0.53
25:YA:900:A:H5'	25:YA:901:A:OP2	2.09	0.53
1:QA:757:U:H2'	1:QA:758:G:O4'	2.09	0.53
31:RH:126:PRO:HD2	31:RH:127:GLU:H	1.72	0.53
50:R4:47:GLN:O	50:R4:48:ARG:HB2	2.07	0.53
27:RD:43:ARG:NH1	27:RD:44:ASN:OD1	2.42	0.53
13:XM:65:LYS:HE2	50:Y4:50:VAL:HG11	1.89	0.53
35:RP:125:VAL:O	35:RP:125:VAL:HG13	2.09	0.53
27:RD:34:VAL:CG1	27:RD:34:VAL:O	2.50	0.53
35:YP:147:LEU:O	35:YP:148:LEU:CB	2.57	0.53
1:QA:690:G:H22	11:QK:55:LYS:NZ	2.07	0.53
19:QS:65:ASN:H	19:QS:65:ASN:ND2	2.07	0.53
2:QB:102:LEU:HB3	2:QB:180:LEU:HD12	1.90	0.53
2:QB:200:ILE:HG22	2:QB:201:ILE:N	2.24	0.53
2:QB:206:ASP:O	2:QB:207:ALA:HB3	2.08	0.53
40:YU:92:ARG:NH2	40:YU:94:ASN:HD22	2.07	0.53
41:YV:38:LEU:HD13	41:YV:55:ALA:HB3	1.91	0.53
52:Y6:7:ILE:CG1	52:Y6:8:LYS:H	2.07	0.53
52:R6:25:LYS:HE2	52:R6:27:LYS:HE3	1.91	0.53
37:RR:33:ARG:NH2	51:R5:55:ARG:CG	2.66	0.53
25:YA:2015:A:N3	51:Y5:2:ALA:N	2.57	0.53
19:XS:27:GLU:O	19:XS:28:LYS:CG	2.53	0.53
38:YS:56:LEU:O	38:YS:58:LEU:HD22	2.09	0.53
8:XH:100:ILE:CB	8:XH:125:ARG:HH12	2.20	0.53
12:XL:32:PHE:HE1	12:XL:86:ARG:HG3	1.73	0.53
3:XC:134:ILE:CG2	3:XC:168:ALA:HB3	2.39	0.53
30:RG:125:PHE:C	30:RG:127:GLY:H	2.12	0.53
9:XI:113:LYS:HD3	9:XI:119:ALA:O	2.09	0.53
29:YF:9:ILE:HD11	29:YF:125:LEU:CG	2.36	0.53
4:QD:172:PRO:HB2	4:QD:193:ASP:OD2	2.08	0.53
4:QD:120:LEU:HD22	4:QD:125:HIS:CB	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:XF:75:LEU:HD21	6:XF:79:LEU:HD11	1.91	0.53
19:XS:29:ARG:HD3	19:XS:30:LEU:HD13	1.91	0.53
19:QS:29:ARG:HD3	19:QS:30:LEU:HD13	1.91	0.53
9:QI:47:LEU:HB3	9:QI:50:LEU:HD12	1.90	0.53
15:QO:6:GLU:H	15:QO:6:GLU:CD	2.12	0.53
15:XO:6:GLU:CD	15:XO:6:GLU:H	2.12	0.53
1:XA:719:C:O2'	18:XR:49:LYS:HB3	2.09	0.53
33:YN:109:LYS:H	33:YN:109:LYS:HD2	1.73	0.53
25:YA:248:G:H5'	25:YA:250:G:N7	2.24	0.53
27:YD:233:HIS:N	27:YD:233:HIS:CD2	2.75	0.53
6:XF:78:GLU:OE2	6:XF:81:ILE:HD12	2.08	0.53
18:QR:29:PHE:N	18:QR:29:PHE:CD2	2.76	0.53
18:XR:36:ASN:ND2	18:XR:36:ASN:O	2.32	0.53
25:RA:2126:A:H4'	25:RA:2127:G:O5'	2.09	0.53
25:RA:270(R):G:H2'	25:RA:270(S):G:H8	1.73	0.52
13:QM:73:GLU:O	13:QM:76:ALA:N	2.42	0.52
25:RA:583:G:OP2	40:RU:10:ARG:NH1	2.42	0.52
2:XB:188:ALA:HB3	2:XB:200:ILE:CG2	2.40	0.52
3:XC:48:TYR:O	3:XC:51:GLY:N	2.41	0.52
27:YD:35:LYS:HD3	27:YD:63:ARG:CA	2.39	0.52
5:XE:12:LEU:O	5:XE:13:ILE:HD12	2.08	0.52
37:YR:70:LEU:O	37:YR:72:ASP:N	2.43	0.52
52:Y6:25:LYS:HE2	52:Y6:27:LYS:HE3	1.91	0.52
30:YG:111:LEU:HB2	50:Y4:38:LYS:HZ3	1.72	0.52
36:RQ:76:LYS:O	36:RQ:88:GLY:HA3	2.09	0.52
14:YN:7:ILE:CG1	14:YN:8:GLU:N	2.72	0.52
28:YE:7:VAL:O	28:YE:196:VAL:HG13	2.09	0.52
33:YN:131:GLN:CG	33:YN:132:ALA:H	2.20	0.52
39:RT:55:ASN:O	39:RT:57:PHE:O	2.26	0.52
16:XP:75:ARG:C	16:XP:77:ALA:H	2.11	0.52
49:Y3:6:VAL:HG12	49:Y3:56:VAL:HG22	1.92	0.52
29:YF:129:PHE:O	29:YF:142:TRP:CD1	2.62	0.52
6:QF:89:MET:HG2	6:QF:89:MET:O	2.09	0.52
29:YF:34:TRP:CH2	35:YP:8:PRO:HB3	2.43	0.52
42:YW:7:ALA:HB2	42:YW:50:VAL:CG2	2.40	0.52
25:YA:247:G:O6	54:Y8:12:LYS:NZ	2.25	0.52
17:QQ:65:ILE:H	17:QQ:65:ILE:HD12	1.74	0.52
32:YI:1:MET:HG3	32:YI:23:PRO:HB3	1.90	0.52
18:XR:25:THR:C	18:XR:26:LEU:HD23	2.29	0.52
31:YH:44:VAL:CG2	31:YH:44:VAL:O	2.57	0.52
1:XA:939:G:H5''	7:XG:102:ARG:NH2	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:534:U:H5'	40:YU:42:ALA:HB1	1.92	0.52
25:RA:1050:A:H8	25:RA:2751:G:HO2'	1.57	0.52
31:YH:76:VAL:C	31:YH:78:GLY:H	2.13	0.52
3:QC:29:TYR:OH	14:QN:54:PRO:HD2	2.09	0.52
1:QA:1159:U:O2'	1:QA:1160:G:N7	2.43	0.52
1:XA:250:A:H4'	1:XA:251:G:O5'	2.07	0.52
2:XB:9:GLU:N	2:XB:9:GLU:OE2	2.42	0.52
7:QG:95:ARG:CZ	7:QG:99:LEU:HD11	2.38	0.52
35:RP:92:GLU:HA	35:RP:123:LEU:CD2	2.38	0.52
31:YH:89:ILE:CG1	31:YH:89:ILE:O	2.57	0.52
47:R1:85:LEU:HA	47:R1:87:PRO:HD2	1.91	0.52
13:XM:87:TYR:CE1	13:XM:91:ARG:HD3	2.44	0.52
50:Y4:54:GLY:O	50:Y4:71:ARG:HA	2.08	0.52
35:RP:79:ARG:HD3	35:RP:110:TYR:CE1	2.43	0.52
28:RE:61:ARG:O	28:RE:63:LEU:N	2.42	0.52
13:QM:87:TYR:CE1	13:QM:91:ARG:HD3	2.44	0.52
38:RS:106:ARG:HA	38:RS:110:LEU:CG	2.39	0.52
36:YQ:29:PHE:HB3	36:YQ:65:PHE:CZ	2.44	0.52
37:YR:56:LYS:C	37:YR:58:GLY:N	2.62	0.52
16:QP:1:MET:SD	16:QP:3:LYS:HE3	2.49	0.52
6:XF:86:ARG:O	6:XF:87:ARG:CG	2.50	0.52
27:YD:155:LEU:CD1	27:YD:155:LEU:N	2.71	0.52
42:YW:38:TYR:OH	51:Y5:47:PRO:HG3	2.08	0.52
25:YA:2277:G:OP2	46:Y0:10:THR:HG21	2.10	0.52
28:YE:7:VAL:CG2	28:YE:8:LYS:H	2.10	0.52
39:YT:94:ALA:O	39:YT:95:ARG:HB3	2.09	0.52
28:RE:7:VAL:O	28:RE:196:VAL:HG13	2.09	0.52
31:RH:12:PRO:HG3	31:RH:48:GLY:O	2.09	0.52
3:QC:134:ILE:CG2	3:QC:168:ALA:HB3	2.39	0.52
25:YA:620:G:H4'	25:YA:621:A:H5''	1.91	0.52
29:RF:125:LEU:HA	29:RF:194:MET:O	2.10	0.52
31:YH:2:SER:O	31:YH:3:ARG:C	2.47	0.52
39:RT:100:TYR:HB3	39:RT:103:ARG:NH1	2.25	0.52
31:RH:44:VAL:O	31:RH:44:VAL:CG2	2.57	0.52
7:XG:106:GLN:O	7:XG:110:GLN:HG3	2.10	0.52
1:XA:1055:A:O2'	3:XC:161:GLU:OE2	2.13	0.52
29:YF:140:LEU:O	29:YF:143:ALA:HB3	2.09	0.52
25:YA:2693:A:H2'	25:YA:2694:G:H8	1.74	0.52
25:RA:1824:G:O3'	27:RD:249:PRO:HD3	2.09	0.52
28:YE:39:PRO:HG2	28:YE:40:GLU:OE1	2.09	0.52
33:RN:12:ARG:NH1	33:RN:50:ASP:OD2	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1441:G:H2'	25:YA:1442:G:H8	1.74	0.52
31:RH:76:VAL:C	31:RH:78:GLY:H	2.13	0.52
19:QS:11:VAL:O	19:QS:11:VAL:HG13	2.09	0.52
50:R4:49:PHE:CD1	50:R4:49:PHE:N	2.76	0.52
54:R8:61:LEU:O	54:R8:62:LEU:CB	2.57	0.52
2:XB:92:TYR:CE1	2:XB:151:GLY:HA3	2.45	0.52
39:RT:14:TYR:CD1	39:RT:14:TYR:N	2.77	0.52
30:YG:16:ARG:HH11	30:YG:16:ARG:HG2	1.74	0.52
38:RS:89:ARG:HH11	38:RS:89:ARG:HG2	1.74	0.52
33:RN:94:HIS:O	33:RN:95:PRO:O	2.27	0.52
30:YG:179:PRO:HG3	50:Y4:38:LYS:HZ1	1.74	0.52
44:YY:61:ILE:HG23	44:YY:62:GLU:N	2.24	0.52
39:RT:110:ILE:HG23	39:RT:111:ARG:N	2.24	0.52
52:Y6:14:THR:OG1	52:Y6:19:ARG:NE	2.41	0.52
25:YA:747:U:C2	51:Y5:2:ALA:HB3	2.45	0.52
33:RN:7:LYS:HD3	33:RN:9:VAL:CA	2.38	0.52
18:QR:44:LEU:HD12	18:QR:44:LEU:N	2.24	0.52
4:XD:206:PHE:HD2	4:XD:207:TYR:CD1	2.27	0.52
5:XE:36:ASP:OD1	5:XE:37:ARG:N	2.42	0.52
25:YA:1797:C:C2'	25:YA:1798:U:H5'	2.39	0.52
15:QO:26:GLU:HA	15:QO:81:LEU:HD22	1.90	0.52
29:RF:192:LEU:HD21	29:RF:194:MET:HE2	1.90	0.52
49:R3:9:VAL:HG12	49:R3:32:GLN:HE22	1.74	0.52
1:QA:1224:G:N1	1:QA:1322:C:H1'	2.23	0.52
25:RA:140:A:H8	25:RA:1408:C:O2'	1.91	0.52
1:QA:1346:A:C5'	9:QI:120:ARG:HH12	2.22	0.52
25:RA:2306:C:H2'	25:RA:2307:G:N2	2.24	0.52
25:YA:1795:C:O2	27:YD:255:LYS:HE2	2.08	0.52
25:YA:1252:G:O4'	40:YU:33:ARG:HD3	2.10	0.52
47:R1:20:ARG:NH1	47:R1:20:ARG:HG2	2.24	0.52
50:Y4:15:ILE:H	50:Y4:15:ILE:HD13	1.73	0.52
25:YA:860:U:H5	25:YA:917:A:H2	1.56	0.52
4:QD:13:ARG:HB3	4:QD:33:MET:HE2	1.91	0.52
3:XC:173:VAL:O	3:XC:173:VAL:HG12	2.08	0.52
35:YP:37:GLY:HA2	35:YP:41:ARG:NE	2.23	0.52
1:QA:921:U:O2'	5:QE:19:MET:O	2.17	0.52
5:XE:140:ARG:NH1	5:XE:140:ARG:HB2	2.23	0.52
25:RA:814:C:H41	35:RP:25:SER:HA	1.74	0.52
4:QD:176:LEU:HD12	4:QD:182:LYS:O	2.10	0.52
25:YA:2126:A:H4'	25:YA:2127:G:O5'	2.09	0.52
22:XV:3:C:H2'	22:XV:4:G:H5'	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1681:G:H8	25:YA:1681:G:OP2	1.93	0.52
25:RA:1859:A:N6	25:RA:1883:G:O2'	2.42	0.52
2:XB:232:PRO:O	2:XB:233:SER:O	2.27	0.52
42:YW:8:ARG:HH11	42:YW:8:ARG:HG3	1.73	0.52
1:QA:1499:A:H1'	1:QA:1520:G:H5'	1.92	0.52
50:R4:48:ARG:CZ	50:R4:51:ASP:HA	2.40	0.52
27:YD:66:ASP:OD2	27:YD:69:ARG:HG2	2.09	0.52
27:RD:35:LYS:HG2	27:RD:64:ILE:HG22	1.91	0.52
33:YN:57:ALA:O	33:YN:58:ASP:HB3	2.09	0.52
36:RQ:29:PHE:HB3	36:RQ:65:PHE:CZ	2.44	0.52
8:QH:87:SER:HA	8:QH:93:VAL:HG23	1.91	0.52
2:XB:87:ARG:HH11	2:XB:223:ILE:HD12	1.72	0.52
50:Y4:40:HIS:N	50:Y4:41:PRO:CD	2.73	0.52
37:YR:52:ILE:CG2	37:YR:94:TYR:HD1	2.22	0.52
37:YR:53:HIS:HA	37:YR:56:LYS:HD3	1.90	0.52
41:YV:35:LEU:HD21	41:YV:57:VAL:CG2	2.30	0.52
25:RA:2619:C:H1'	28:RE:156:MET:HE1	1.92	0.52
28:YE:137:HIS:HB3	28:YE:138:PRO:CD	2.37	0.52
27:RD:77:ALA:HB2	27:RD:97:TYR:CG	2.44	0.52
38:YS:25:ARG:HH11	38:YS:25:ARG:CB	2.22	0.52
15:QO:62:GLN:N	15:QO:65:ARG:HH12	2.06	0.52
47:Y1:4:VAL:HG22	47:Y1:5:CYS:N	2.25	0.52
10:XJ:39:PRO:HB3	10:XJ:70:ARG:NH1	2.24	0.52
11:XK:91:ARG:NH2	18:XR:88:LYS:NZ	2.57	0.52
11:QK:91:ARG:NH2	18:QR:88:LYS:NZ	2.58	0.52
25:RA:2591:C:OP2	27:RD:238:GLY:HA3	2.09	0.52
42:YW:25:ARG:HH11	42:YW:25:ARG:HB2	1.74	0.52
25:RA:1113:U:OP1	31:RH:2:SER:N	2.42	0.52
1:XA:64:G:N2	1:XA:68:G:O6	2.34	0.52
31:YH:121:ILE:HG12	31:YH:135:GLY:HA3	1.91	0.52
25:RA:1028:A:N6	25:RA:1125:G:H2'	2.24	0.52
1:QA:1241:G:H2'	1:QA:1242:C:C6	2.44	0.52
25:YA:774:A:H2	25:YA:787:U:HO2'	1.56	0.52
7:QG:89:MET:CE	7:QG:156:TRP:H	2.22	0.52
4:XD:26:CYS:HB3	4:XD:31:CYS:SG	2.49	0.52
54:Y8:61:LEU:O	54:Y8:62:LEU:CB	2.57	0.52
25:YA:1251:C:OP1	40:YU:10:ARG:HG3	2.09	0.52
19:XS:65:ASN:ND2	19:XS:65:ASN:H	2.08	0.52
10:XJ:6:ILE:CG2	10:XJ:98:ILE:HG13	2.21	0.52
27:YD:36:PRO:HA	27:YD:62:TYR:O	2.09	0.52
30:RG:124:SER:HB2	30:RG:131:TYR:CE1	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:RU:88:ILE:CD1	40:RU:88:ILE:H	2.05	0.52
2:QB:188:ALA:HB3	2:QB:200:ILE:CG2	2.40	0.52
41:YV:34:GLU:O	41:YV:36:PRO:HD3	2.10	0.52
33:YN:103:VAL:O	33:YN:106:MET:N	2.42	0.52
36:RQ:132:VAL:HG11	45:RZ:81:ARG:CZ	2.39	0.52
48:Y2:50:ILE:CD1	48:Y2:51:ARG:N	2.61	0.52
8:QH:100:ILE:CB	8:QH:125:ARG:HH12	2.21	0.52
26:RB:56:G:P	30:RG:27:ASN:HD21	2.32	0.52
25:YA:2372:G:H4'	52:Y6:46:HIS:NE2	2.25	0.52
30:YG:124:SER:HB2	30:YG:131:TYR:CE1	2.44	0.52
16:XP:4:ILE:N	16:XP:4:ILE:HD12	2.23	0.52
20:QT:89:ARG:HH22	20:QT:106:ALA:HB2	1.75	0.52
10:XJ:4:ILE:HB	10:XJ:74:ILE:CD1	2.36	0.52
1:XA:1322:C:O2'	1:XA:1323:G:H5'	2.10	0.52
39:RT:23:ARG:HG2	39:RT:120:ARG:HH12	1.75	0.52
39:RT:94:ALA:O	39:RT:95:ARG:HB3	2.09	0.52
19:QS:50:ALA:CB	19:QS:57:HIS:HB3	2.37	0.52
33:YN:114:ARG:C	33:YN:116:LEU:H	2.13	0.52
27:RD:134:ARG:HB2	27:RD:135:PHE:HD2	1.75	0.52
9:QI:113:LYS:HD3	9:QI:119:ALA:O	2.09	0.52
38:YS:62:LYS:HB3	38:YS:97:ARG:CD	2.39	0.52
48:Y2:7:ARG:NH1	48:Y2:7:ARG:HG3	2.25	0.52
25:RA:2439:A:H5'	25:RA:2439:A:H8	1.74	0.52
47:R1:4:VAL:HG22	47:R1:5:CYS:N	2.25	0.52
3:QC:140:ARG:HG3	3:QC:140:ARG:HH11	1.75	0.52
9:QI:13:ALA:HB2	9:QI:68:GLY:HA3	1.91	0.52
39:YT:100:TYR:HB3	39:YT:103:ARG:NH1	2.25	0.52
29:YF:162:LEU:HD23	29:YF:165:ARG:NH2	2.25	0.52
49:R3:21:ALA:O	49:R3:25:ALA:N	2.41	0.52
25:YA:1203:G:H3'	25:YA:1204:A:H5''	1.92	0.52
17:XQ:62:SER:HB3	17:XQ:72:ARG:HH21	1.72	0.52
34:YO:79:PHE:CD2	39:YT:72:VAL:HG22	2.45	0.52
1:QA:523:A:H61	12:QL:92:ASP:HB2	1.73	0.52
2:XB:233:SER:OG	2:XB:234:PRO:HD2	2.09	0.52
27:RD:210:GLY:O	27:RD:213:ARG:N	2.43	0.52
2:QB:9:GLU:OE2	2:QB:9:GLU:N	2.42	0.52
26:YB:52:A:H62	38:YS:33:LYS:HG3	1.75	0.52
29:RF:140:LEU:O	29:RF:143:ALA:HB3	2.09	0.52
4:QD:10:ARG:O	4:QD:14:ARG:HB2	2.08	0.52
44:YY:91:GLU:HG3	44:YY:92:ASN:N	2.25	0.52
50:R4:63:TYR:C	50:R4:65:ASP:N	2.62	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:XM:73:GLU:O	13:XM:76:ALA:N	2.42	0.52
13:XM:92:HIS:CD2	13:XM:98:VAL:HG21	2.43	0.52
3:XC:112:SER:HB3	3:XC:115:LEU:HD12	1.92	0.52
40:RU:92:ARG:NH2	40:RU:94:ASN:HD22	2.07	0.52
41:RV:34:GLU:O	41:RV:36:PRO:HD3	2.10	0.52
38:RS:83:LYS:O	38:RS:109:GLY:CA	2.46	0.52
36:YQ:81:VAL:C	36:YQ:82:ARG:CG	2.76	0.52
25:RA:675:A:N3	25:RA:2443:C:O2'	2.38	0.52
38:RS:86:ALA:O	38:RS:87:PHE:HB3	2.10	0.52
52:Y6:30:THR:HG23	52:Y6:30:THR:O	2.09	0.52
33:RN:103:VAL:O	33:RN:106:MET:N	2.42	0.52
16:QP:34:GLU:OE1	16:QP:55:ARG:HD3	2.10	0.52
16:XP:1:MET:SD	16:XP:3:LYS:HE3	2.49	0.52
16:XP:34:GLU:OE1	16:XP:55:ARG:HD3	2.10	0.52
41:RV:41:GLY:HA3	41:RV:46:VAL:CG1	2.38	0.52
10:QJ:4:ILE:HB	10:QJ:74:ILE:CD1	2.37	0.52
13:XM:34:LEU:HD12	13:XM:41:PRO:HG3	1.92	0.52
18:XR:44:LEU:N	18:XR:44:LEU:HD12	2.24	0.52
49:R3:56:VAL:CG1	49:R3:57:GLU:H	2.20	0.52
49:Y3:9:VAL:HG12	49:Y3:32:GLN:HE22	1.74	0.52
25:RA:2723:C:OP1	37:RR:3:HIS:HD2	1.92	0.52
39:RT:16:ARG:HD3	39:RT:19:LEU:HG	1.92	0.52
9:XI:13:ALA:HB2	9:XI:68:GLY:HA3	1.91	0.52
27:YD:174:ILE:CD1	27:YD:174:ILE:N	2.73	0.52
7:QG:85:TYR:HE1	7:QG:154:TYR:HE1	1.56	0.52
42:YW:9:TYR:CD2	42:YW:102:HIS:HE1	2.28	0.52
25:RA:2853:C:H2'	25:RA:2854:G:C8	2.45	0.52
25:YA:1681:G:O2'	25:YA:1762:A:O2'	2.16	0.52
25:YA:1169:G:H1	25:YA:1180:C:H42	1.57	0.52
4:XD:176:LEU:HD12	4:XD:182:LYS:O	2.10	0.52
1:XA:1126:U:H5	1:XA:1127:G:C4	2.27	0.52
1:XA:960:U:H1'	1:XA:1223:C:H5'	1.92	0.52
32:YI:83:ALA:O	32:YI:85:GLU:N	2.43	0.52
28:RE:39:PRO:HG2	28:RE:40:GLU:OE1	2.09	0.52
31:RH:24:VAL:O	31:RH:24:VAL:HG23	2.09	0.52
39:YT:42:ILE:N	39:YT:42:ILE:HD12	2.25	0.52
25:RA:1289:C:H2'	25:RA:1290:C:H6	1.73	0.52
31:YH:24:VAL:O	31:YH:24:VAL:HG23	2.09	0.52
1:QA:1112:C:H1'	3:QC:179:ARG:HH11	1.73	0.52
1:QA:1119:C:H2'	1:QA:1120:G:C8	2.45	0.52
25:RA:270(R):G:H2'	25:RA:270(S):G:C8	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:106:TYR:CE1	4:QD:112:VAL:O	2.62	0.52
4:QD:31:CYS:O	4:QD:32:ALA:HB3	2.10	0.52
13:QM:77:ASN:ND2	50:R4:71:ARG:NH1	2.57	0.52
28:YE:176:ILE:HG22	28:YE:176:ILE:O	2.10	0.52
19:XS:3:ARG:HG3	19:XS:4:SER:N	2.24	0.52
50:Y4:48:ARG:CZ	50:Y4:51:ASP:HA	2.40	0.52
2:XB:200:ILE:HG22	2:XB:201:ILE:N	2.24	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:55:ASN:C	28:RE:57:LYS:N	2.62	0.52
13:QM:81:LEU:HD13	13:QM:88:ARG:HD2	1.91	0.52
1:QA:972:C:H4'	10:QJ:57:LYS:HG3	1.90	0.52
33:YN:7:LYS:HD3	33:YN:9:VAL:N	2.25	0.52
38:YS:106:ARG:HA	38:YS:110:LEU:CG	2.39	0.52
4:QD:29:PRO:CG	4:QD:30:LYS:NZ	2.73	0.52
52:R6:30:THR:HG23	52:R6:30:THR:O	2.09	0.52
37:RR:56:LYS:C	37:RR:58:GLY:N	2.62	0.52
27:RD:133:LEU:HG	27:RD:189:CYS:O	2.10	0.52
38:YS:67:ARG:HH11	38:YS:67:ARG:HB2	1.65	0.52
34:YO:2:ILE:CD1	34:YO:82:ASN:HD22	2.14	0.52
31:RH:4:ILE:O	31:RH:6:ARG:N	2.43	0.52
27:YD:133:LEU:HG	27:YD:189:CYS:O	2.10	0.52
1:XA:1132:C:H2'	1:XA:1133:G:H8	1.75	0.52
9:XI:3:GLN:HB3	9:XI:20:ARG:CG	2.40	0.52
39:YT:23:ARG:HG2	39:YT:120:ARG:HH12	1.75	0.52
12:QL:32:PHE:HE1	12:QL:86:ARG:HG3	1.73	0.52
33:YN:112:LEU:C	33:YN:112:LEU:HD23	2.30	0.52
28:RE:116:VAL:HG22	28:RE:122:PHE:HB2	1.91	0.52
35:RP:13:ASN:O	35:RP:14:LYS:C	2.49	0.52
49:R3:6:VAL:HG12	49:R3:56:VAL:HG22	1.91	0.52
1:XA:1305:G:H5'	21:XU:4:GLY:HA3	1.92	0.52
49:R3:7:LYS:HE2	49:R3:32:GLN:NE2	2.25	0.52
6:QF:10:LEU:HD13	6:QF:61:LEU:HD11	1.92	0.52
25:RA:2061:G:OP2	25:RA:2502:G:H5'	2.10	0.52
25:YA:878:A:N6	25:YA:899:A:O2'	2.42	0.52
25:RA:247:G:O6	54:R8:12:LYS:NZ	2.28	0.52
5:QE:87:SER:HB3	5:QE:131:ILE:CD1	2.38	0.52
25:RA:2507:C:H2'	25:RA:2508:G:O4'	2.09	0.52
28:RE:170:LEU:CD2	28:RE:185:LYS:HB2	2.40	0.52
1:XA:1273:G:H3'	1:XA:1274:G:H8	1.74	0.52
39:YT:99:LEU:HB2	39:YT:101:PHE:CE1	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1416:G:H2'	25:RA:1417:C:C6	2.45	0.52
1:XA:246:A:N6	1:XA:281:G:H1'	2.24	0.52
33:YN:12:ARG:NH1	33:YN:50:ASP:OD1	2.43	0.52
25:RA:2564:A:OP1	25:RA:2648:C:H4'	2.10	0.52
4:XD:155:LEU:O	4:XD:159:ARG:HG2	2.10	0.52
25:YA:2753:A:O2'	55:Y9:15:LYS:NZ	2.43	0.52
25:RA:2300:G:H2'	25:RA:2301:C:C6	2.45	0.52
1:QA:1342:C:H4'	9:QI:125:TYR:HB3	1.91	0.52
25:RA:2319:G:N7	38:RS:3:ARG:HB3	2.24	0.52
25:RA:270(S):G:C2'	25:RA:270(T):G:H5'	2.40	0.52
47:Y1:83:GLU:CG	47:Y1:84:GLY:N	2.71	0.52
44:RY:91:GLU:HG3	44:RY:92:ASN:N	2.25	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
25:RA:593:G:O2'	54:R8:61:LEU:HD13	2.10	0.52
19:QS:63:THR:O	19:QS:66:MET:HG2	2.09	0.52
13:XM:98:VAL:HG12	13:XM:98:VAL:O	2.10	0.52
27:YD:35:LYS:HG2	27:YD:64:ILE:HG22	1.92	0.52
34:YO:43:VAL:HG23	34:YO:56:ASP:O	2.10	0.52
38:YS:89:ARG:HG2	38:YS:89:ARG:HH11	1.74	0.52
3:QC:22:TRP:CZ3	3:QC:32:LEU:HD12	2.45	0.52
30:RG:16:ARG:HH11	30:RG:16:ARG:HG2	1.74	0.52
30:RG:97:ASP:N	30:RG:100:TRP:HD1	2.05	0.52
29:YF:108:LYS:O	29:YF:112:MET:HG3	2.10	0.52
41:RV:3:ALA:HB3	41:RV:14:VAL:HG23	1.92	0.52
14:QN:7:ILE:CG1	14:QN:8:GLU:N	2.72	0.52
33:RN:112:LEU:HD23	33:RN:112:LEU:C	2.30	0.52
25:RA:336:C:O2'	44:RY:35:TYR:OH	2.27	0.52
3:QC:150:LYS:HG3	3:QC:169:ALA:HB2	1.92	0.52
34:YO:113:LYS:HG2	34:YO:117:LEU:CD1	2.38	0.52
11:XK:46:GLY:HA2	11:XK:50:TYR:O	2.10	0.52
16:XP:45:THR:HG23	16:XP:46:PRO:CD	2.40	0.52
15:XO:26:GLU:OE2	15:XO:77:ARG:NH1	2.43	0.52
12:QL:127:GLU:O	12:QL:128:ALA:HB3	2.10	0.52
1:QA:1395:C:O2'	1:QA:1401:G:O2'	2.14	0.52
6:XF:99:ALA:HB1	18:XR:23:LYS:NZ	2.25	0.52
53:R7:38:GLY:O	53:R7:39:ARG:C	2.48	0.52
7:QG:106:GLN:O	7:QG:110:GLN:HG3	2.09	0.52
31:RH:2:SER:O	31:RH:3:ARG:C	2.47	0.52
9:QI:13:ALA:HB2	9:QI:67:GLY:C	2.28	0.52
53:Y7:38:GLY:O	53:Y7:39:ARG:C	2.48	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RH:121:ILE:HG12	31:RH:135:GLY:HA3	1.91	0.52
38:RS:95:HIS:CG	38:RS:96:GLY:N	2.77	0.52
25:RA:2572:A:OP1	25:RA:2574:G:O2'	2.26	0.52
1:XA:1034:G:H2'	1:XA:1035:A:C8	2.44	0.52
25:RA:2893:G:H5''	25:RA:2894:G:H5'	1.91	0.52
2:QB:92:TYR:CE1	2:QB:151:GLY:HA3	2.45	0.52
1:QA:551:U:H2'	1:QA:552:U:C6	2.45	0.52
55:R9:27:CYS:SG	55:R9:28:GLU:N	2.83	0.52
7:QG:151:TYR:HA	7:QG:153:HIS:CE1	2.45	0.52
25:YA:583:G:OP2	40:YU:10:ARG:NH1	2.43	0.52
27:YD:43:ARG:NH1	27:YD:44:ASN:OD1	2.42	0.52
28:RE:179:GLU:HA	28:RE:179:GLU:OE1	2.10	0.52
28:YE:55:ASN:C	28:YE:57:LYS:N	2.62	0.52
2:XB:170:GLU:HA	2:XB:172:ILE:CD1	2.40	0.52
2:XB:80:ILE:HD11	2:XB:208:ILE:CG2	2.23	0.52
28:RE:54:GLN:H	28:RE:54:GLN:NE2	2.08	0.52
28:YE:61:ARG:O	28:YE:63:LEU:N	2.42	0.52
40:YU:59:ARG:O	40:YU:63:VAL:HG23	2.10	0.52
33:RN:57:ALA:O	33:RN:58:ASP:HB3	2.09	0.52
51:Y5:55:ARG:HG3	51:Y5:57:VAL:H	1.74	0.52
13:QM:34:LEU:HD12	13:QM:41:PRO:HG3	1.92	0.52
33:RN:114:ARG:C	33:RN:116:LEU:H	2.13	0.52
15:QO:16:ALA:HB1	15:QO:21:ASP:HB3	1.92	0.52
12:XL:127:GLU:O	12:XL:128:ALA:HB3	2.10	0.52
20:XT:83:ARG:O	20:XT:86:ARG:HB3	2.09	0.52
34:RO:4:PRO:O	34:RO:5:GLN:CB	2.58	0.52
10:QJ:39:PRO:HB3	10:QJ:70:ARG:NH1	2.23	0.52
18:QR:64:ARG:O	18:QR:66:LEU:N	2.43	0.52
3:XC:140:ARG:HH11	3:XC:140:ARG:HG3	1.75	0.52
25:RA:443:A:H1'	25:RA:1201:C:O4'	2.08	0.52
39:YT:16:ARG:HD3	39:YT:19:LEU:HG	1.92	0.52
2:QB:232:PRO:O	2:QB:233:SER:O	2.27	0.52
2:XB:53:ARG:O	2:XB:56:ARG:HB2	2.10	0.52
25:RA:2335:A:HO2'	25:RA:2336:A:P	2.32	0.52
28:YE:170:LEU:CD2	28:YE:185:LYS:HB2	2.40	0.52
48:R2:9:GLN:O	48:R2:12:GLU:HB3	2.10	0.52
25:RA:1796:U:H2'	25:RA:1797:C:C6	2.45	0.52
40:YU:107:ALA:O	40:YU:111:GLU:OE1	2.28	0.52
26:YB:89:G:C6	26:YB:89(A):A:C6	2.98	0.52
37:RR:41:ALA:O	37:RR:43:GLU:N	2.43	0.52
25:YA:2096:U:H3	25:YA:2193:G:H1	1.57	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1080:A:H5''	5:XE:16:THR:HG21	1.91	0.52
25:RA:38:A:H2'	25:RA:39:C:C6	2.44	0.52
1:XA:1008:C:H42	1:XA:1021:G:H1	1.57	0.52
25:YA:2645:G:H3'	25:YA:2646:C:H5'	1.92	0.52
1:XA:430:A:OP1	4:XD:9:CYS:N	2.37	0.52
47:Y1:91:LYS:HE3	47:Y1:91:LYS:CA	2.40	0.52
13:XM:66:LEU:O	13:XM:68:GLY:N	2.43	0.52
13:XM:90:LEU:CB	13:XM:93:ARG:HD2	2.40	0.52
31:YH:153:LYS:HG3	31:YH:161:GLY:HA2	1.91	0.52
35:RP:147:LEU:O	35:RP:148:LEU:CB	2.57	0.52
28:RE:54:GLN:O	28:RE:55:ASN:HB2	2.09	0.52
28:RE:64:LYS:C	28:RE:66:HIS:H	2.12	0.52
50:R4:40:HIS:N	50:R4:41:PRO:CD	2.73	0.52
2:XB:5:ILE:HD13	2:XB:5:ILE:N	2.25	0.52
34:YO:14:THR:HG21	34:YO:86:ILE:HD13	1.91	0.52
25:YA:2250:G:C4	36:YQ:82:ARG:HG3	2.45	0.52
39:YT:111:ARG:O	39:YT:112:ARG:CG	2.55	0.52
30:YG:34:LEU:HD13	30:YG:34:LEU:C	2.30	0.52
3:XC:40:ARG:O	3:XC:44:GLU:HG3	2.10	0.52
34:RO:2:ILE:N	34:RO:2:ILE:HD12	2.24	0.52
52:Y6:34:LEU:HD23	52:Y6:36:LEU:HD22	1.92	0.52
5:XE:101:ILE:HD13	5:XE:101:ILE:N	2.25	0.52
1:QA:880:C:OP1	12:QL:8:ASN:ND2	2.34	0.52
25:RA:747:U:C4	25:RA:2613:U:C4	2.98	0.52
8:XH:102:ARG:NH1	8:XH:105:ARG:HH22	2.08	0.52
29:RF:108:LYS:O	29:RF:112:MET:HG3	2.10	0.52
1:QA:1494:G:O6	58:QA:1670:PAR:H42	2.10	0.52
1:QA:687:A:H4'	1:QA:688:G:O5'	2.10	0.52
25:RA:531:C:H4'	25:RA:532:A:H5''	1.91	0.52
4:XD:162:LEU:HD11	4:XD:181:MET:HB3	1.92	0.52
47:R1:76:ARG:NH1	47:R1:76:ARG:HG2	2.19	0.52
34:RO:23:ARG:O	34:RO:39:ILE:HB	2.10	0.52
1:XA:737:A:H2'	1:XA:738:C:H6	1.75	0.52
6:QF:99:ALA:HB1	18:QR:23:LYS:NZ	2.25	0.52
25:RA:330:A:H2	25:RA:1210:A:H2'	1.75	0.52
25:RA:2543:G:H21	25:RA:2646:C:H5''	1.73	0.52
40:RU:39:LEU:O	40:RU:40:PHE:C	2.48	0.52
1:QA:10:A:H2'	1:QA:11:G:C8	2.44	0.52
25:YA:2818:G:OP2	37:YR:42:LYS:NZ	2.41	0.52
1:QA:1292:U:H2'	1:QA:1293:G:H8	1.74	0.52
40:RU:107:ALA:O	40:RU:111:GLU:OE1	2.28	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:65:ARG:NH1	4:XD:70:ILE:O	2.43	0.52
25:YA:524:U:H2'	25:YA:525:U:C6	2.45	0.52
25:RA:1068:G:O2'	25:RA:1096:A:N3	2.43	0.52
44:YY:9:LYS:O	44:YY:9:LYS:HG2	2.10	0.52
43:YX:52:VAL:HG12	43:YX:52:VAL:O	2.09	0.52
37:YR:41:ALA:O	37:YR:43:GLU:N	2.43	0.52
25:RA:2776:A:OP1	25:RA:2776:A:H3'	2.10	0.52
1:QA:745:C:OP1	1:QA:851:G:O2'	2.28	0.52
44:RY:75:ILE:C	44:RY:75:ILE:HD13	2.30	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
19:QS:40:ILE:HG23	19:QS:67:VAL:O	2.11	0.51
50:Y4:68:ARG:HD3	50:Y4:69:LYS:HG2	1.92	0.51
35:YP:112:LEU:HD22	35:YP:113:LYS:H	1.74	0.51
13:QM:98:VAL:O	13:QM:98:VAL:HG12	2.10	0.51
30:RG:34:LEU:HD13	30:RG:34:LEU:C	2.30	0.51
33:YN:94:HIS:O	33:YN:95:PRO:O	2.28	0.51
3:QC:35:GLU:OE2	3:QC:95:THR:HG23	2.10	0.51
16:QP:21:VAL:O	16:QP:33:ILE:HG12	2.11	0.51
16:XP:21:VAL:O	16:XP:33:ILE:HG12	2.11	0.51
37:RR:52:ILE:CG2	37:RR:94:TYR:HD1	2.22	0.51
35:RP:88:LEU:HD23	35:RP:89:ALA:N	2.24	0.51
25:YA:1020:A:N1	25:YA:1141:U:H2'	2.25	0.51
40:RU:59:ARG:O	40:RU:63:VAL:HG23	2.10	0.51
33:RN:108:PRO:O	33:RN:113:GLY:HA3	2.10	0.51
25:YA:2562:U:H1'	34:YO:23:ARG:NH1	2.25	0.51
34:RO:24:VAL:HG21	34:RO:32:TYR:O	2.10	0.51
1:XA:522:C:H41	12:XL:53:ARG:NH2	2.08	0.51
36:YQ:119:ARG:HG2	36:YQ:119:ARG:NH1	2.20	0.51
7:XG:16:LEU:HD11	9:XI:45:ALA:HB2	1.92	0.51
50:R4:14:ILE:HG23	50:R4:14:ILE:O	2.10	0.51
29:YF:125:LEU:HA	29:YF:194:MET:O	2.10	0.51
12:XL:23:LYS:O	12:XL:24:VAL:HG23	2.10	0.51
17:QQ:48:GLU:O	17:QQ:49:GLU:C	2.48	0.51
25:YA:64:A:C5	43:YX:66:LEU:HD13	2.45	0.51
2:XB:134:GLU:HB3	2:XB:138:LEU:CD1	2.39	0.51
9:XI:88:TYR:O	9:XI:89:ASN:CB	2.58	0.51
27:RD:174:ILE:N	27:RD:174:ILE:CD1	2.73	0.51
42:RW:28:SER:HB3	42:RW:31:GLU:HB2	1.91	0.51
4:XD:106:TYR:CE1	4:XD:112:VAL:O	2.62	0.51
31:RH:55:PRO:HG2	31:RH:61:HIS:ND1	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:389:G:H1	35:RP:71:VAL:HG12	1.76	0.51
25:YA:1265:A:H8	25:YA:1265:A:OP1	1.92	0.51
26:RB:37:C:O2	38:RS:95:HIS:NE2	2.39	0.51
4:XD:127:THR:CG2	4:XD:128:VAL:N	2.73	0.51
25:RA:2150:U:H2'	25:RA:2151:G:H8	1.73	0.51
25:RA:1289:C:H2'	25:RA:1290:C:C6	2.45	0.51
7:XG:89:MET:CE	7:XG:156:TRP:H	2.22	0.51
25:YA:1200:C:H1'	40:YU:2:PRO:HG2	1.92	0.51
34:YO:16:ALA:HA	34:YO:46:ALA:HB2	1.92	0.51
25:YA:2832:U:O2'	25:YA:2833:G:OP2	2.24	0.51
43:RX:47:PHE:CD1	43:RX:47:PHE:N	2.78	0.51
1:XA:618:C:H5'	1:XA:619:U:H5''	1.92	0.51
3:XC:175:LEU:HD12	3:XC:175:LEU:H	1.75	0.51
50:Y4:14:ILE:O	50:Y4:14:ILE:HG23	2.10	0.51
49:R3:49:LYS:HG2	49:R3:49:LYS:O	2.10	0.51
49:Y3:49:LYS:O	49:Y3:49:LYS:HG2	2.10	0.51
43:RX:52:VAL:O	43:RX:52:VAL:HG12	2.09	0.51
44:RY:9:LYS:HG2	44:RY:9:LYS:O	2.10	0.51
25:RA:833:U:H2'	25:RA:834:C:C6	2.45	0.51
2:QB:53:ARG:O	2:QB:56:ARG:HB2	2.10	0.51
13:QM:66:LEU:O	13:QM:68:GLY:N	2.43	0.51
19:XS:40:ILE:HG23	19:XS:67:VAL:O	2.11	0.51
28:YE:54:GLN:O	28:YE:55:ASN:HB2	2.09	0.51
28:YE:77:ILE:O	28:YE:78:LEU:C	2.47	0.51
33:YN:134:ARG:O	33:YN:136:GLU:N	2.43	0.51
27:YD:67:PHE:CE1	27:YD:157:ARG:NH2	2.79	0.51
35:RP:112:LEU:HD22	35:RP:113:LYS:N	2.25	0.51
42:YW:14:PRO:O	42:YW:17:VAL:N	2.42	0.51
36:RQ:134:ARG:HH12	45:RZ:119:GLU:HG3	1.74	0.51
3:QC:22:TRP:CH2	3:QC:32:LEU:HB2	2.45	0.51
3:QC:40:ARG:O	3:QC:44:GLU:HG3	2.11	0.51
3:XC:20:SER:CB	3:XC:40:ARG:HH22	2.14	0.51
3:XC:35:GLU:OE2	3:XC:95:THR:HG23	2.10	0.51
44:RY:61:ILE:HG23	44:RY:62:GLU:N	2.24	0.51
7:QG:15:ASP:CB	7:QG:20:ASP:H	2.13	0.51
30:RG:97:ASP:O	30:RG:101:ILE:HG23	2.10	0.51
31:YH:6:ARG:C	31:YH:8:PRO:HD2	2.30	0.51
25:YA:2451:A:N1	56:Z8:76:PPU:HE2	2.25	0.51
36:RQ:64:ILE:HA	36:RQ:106:VAL:CG1	2.33	0.51
8:XH:51:VAL:HG11	8:XH:60:ARG:HG3	1.92	0.51
30:YG:97:ASP:O	30:YG:101:ILE:HG23	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:YV:14:VAL:HA	41:YV:18:LEU:HD12	1.93	0.51
34:YO:23:ARG:O	34:YO:39:ILE:HB	2.09	0.51
35:RP:31:ALA:C	35:RP:32:THR:HG23	2.31	0.51
25:YA:819:A:OP2	25:YA:1187:G:N2	2.40	0.51
25:RA:2008:C:H2'	25:RA:2009:G:H8	1.76	0.51
6:QF:10:LEU:HD13	6:QF:61:LEU:HD13	1.93	0.51
6:XF:75:LEU:HD23	6:XF:79:LEU:HG	1.91	0.51
1:QA:923:A:N6	1:QA:1392:G:O6	2.43	0.51
1:QA:34:C:H2'	1:QA:35:G:C8	2.45	0.51
4:XD:196:LEU:HD12	4:XD:196:LEU:H	1.75	0.51
43:RX:65:ARG:H	43:RX:65:ARG:CD	2.23	0.51
1:XA:15:G:H4'	5:XE:24:ARG:HH12	1.75	0.51
29:RF:162:LEU:HD23	29:RF:165:ARG:NH2	2.25	0.51
1:XA:271:C:H2'	1:XA:272:C:H6	1.74	0.51
48:Y2:15:LYS:H	48:Y2:67:LYS:HE2	1.73	0.51
4:XD:147:ALA:HA	4:XD:182:LYS:HA	1.91	0.51
7:XG:151:TYR:HA	7:XG:153:HIS:CE1	2.45	0.51
25:YA:1929:G:H4'	25:YA:1930:G:OP1	2.09	0.51
4:QD:65:ARG:NH1	4:QD:70:ILE:O	2.43	0.51
5:QE:60:TYR:CE1	5:QE:64:ARG:NH2	2.77	0.51
6:XF:101:ALA:HA	18:XR:28:GLU:OE1	2.10	0.51
39:RT:20:PRO:HD2	39:RT:86:ILE:HG23	1.92	0.51
25:RA:1462:C:H4'	25:RA:2703:C:H5'	1.91	0.51
49:R3:17:LYS:HA	49:R3:20:LYS:HD2	1.93	0.51
31:RH:126:PRO:HD2	31:RH:127:GLU:N	2.26	0.51
31:RH:89:ILE:O	31:RH:89:ILE:CG1	2.57	0.51
44:YY:75:ILE:C	44:YY:75:ILE:HD13	2.31	0.51
28:YE:95:ILE:H	28:YE:95:ILE:CD1	2.19	0.51
28:RE:105:THR:HB	28:RE:197:ILE:HG12	1.92	0.51
28:RE:105:THR:HG23	28:RE:166:THR:OG1	2.10	0.51
1:XA:1313:U:OP1	19:XS:5:LEU:HB2	2.10	0.51
3:QC:11:ARG:O	3:QC:13:GLY:N	2.43	0.51
27:YD:30:GLU:HG3	27:YD:63:ARG:NH2	2.26	0.51
35:RP:112:LEU:HD11	35:RP:114:ILE:CG2	2.40	0.51
35:YP:112:LEU:HD11	35:YP:114:ILE:CG2	2.40	0.51
13:QM:90:LEU:CB	13:QM:93:ARG:HD2	2.41	0.51
34:RO:43:VAL:HG23	34:RO:56:ASP:O	2.10	0.51
28:YE:203:LYS:HE3	28:YE:204:ALA:CB	2.40	0.51
25:RA:2420:C:H41	54:R8:30:ARG:HD2	1.75	0.51
41:YV:35:LEU:CD2	41:YV:57:VAL:HG22	2.32	0.51
5:QE:107:ARG:O	5:QE:108:ALA:C	2.49	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:YG:44:GLY:CA	30:YG:88:ILE:HD11	2.40	0.51
51:Y5:40:LYS:HD3	51:Y5:46:CYS:SG	2.50	0.51
21:XU:3:LYS:HB3	21:XU:14:TRP:CD1	2.46	0.51
51:R5:40:LYS:HD3	51:R5:46:CYS:SG	2.50	0.51
1:XA:1220:G:O3'	19:XS:36:ARG:HD3	2.10	0.51
25:YA:1728:G:H3'	25:YA:1729:A:H5''	1.92	0.51
4:XD:83:SER:HA	4:XD:89:THR:HG23	1.92	0.51
3:XC:22:TRP:CZ3	3:XC:32:LEU:HD12	2.45	0.51
1:XA:346:G:H1'	1:XA:347:G:H5'	1.92	0.51
6:QF:69:GLU:C	6:QF:71:ARG:H	2.13	0.51
12:XL:24:VAL:CG1	12:XL:24:VAL:O	2.58	0.51
6:XF:30:LEU:O	6:XF:35:ALA:HB3	2.10	0.51
1:QA:475:G:H2'	1:QA:476:G:C8	2.45	0.51
6:QF:63:TYR:N	6:QF:63:TYR:HD2	2.09	0.51
3:QC:195:VAL:HG12	3:QC:196:LEU:H	1.75	0.51
4:QD:196:LEU:HD12	4:QD:196:LEU:H	1.75	0.51
1:QA:503:C:H2'	1:QA:504:C:H6	1.74	0.51
19:XS:15:LEU:H	19:XS:15:LEU:HD23	1.75	0.51
7:XG:11:GLN:C	7:XG:12:LEU:HD22	2.31	0.51
33:RN:16:ILE:HG22	33:RN:17:ASP:N	2.26	0.51
23:XY:29:U:H2'	23:XY:30:C:C6	2.45	0.51
36:RQ:25:ASP:HA	36:RQ:100:GLY:O	2.11	0.51
4:QD:127:THR:CG2	4:QD:128:VAL:N	2.73	0.51
25:RA:813:U:H2'	25:RA:814:C:C6	2.46	0.51
1:QA:64:G:H4'	1:QA:65:U:O5'	2.11	0.51
33:RN:12:ARG:NH1	33:RN:50:ASP:OD1	2.43	0.51
33:YN:12:ARG:NH1	33:YN:50:ASP:OD2	2.40	0.51
39:RT:99:LEU:HB2	39:RT:101:PHE:CE1	2.45	0.51
1:QA:537:G:H5''	12:QL:113:ARG:HH12	1.73	0.51
25:RA:84:A:N1	25:RA:98:G:O2'	2.30	0.51
25:RA:507:A:C5'	25:RA:508:G:H5'	2.40	0.51
25:YA:1778:U:H2'	25:YA:1784:A:N6	2.25	0.51
25:RA:270(U):C:H2'	25:RA:270(V):G:H8	1.76	0.51
25:YA:414:C:O2	25:YA:1864:U:O2'	2.27	0.51
41:RV:75:PHE:CD1	41:RV:75:PHE:C	2.83	0.51
41:YV:75:PHE:CD1	41:YV:75:PHE:C	2.83	0.51
1:XA:1111:A:N1	3:XC:177:THR:HG23	2.25	0.51
25:YA:363(A):A:H2'	25:YA:363(B):G:H8	1.76	0.51
1:QA:598:U:H4'	8:QH:94:TYR:CD2	2.45	0.51
25:RA:2224:G:OP1	27:RD:268:ARG:HD3	2.09	0.51
4:QD:12:CYS:HA	4:QD:19:LEU:HD23	1.83	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:QS:3:ARG:HG3	19:QS:4:SER:N	2.24	0.51
50:Y4:50:VAL:O	50:Y4:51:ASP:C	2.48	0.51
3:QC:112:SER:HB3	3:QC:115:LEU:HD12	1.92	0.51
27:YD:35:LYS:HD2	27:YD:104:TYR:CD1	2.45	0.51
35:RP:112:LEU:HD22	35:RP:113:LYS:H	1.75	0.51
13:QM:2:ALA:O	13:QM:9:ILE:HB	2.11	0.51
3:QC:36:ASP:HB3	3:QC:40:ARG:NH1	2.26	0.51
30:YG:37:VAL:HG22	30:YG:159:VAL:CA	2.34	0.51
6:QF:86:ARG:O	6:QF:87:ARG:CG	2.50	0.51
37:RR:28:LEU:CD2	37:RR:114:VAL:HG12	2.41	0.51
25:RA:747:U:N1	51:R5:2:ALA:HB3	2.25	0.51
21:XU:6:ARG:HE	21:XU:15:ARG:NH2	2.08	0.51
1:QA:1305:G:OP1	21:QU:2:GLY:HA2	2.09	0.51
33:RN:131:GLN:CG	33:RN:132:ALA:H	2.20	0.51
29:RF:198:ALA:C	29:RF:200:GLU:N	2.62	0.51
25:YA:1093:G:OP1	31:YH:170:ARG:HD2	2.10	0.51
10:XJ:17:ASP:HA	10:XJ:20:ALA:HB3	1.93	0.51
10:QJ:17:ASP:HA	10:QJ:20:ALA:HB3	1.93	0.51
25:RA:1331:A:O2'	25:RA:1332:G:H8	1.93	0.51
4:QD:162:LEU:HD11	4:QD:181:MET:HB3	1.92	0.51
27:YD:259:THR:O	27:YD:260:ARG:C	2.49	0.51
15:QO:17:ARG:NH1	15:QO:77:ARG:NH1	2.59	0.51
54:Y8:29:LYS:HB2	54:Y8:44:LYS:HG2	1.90	0.51
6:QF:30:LEU:O	6:QF:35:ALA:HB3	2.10	0.51
6:QF:75:LEU:HD21	6:QF:79:LEU:HD11	1.91	0.51
29:YF:65:TRP:HZ2	29:YF:72:ARG:NH2	2.09	0.51
33:YN:120:LEU:CD1	33:YN:122:VAL:HG23	2.38	0.51
42:RW:20:VAL:C	42:RW:22:ASP:N	2.59	0.51
42:RW:25:ARG:HB2	42:RW:25:ARG:HH11	1.74	0.51
1:XA:243:A:H4'	1:XA:244:U:H3'	1.93	0.51
25:YA:1055:G:H1	25:YA:1104:C:H42	1.58	0.51
1:QA:1069:C:O3'	5:QE:25:ARG:NH1	2.44	0.51
8:XH:12:ARG:NH1	8:XH:27:PRO:HD2	2.25	0.51
45:RZ:110:GLY:HA2	45:RZ:111:VAL:C	2.29	0.51
9:QI:126:SER:O	9:QI:128:ARG:N	2.35	0.51
34:RO:79:PHE:CD2	39:RT:72:VAL:HG22	2.45	0.51
25:RA:1434:A:H61	25:RA:1558:A:H62	1.58	0.51
41:RV:29:PRO:O	41:RV:61:VAL:O	2.29	0.51
1:QA:537:G:H5''	12:QL:113:ARG:NH1	2.25	0.51
39:RT:42:ILE:HD12	39:RT:42:ILE:N	2.25	0.51
3:XC:29:TYR:OH	14:XN:54:PRO:HD2	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R1:87:PRO:O	47:R1:91:LYS:HB2	2.10	0.51
44:RY:95:LYS:O	44:RY:96:ILE:O	2.28	0.51
3:XC:113:ALA:C	3:XC:115:LEU:H	2.14	0.51
3:XC:11:ARG:O	3:XC:13:GLY:N	2.43	0.51
27:RD:67:PHE:CE1	27:RD:157:ARG:NH2	2.78	0.51
35:YP:101:VAL:HA	35:YP:105:LEU:O	2.10	0.51
54:Y8:52:LYS:N	54:Y8:53:PRO:HD2	2.22	0.51
13:QM:87:TYR:C	13:QM:89:GLY:N	2.64	0.51
50:R4:36:CYS:O	50:R4:39:CYS:CB	2.55	0.51
41:RV:38:LEU:HD13	41:RV:55:ALA:HB3	1.91	0.51
38:RS:87:PHE:O	38:RS:88:ASP:O	2.29	0.51
50:Y4:42:PHE:O	50:Y4:44:THR:N	2.44	0.51
7:XG:15:ASP:CB	7:XG:20:ASP:H	2.13	0.51
30:RG:44:GLY:CA	30:RG:88:ILE:HD11	2.40	0.51
30:RG:114:ILE:CG2	30:RG:115:ARG:N	2.73	0.51
37:RR:117:VAL:CG2	37:RR:118:GLU:N	2.74	0.51
20:XT:89:ARG:HH22	20:XT:106:ALA:HB2	1.75	0.51
3:XC:22:TRP:CH2	3:XC:32:LEU:HB2	2.45	0.51
29:RF:127:GLU:O	29:RF:129:PHE:N	2.40	0.51
34:YO:4:PRO:O	34:YO:5:GLN:CB	2.58	0.51
20:QT:83:ARG:O	20:QT:86:ARG:HB3	2.10	0.51
2:QB:24:TRP:CE3	2:QB:26:PRO:HA	2.45	0.51
32:RI:93:THR:O	32:RI:97:ILE:HG12	2.10	0.51
18:XR:64:ARG:O	18:XR:66:LEU:N	2.43	0.51
2:QB:134:GLU:HB3	2:QB:138:LEU:HD12	1.93	0.51
25:RA:2746:U:H5''	31:RH:138:LYS:HE2	1.91	0.51
48:R2:15:LYS:H	48:R2:67:LYS:HE2	1.73	0.51
1:QA:438:G:H4'	4:QD:123:HIS:CE1	2.45	0.51
42:RW:9:TYR:CD2	42:RW:102:HIS:HE1	2.28	0.51
25:YA:2619:C:H1'	28:YE:156:MET:HE1	1.93	0.51
1:XA:1281:U:H5'	1:XA:1282:C:OP2	2.10	0.51
32:YI:56:LYS:HE3	32:YI:57:ARG:HG2	1.91	0.51
14:XN:44:LEU:O	14:XN:48:ALA:N	2.41	0.51
47:Y1:92:LYS:C	47:Y1:94:LEU:N	2.63	0.51
44:YY:77:PRO:O	44:YY:78:ALA:HB2	2.10	0.51
1:XA:1318:A:H4'	19:XS:11:VAL:CG1	2.37	0.51
19:XS:41:VAL:CG1	19:XS:45:VAL:N	2.74	0.51
28:YE:51:PHE:CD1	28:YE:52:LEU:N	2.76	0.51
3:XC:181:ASN:HD21	3:XC:204:LEU:CD1	2.12	0.51
3:XC:70:VAL:CG1	3:XC:71:ALA:N	2.73	0.51
28:RE:77:ILE:O	28:RE:78:LEU:C	2.48	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:YG:114:ILE:CG2	30:YG:115:ARG:N	2.73	0.51
33:RN:134:ARG:O	33:RN:136:GLU:N	2.43	0.51
13:QM:9:ILE:C	13:QM:9:ILE:HD12	2.31	0.51
2:QB:178:ARG:CD	8:QH:71:GLY:C	2.79	0.51
52:R6:9:LEU:HB3	52:R6:26:ASN:O	2.11	0.51
8:QH:102:ARG:NH1	8:QH:105:ARG:HH12	2.09	0.51
39:RT:34:VAL:CG1	39:RT:36:GLU:HG2	2.39	0.51
21:QU:3:LYS:HB3	21:QU:14:TRP:CD1	2.45	0.51
25:YA:2295:C:OP1	38:YS:10:ARG:HD2	2.11	0.51
27:RD:259:THR:O	27:RD:260:ARG:C	2.49	0.51
25:RA:566:U:OP1	35:RP:29:LYS:HE2	2.10	0.51
27:YD:94:LEU:C	27:YD:94:LEU:HD13	2.30	0.51
25:RA:2068:U:N3	25:RA:2430:A:H2	2.04	0.51
25:RA:102:G:OP2	48:R2:7:ARG:NH2	2.43	0.51
4:QD:54:TYR:CE1	4:QD:206:PHE:HE1	2.29	0.51
29:RF:127:GLU:HA	29:RF:127:GLU:OE1	2.07	0.51
25:YA:625:G:OP1	54:Y8:64:TYR:HD1	1.94	0.51
42:YW:70:TYR:HD2	42:YW:70:TYR:N	2.06	0.51
25:RA:298:G:P	44:RY:85:VAL:HG22	2.50	0.51
47:R1:8:SER:HB3	47:R1:66:HIS:CE1	2.46	0.51
19:QS:15:LEU:H	19:QS:15:LEU:HD23	1.75	0.51
25:RA:2745:C:H1'	31:RH:143:GLN:HG2	1.93	0.51
9:QI:3:GLN:HB3	9:QI:20:ARG:CG	2.40	0.51
43:YX:36:LYS:HA	43:YX:39:ILE:HD12	1.90	0.51
25:RA:1204:A:H2	25:RA:1241:A:N1	2.07	0.51
32:RI:94:ALA:H	32:RI:116:LEU:HD13	1.74	0.51
25:RA:1786:A:C2	25:RA:2606:C:H1'	2.46	0.51
1:XA:857:C:H2'	1:XA:858:G:O4'	2.10	0.51
32:YI:88:ILE:HG12	32:YI:122:GLU:N	2.25	0.51
25:YA:2064:C:H2'	25:YA:2065:C:C6	2.45	0.51
1:XA:148:G:H1	1:XA:174:C:H42	1.57	0.51
25:RA:2012:G:H4'	42:RW:96:ILE:HD11	1.92	0.51
1:XA:45:U:H2'	1:XA:46:G:C8	2.45	0.51
4:QD:112:VAL:HG12	4:QD:116:GLN:OE1	2.11	0.51
44:RY:75:ILE:CG1	44:RY:76:CYS:N	2.74	0.51
19:XS:42:PRO:HB3	50:Y4:60:GLN:OE1	2.10	0.51
39:YT:14:TYR:H	39:YT:14:TYR:HD1	1.56	0.51
39:YT:14:TYR:CD1	39:YT:14:TYR:N	2.78	0.51
13:XM:4:ILE:HG22	13:XM:5:ALA:H	1.76	0.51
2:QB:187:LEU:O	2:QB:187:LEU:HD13	2.11	0.51
8:XH:29:SER:CB	8:XH:32:LYS:HG3	2.28	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:32:LEU:O	29:RF:36:VAL:HG23	2.11	0.51
30:YG:109:VAL:O	30:YG:113:ARG:HG3	2.10	0.51
1:QA:192:U:H2'	1:QA:193:C:C6	2.46	0.51
5:QE:101:ILE:N	5:QE:101:ILE:HD13	2.25	0.51
41:RV:5:VAL:HG22	41:RV:14:VAL:HG22	1.93	0.51
37:YR:118:GLU:HG3	37:YR:118:GLU:OXT	2.11	0.51
27:YD:134:ARG:HB2	27:YD:135:PHE:HD2	1.75	0.51
34:RO:113:LYS:O	34:RO:116:SER:HB3	2.11	0.51
33:YN:108:PRO:O	33:YN:113:GLY:HA3	2.10	0.51
28:RE:119:ARG:HD3	28:RE:160:TYR:HB2	1.92	0.51
3:XC:150:LYS:HG3	3:XC:169:ALA:HB2	1.92	0.51
7:QG:16:LEU:HD11	9:QI:45:ALA:HB2	1.92	0.51
25:YA:2563:U:H1'	25:YA:2566:A:N6	2.26	0.51
16:XP:72:ARG:HD3	16:XP:73:LEU:HD23	1.91	0.51
50:R4:12:ALA:HB1	50:R4:30:GLU:H	1.76	0.51
6:XF:10:LEU:HD13	6:XF:61:LEU:HD11	1.92	0.51
51:Y5:20:ARG:C	51:Y5:22:HIS:H	2.14	0.51
4:QD:52:SER:O	4:QD:53:ASP:C	2.49	0.51
1:QA:713:G:H2'	1:QA:714:G:C8	2.46	0.51
41:YV:1:MET:HE2	41:YV:43:GLU:HG2	1.92	0.51
25:RA:1048:A:H2	25:RA:1112:G:H21	1.58	0.51
42:RW:7:ALA:HB2	42:RW:50:VAL:CG2	2.40	0.51
25:YA:1429:G:H2'	25:YA:1430:C:C6	2.46	0.51
25:RA:288:C:H2'	25:RA:289:A:C8	2.45	0.51
43:YX:5:TYR:CE2	48:Y2:30:ARG:HG3	2.45	0.51
31:YH:72:ILE:O	31:YH:75:ALA:HB3	2.11	0.51
1:XA:143:A:H2	1:XA:220:G:H1	1.58	0.51
45:YZ:10:ARG:NH2	45:YZ:26:GLY:O	2.44	0.51
16:XP:39:TYR:OH	16:XP:41:PRO:HB3	2.11	0.51
27:YD:210:GLY:O	27:YD:213:ARG:N	2.43	0.51
45:RZ:182:LYS:H	45:RZ:182:LYS:HD3	1.75	0.51
47:R1:94:LEU:O	47:R1:95:LEU:HG	2.11	0.51
25:YA:270(T):G:H5''	47:Y1:97:LEU:CD2	2.28	0.51
31:RH:131:VAL:CG1	31:RH:132:ARG:N	2.74	0.51
50:R4:61:ARG:C	50:R4:63:TYR:H	2.14	0.51
13:QM:77:ASN:OD1	50:R4:71:ARG:NH1	2.44	0.51
13:XM:87:TYR:C	13:XM:89:GLY:N	2.64	0.51
50:Y4:54:GLY:HA2	50:Y4:57:GLU:HG2	1.92	0.51
3:QC:113:ALA:C	3:QC:115:LEU:H	2.14	0.51
13:XM:2:ALA:O	13:XM:9:ILE:HB	2.10	0.51
36:YQ:80:GLU:OE1	46:Y0:7:LEU:HG	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:YV:41:GLY:N	41:YV:46:VAL:HG13	2.26	0.51
35:YP:95:VAL:HG13	35:YP:100:LEU:CD2	2.41	0.51
33:RN:6:PRO:HG2	33:RN:43:THR:OG1	2.11	0.51
49:Y3:56:VAL:CG1	49:Y3:57:GLU:N	2.74	0.51
25:RA:1279:G:C4'	37:RR:31:HIS:HD2	2.21	0.51
35:YP:31:ALA:C	35:YP:32:THR:HG23	2.31	0.51
4:XD:206:PHE:CD2	4:XD:207:TYR:CD1	2.99	0.51
11:XK:29:ILE:HG13	11:XK:44:SER:HB3	1.93	0.51
21:XU:10:ARG:HH11	21:XU:10:ARG:HG3	1.75	0.51
54:R8:10:ALA:O	54:R8:14:VAL:HG12	2.11	0.51
25:YA:102:G:OP2	48:Y2:7:ARG:NH2	2.44	0.51
6:XF:10:LEU:HD13	6:XF:61:LEU:HD13	1.93	0.51
6:XF:63:TYR:N	6:XF:63:TYR:CD2	2.79	0.51
43:YX:65:ARG:CD	43:YX:65:ARG:H	2.23	0.51
25:RA:2271:G:OP1	46:R0:18:ALA:HB1	2.11	0.51
43:YX:18:TYR:C	43:YX:20:GLY:N	2.64	0.51
9:QL:88:TYR:O	9:QL:89:ASN:CB	2.58	0.51
33:RN:26:LEU:HG	33:RN:30:ILE:HD11	1.93	0.51
36:YQ:58:PHE:O	36:YQ:58:PHE:HD1	1.94	0.51
25:YA:558:G:OP1	33:YN:111:PRO:HD2	2.11	0.51
1:XA:939:G:H5''	7:XG:102:ARG:HH12	1.76	0.51
31:YH:55:PRO:HG2	31:YH:61:HIS:ND1	2.26	0.51
2:QB:82:ARG:HA	2:QB:92:TYR:CE2	2.45	0.51
25:RA:2518:A:H4'	25:RA:2519:U:OP1	2.11	0.51
25:YA:309:G:N3	25:YA:329:G:O2'	2.42	0.51
34:RO:16:ALA:HA	34:RO:46:ALA:HB2	1.92	0.51
34:RO:15:GLY:O	34:RO:46:ALA:HB1	2.10	0.51
1:XA:1065:U:O2'	1:XA:1066:C:OP2	2.25	0.51
25:YA:1759:A:H1'	25:YA:2711:A:C2	2.46	0.51
31:YH:19:VAL:HG13	31:YH:43:VAL:CG2	2.41	0.51
43:YX:47:PHE:N	43:YX:47:PHE:CD1	2.78	0.51
1:XA:539:A:H2'	1:XA:540:G:C8	2.45	0.51
1:QA:642:A:N3	8:QH:113:SER:OG	2.38	0.51
3:QC:175:LEU:HD12	3:QC:175:LEU:H	1.75	0.51
3:XC:21:ARG:CD	3:XC:21:ARG:N	2.74	0.51
53:R7:36:GLN:HG2	53:R7:36:GLN:O	2.10	0.51
25:YA:287:C:H2'	25:YA:288:C:C6	2.45	0.51
22:XV:23:C:H2'	22:XV:24:U:C6	2.45	0.51
4:QD:22:LYS:HB2	4:QD:26:CYS:CB	2.41	0.51
44:YY:95:LYS:O	44:YY:96:ILE:O	2.28	0.51
35:YP:49:ARG:HE	54:Y8:59:LYS:HG2	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:54:GLN:NE2	28:YE:54:GLN:H	2.08	0.51
2:XB:187:LEU:HD13	2:XB:187:LEU:O	2.11	0.51
10:QJ:54:PHE:O	10:QJ:55:LYS:HG3	2.11	0.51
50:R4:42:PHE:O	50:R4:44:THR:N	2.44	0.51
36:YQ:133:ARG:HG2	36:YQ:134:ARG:N	2.26	0.51
38:RS:89:ARG:HD2	38:RS:89:ARG:O	2.11	0.51
51:Y5:56:LYS:N	51:Y5:56:LYS:HD2	2.13	0.51
25:YA:2414:G:H21	35:YP:67:MET:HE1	1.76	0.51
16:XP:1:MET:O	16:XP:3:LYS:HG3	2.11	0.51
27:YD:28:GLU:OE1	27:YD:29:PRO:HD2	2.11	0.51
52:Y6:20:ASN:O	52:Y6:21:TYR:CB	2.59	0.51
8:QH:104:ARG:HD2	8:QH:138:TRP:CD2	2.46	0.51
31:RH:6:ARG:C	31:RH:8:PRO:HD2	2.30	0.51
5:XE:107:ARG:O	5:XE:108:ALA:C	2.49	0.51
13:QM:16:ASP:HB3	13:QM:34:LEU:HD11	1.93	0.51
28:RE:37:ARG:HE	28:RE:37:ARG:N	2.09	0.51
48:R2:36:ARG:O	48:R2:40:SER:HB2	2.10	0.51
48:Y2:36:ARG:O	48:Y2:40:SER:HB2	2.10	0.51
34:YO:24:VAL:O	34:YO:24:VAL:HG13	2.11	0.51
34:YO:24:VAL:HG21	34:YO:32:TYR:O	2.11	0.51
29:YF:198:ALA:C	29:YF:200:GLU:N	2.62	0.51
28:YE:37:ARG:HE	28:YE:37:ARG:N	2.09	0.51
9:QI:29:ASN:OD1	9:QI:64:THR:HA	2.11	0.51
1:XA:1343:G:H2'	1:XA:1344:C:C6	2.46	0.51
11:QK:46:GLY:HA2	11:QK:50:TYR:O	2.10	0.51
21:QU:10:ARG:HH11	21:QU:10:ARG:HG3	1.76	0.51
16:QP:45:THR:HG23	16:QP:46:PRO:CD	2.39	0.51
15:XO:16:ALA:HB1	15:XO:21:ASP:HB3	1.92	0.51
50:Y4:12:ALA:HB1	50:Y4:30:GLU:H	1.76	0.51
34:RO:23:ARG:HH11	34:RO:23:ARG:HG2	1.76	0.51
29:YF:192:LEU:HD21	29:YF:194:MET:HE2	1.92	0.51
1:QA:1346:A:C4	7:QG:10:ARG:NH1	2.79	0.51
12:QL:23:LYS:O	12:QL:24:VAL:HG23	2.10	0.51
6:XF:63:TYR:HD2	6:XF:63:TYR:N	2.09	0.51
4:QD:197:PRO:HD3	6:XF:16:GLN:HG3	1.91	0.51
4:XD:52:SER:O	4:XD:53:ASP:C	2.49	0.51
25:RA:1939:U:H5''	25:RA:1939:U:H6	1.75	0.51
12:XL:27:LEU:C	12:XL:29:GLY:N	2.64	0.51
10:QJ:81:THR:C	10:QJ:83:GLU:N	2.64	0.51
25:YA:2022:U:O2'	25:YA:2617:C:H5'	2.11	0.51
25:YA:1103:A:H5'	25:YA:1104:C:C5	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YN:16:ILE:HG22	33:YN:17:ASP:N	2.26	0.51
4:XD:112:VAL:HG12	4:XD:116:GLN:OE1	2.11	0.51
22:XV:76:A:H2'	25:YA:2602:A:N6	2.26	0.51
25:YA:1264:G:H3'	25:YA:1265:A:H5''	1.92	0.51
38:YS:95:HIS:CG	38:YS:96:GLY:N	2.77	0.51
43:RX:5:TYR:CE2	48:R2:30:ARG:HG3	2.45	0.51
1:QA:1064:G:O2'	1:QA:1065:U:O5'	2.25	0.51
1:XA:1510:U:H2'	1:XA:1511:G:C8	2.46	0.51
3:XC:139:GLN:O	3:XC:143:GLU:HB2	2.11	0.51
30:YG:51:ARG:HB3	30:YG:51:ARG:HH11	1.76	0.51
4:QD:155:LEU:O	4:QD:159:ARG:HG2	2.10	0.51
3:QC:21:ARG:CD	3:QC:21:ARG:N	2.74	0.51
34:RO:35:VAL:O	34:RO:35:VAL:HG23	2.11	0.51
1:QA:56:U:H2'	1:QA:57:G:C8	2.46	0.51
47:R1:92:LYS:C	47:R1:94:LEU:N	2.62	0.51
31:YH:103:LEU:CD1	31:YH:131:VAL:HG21	2.41	0.51
2:XB:15:VAL:H	2:XB:16:HIS:HD1	1.59	0.51
38:YS:83:LYS:HG2	38:YS:109:GLY:H	1.76	0.51
38:YS:86:ALA:O	38:YS:87:PHE:HB3	2.09	0.51
8:QH:10:LEU:N	8:QH:10:LEU:CD2	2.70	0.51
37:YR:92:GLY:N	37:YR:94:TYR:HE2	2.09	0.51
16:QP:1:MET:O	16:QP:3:LYS:HG3	2.11	0.51
16:XP:20:VAL:HG23	16:XP:34:GLU:O	2.11	0.51
34:RO:20:MET:HG2	34:RO:21:CYS:O	2.11	0.51
13:QM:57:ARG:CB	13:QM:57:ARG:HH11	2.14	0.51
31:YH:4:ILE:O	31:YH:6:ARG:N	2.43	0.51
8:XH:104:ARG:HD2	8:XH:138:TRP:CD2	2.46	0.51
21:XU:14:TRP:CE3	21:XU:15:ARG:HD3	2.46	0.51
19:QS:26:GLY:O	19:QS:27:GLU:HB2	2.11	0.51
41:YV:5:VAL:HG22	41:YV:14:VAL:HG22	1.93	0.51
14:QN:8:GLU:C	14:QN:10:ALA:H	2.13	0.51
33:RN:112:LEU:HD23	33:RN:113:GLY:N	2.26	0.51
2:QB:23:ARG:HH11	2:QB:23:ARG:HG2	1.76	0.51
4:QD:83:SER:HA	4:QD:89:THR:HG23	1.92	0.51
9:QI:79:LEU:HD22	9:QI:101:PHE:O	2.11	0.51
16:XP:43:LYS:C	16:XP:45:THR:H	2.14	0.51
25:YA:1844:C:H2'	25:YA:1845:G:H8	1.74	0.51
4:XD:178:VAL:O	4:XD:180:GLY:N	2.44	0.51
37:RR:1:MET:O	37:RR:2:ARG:CB	2.59	0.51
5:QE:83:GLU:HG2	5:QE:88:LYS:CG	2.41	0.51
29:RF:65:TRP:HZ2	29:RF:72:ARG:NH2	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:RY:2:ARG:NH1	44:RY:2:ARG:HG2	2.22	0.51
27:RD:76:PRO:HA	27:RD:118:VAL:HG23	1.93	0.51
33:YN:118:LYS:O	33:YN:120:LEU:N	2.43	0.51
3:QC:99:VAL:HG23	3:QC:99:VAL:O	2.11	0.51
25:RA:2591:C:H2'	25:RA:2592:G:C8	2.46	0.51
46:R0:27:GLU:HG3	46:R0:68:GLU:HA	1.92	0.51
25:RA:2396:G:OP1	47:R1:25:LYS:NZ	2.41	0.51
25:YA:2331:G:H4'	46:Y0:43:THR:H	1.77	0.51
39:YT:20:PRO:HD2	39:YT:86:ILE:HG23	1.92	0.51
39:YT:51:ARG:HG3	39:YT:98:LYS:HG3	1.93	0.51
1:QA:464:G:O6	1:QA:466:C:H5'	2.11	0.51
25:YA:2031:A:C6	25:YA:2498:C:H1'	2.46	0.51
36:YQ:25:ASP:HA	36:YQ:100:GLY:O	2.11	0.51
31:RH:72:ILE:O	31:RH:75:ALA:HB3	2.11	0.51
2:XB:53:ARG:HA	2:XB:56:ARG:HG3	1.93	0.51
6:QF:101:ALA:HA	18:QR:28:GLU:OE1	2.10	0.51
30:RG:51:ARG:HB3	30:RG:51:ARG:HH11	1.76	0.51
36:RQ:36:ALA:HB1	36:RQ:127:ILE:HD12	1.93	0.51
47:R1:91:LYS:HE3	47:R1:91:LYS:CA	2.40	0.50
47:Y1:83:GLU:CD	47:Y1:85:LEU:H	2.15	0.50
47:Y1:85:LEU:HA	47:Y1:87:PRO:HD2	1.91	0.50
4:QD:7:PRO:HB2	4:QD:10:ARG:HD2	1.92	0.50
3:QC:48:TYR:O	3:QC:51:GLY:N	2.41	0.50
31:RH:152:ARG:C	31:RH:153:LYS:HE2	2.32	0.50
35:YP:114:ILE:HD13	35:YP:125:VAL:CG2	2.41	0.50
1:XA:691:G:H2'	1:XA:692:U:C6	2.46	0.50
13:XM:9:ILE:HD12	13:XM:9:ILE:C	2.31	0.50
38:RS:83:LYS:HG2	38:RS:109:GLY:H	1.76	0.50
38:YS:83:LYS:HG2	38:YS:109:GLY:HA2	1.90	0.50
36:RQ:133:ARG:HG2	36:RQ:134:ARG:N	2.26	0.50
25:RA:2286:A:H4'	25:RA:2287:A:O4'	2.11	0.50
35:YP:62:LEU:CD2	35:YP:62:LEU:H	2.19	0.50
25:RA:2416:C:H5''	35:RP:64:LYS:HE3	1.92	0.50
44:RY:46:LYS:HE3	44:RY:63:LYS:HB3	1.93	0.50
34:RO:2:ILE:CD1	34:RO:82:ASN:HD22	2.14	0.50
7:QG:23:VAL:O	7:QG:27:ILE:CD1	2.59	0.50
29:YF:108:LYS:HA	29:YF:108:LYS:NZ	2.27	0.50
41:RV:14:VAL:HA	41:RV:18:LEU:HD12	1.92	0.50
33:RN:7:LYS:HD3	33:RN:9:VAL:N	2.25	0.50
28:YE:116:VAL:HG22	28:YE:122:PHE:HB2	1.91	0.50
35:YP:13:ASN:O	35:YP:14:LYS:C	2.49	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:XI:10:ARG:HG3	9:XI:105:ASP:HB2	1.92	0.50
34:YO:113:LYS:O	34:YO:116:SER:HB3	2.11	0.50
4:QD:206:PHE:CD2	4:QD:207:TYR:CD1	2.99	0.50
49:Y3:7:LYS:HE2	49:Y3:32:GLN:NE2	2.25	0.50
12:XL:126:LYS:HB2	12:XL:126:LYS:HZ2	1.74	0.50
9:QI:10:ARG:HG3	9:QI:105:ASP:HB2	1.92	0.50
25:YA:102:G:H4'	25:YA:103:A:O5'	2.09	0.50
47:R1:4:VAL:HG23	47:R1:10:LYS:C	2.32	0.50
1:QA:677:U:H1'	11:QK:119:CYS:SG	2.51	0.50
3:XC:99:VAL:O	3:XC:99:VAL:HG23	2.11	0.50
33:YN:26:LEU:HG	33:YN:30:ILE:HD11	1.93	0.50
1:XA:96:G:H2'	1:XA:97:U:O4'	2.11	0.50
13:QM:30:ALA:O	13:QM:31:LYS:C	2.49	0.50
33:YN:78:TYR:HD1	33:YN:78:TYR:N	2.07	0.50
33:YN:73:THR:HG22	33:YN:82:LEU:HD11	1.93	0.50
42:RW:88:ARG:HB3	42:RW:92:ARG:CB	2.41	0.50
1:XA:1231:G:O3'	9:XI:126:SER:OG	2.29	0.50
1:XA:1241:G:H2'	1:XA:1242:C:C6	2.45	0.50
25:RA:270(F):U:H2'	25:RA:270(G):C:C6	2.46	0.50
1:XA:1118:C:H1'	1:XA:1179:A:C4	2.46	0.50
1:XA:644:G:H4'	8:XH:92:ARG:HH21	1.75	0.50
1:XA:299:G:H2'	1:XA:300:A:C8	2.47	0.50
47:Y1:80:LEU:HB2	47:Y1:81:LYS:CE	2.41	0.50
13:QM:66:LEU:O	13:QM:70:LEU:HB2	2.11	0.50
28:YE:105:THR:HG23	28:YE:166:THR:OG1	2.10	0.50
13:XM:66:LEU:O	13:XM:70:LEU:HB2	2.11	0.50
2:XB:103:THR:N	2:XB:180:LEU:HD11	2.26	0.50
35:RP:101:VAL:HA	35:RP:105:LEU:O	2.10	0.50
35:RP:104:GLY:C	35:RP:105:LEU:HD12	2.31	0.50
31:RH:153:LYS:HG3	31:RH:161:GLY:HA2	1.91	0.50
5:QE:45:PHE:CD2	5:QE:47:LYS:HD2	2.47	0.50
26:RB:42:C:N4	30:RG:91:ARG:NH2	2.58	0.50
30:RG:92:VAL:HG13	30:RG:92:VAL:O	2.12	0.50
38:RS:35:ILE:CD1	38:RS:101:LEU:HD23	2.41	0.50
34:RO:47:ILE:CG1	34:RO:48:PRO:HD2	2.42	0.50
29:YF:32:LEU:O	29:YF:36:VAL:HG23	2.11	0.50
38:YS:87:PHE:O	38:YS:88:ASP:O	2.29	0.50
41:RV:35:LEU:CD2	41:RV:57:VAL:HG22	2.32	0.50
1:QA:191:G:O2'	20:QT:101:GLY:O	2.28	0.50
35:RP:95:VAL:HG13	35:RP:100:LEU:CD2	2.40	0.50
21:QU:14:TRP:CE3	21:QU:15:ARG:HD3	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:Z6:76:PPU:HN2	56:Z6:76:PPU:HD2	1.76	0.50
25:RA:2849:U:O4	39:RT:23:ARG:NH2	2.44	0.50
28:RE:37:ARG:HE	28:RE:37:ARG:H	1.59	0.50
5:XE:126:ARG:CG	5:XE:126:ARG:HH11	2.21	0.50
28:RE:137:HIS:HB3	28:RE:138:PRO:CD	2.37	0.50
27:RD:94:LEU:C	27:RD:94:LEU:HD13	2.31	0.50
4:XD:162:LEU:HD13	4:XD:181:MET:HB3	1.92	0.50
13:QM:120:LYS:O	13:QM:121:LYS:HB2	2.11	0.50
11:QK:91:ARG:HH22	18:QR:88:LYS:NZ	2.09	0.50
2:XB:24:TRP:CE3	2:XB:26:PRO:HA	2.45	0.50
4:QD:13:ARG:CB	4:QD:33:MET:CE	2.89	0.50
42:YW:22:ASP:HA	42:YW:25:ARG:HH12	1.75	0.50
8:QH:12:ARG:NH1	8:QH:27:PRO:HD2	2.25	0.50
25:YA:2832:U:H4'	25:YA:2833:G:C5'	2.41	0.50
2:QB:53:ARG:HA	2:QB:56:ARG:HG3	1.93	0.50
50:Y4:10:VAL:HG23	50:Y4:11:PRO:HD2	1.93	0.50
1:XA:137:C:O2'	16:XP:61:SER:O	2.28	0.50
23:QY:30:C:H2'	23:QY:31:G:C8	2.46	0.50
3:QC:132:ARG:O	3:QC:136:GLN:HB2	2.11	0.50
16:QP:83:GLU:HG3	16:QP:84:ALA:H	1.76	0.50
25:RA:669:G:H2'	25:RA:669:G:N3	2.27	0.50
53:Y7:36:GLN:HG2	53:Y7:36:GLN:O	2.09	0.50
25:RA:1750:G:O2'	25:RA:2860:A:N1	2.42	0.50
25:RA:2030:A:H4'	25:RA:2031:A:C8	2.47	0.50
25:YA:2853:C:H2'	25:YA:2854:G:C8	2.46	0.50
14:XN:41:ARG:HE	14:XN:42:ILE:HG13	1.75	0.50
31:YH:126:PRO:HD2	31:YH:127:GLU:N	2.26	0.50
44:RY:74:PRO:O	44:RY:80:GLY:HA2	2.10	0.50
44:YY:75:ILE:CG1	44:YY:76:CYS:N	2.73	0.50
50:Y4:61:ARG:C	50:Y4:63:TYR:H	2.14	0.50
31:YH:152:ARG:C	31:YH:153:LYS:HE2	2.32	0.50
2:XB:82:ARG:HA	2:XB:92:TYR:CE2	2.45	0.50
13:QM:82:MET:O	13:QM:83:ASP:C	2.49	0.50
5:QE:12:LEU:HD23	5:QE:13:ILE:H	1.76	0.50
38:YS:26:LEU:CD2	38:YS:87:PHE:CD1	2.94	0.50
38:YS:89:ARG:O	38:YS:89:ARG:HD2	2.11	0.50
44:RY:44:ILE:CG1	44:RY:45:VAL:H	2.25	0.50
44:YY:46:LYS:HE3	44:YY:63:LYS:HB3	1.93	0.50
8:QH:51:VAL:HG11	8:QH:60:ARG:HG3	1.92	0.50
14:XN:8:GLU:C	14:XN:10:ALA:H	2.14	0.50
39:RT:57:PHE:CG	39:RT:58:ASN:N	2.79	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:108:LEU:HD11	4:XD:174:LEU:CD2	2.37	0.50
33:YN:112:LEU:HD23	33:YN:113:GLY:N	2.26	0.50
34:YO:23:ARG:HG2	34:YO:23:ARG:HH11	1.76	0.50
34:RO:24:VAL:O	34:RO:24:VAL:HG13	2.11	0.50
9:XI:79:LEU:HD22	9:XI:101:PHE:O	2.10	0.50
9:XI:53:VAL:HG21	9:XI:92:TYR:CZ	2.45	0.50
4:QD:162:LEU:HD13	4:QD:181:MET:HB3	1.92	0.50
9:XI:48:GLU:N	9:XI:49:PRO:CD	2.74	0.50
15:XO:17:ARG:NH1	15:XO:77:ARG:NH1	2.59	0.50
1:XA:258:G:H2'	1:XA:259:G:C8	2.47	0.50
25:RA:2867:G:HO2'	25:RA:2868:A:P	2.34	0.50
7:QG:50:ILE:HA	7:QG:54:THR:HG22	1.94	0.50
29:RF:45:ARG:NH1	29:RF:45:ARG:CG	2.71	0.50
25:RA:307:G:N2	25:RA:309:G:H3'	2.26	0.50
1:QA:520:A:N1	1:QA:536:C:H1'	2.26	0.50
8:QH:83:ILE:HB	8:QH:137:VAL:HG13	1.93	0.50
25:YA:27:G:H22	25:YA:512:G:H2'	1.76	0.50
1:XA:110:C:O2'	16:XP:25:ARG:O	2.26	0.50
25:YA:2645:G:N2	25:YA:2767:C:OP2	2.44	0.50
1:XA:328:C:H4'	1:XA:329:A:H5'	1.93	0.50
1:XA:1354:C:H2'	1:XA:1355:G:H8	1.75	0.50
19:QS:43:GLU:OE2	19:QS:43:GLU:N	2.44	0.50
51:R5:37:LYS:HD2	51:R5:37:LYS:O	2.12	0.50
40:YU:112:ARG:HG2	40:YU:112:ARG:HH11	1.76	0.50
1:XA:1376:U:H2'	1:XA:1377:A:C8	2.47	0.50
25:YA:2208:U:H1'	27:YD:151:LYS:HE2	1.93	0.50
25:YA:639:U:H2'	25:YA:640:C:C6	2.45	0.50
3:XC:184:TYR:HA	3:XC:200:ALA:O	2.12	0.50
25:RA:153:C:P	47:R1:88:LYS:HE2	2.51	0.50
47:Y1:94:LEU:O	47:Y1:95:LEU:HG	2.11	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
25:YA:2636:U:H2'	25:YA:2637:U:H6	1.76	0.50
2:XB:200:ILE:O	2:XB:201:ILE:HD13	2.12	0.50
27:RD:30:GLU:HG3	27:RD:63:ARG:NH2	2.26	0.50
31:RH:151:ILE:C	31:RH:152:ARG:O	2.49	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
37:RR:70:LEU:O	37:RR:72:ASP:N	2.42	0.50
25:RA:2495:G:H5''	36:RQ:81:VAL:CG1	2.41	0.50
52:Y6:9:LEU:HB3	52:Y6:26:ASN:O	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2839:G:H21	37:YR:92:GLY:HA3	1.76	0.50
16:QP:20:VAL:HG23	16:QP:34:GLU:O	2.11	0.50
27:YD:10:THR:HG23	27:YD:13:ARG:CB	2.34	0.50
25:YA:1142(A):A:H4'	33:YN:25:ARG:NH2	2.23	0.50
29:RF:108:LYS:NZ	29:RF:108:LYS:HA	2.27	0.50
25:YA:2882:A:OP1	37:YR:96:ARG:NH1	2.45	0.50
39:RT:54:ARG:HG2	39:RT:54:ARG:NH1	2.24	0.50
39:YT:57:PHE:CG	39:YT:58:ASN:N	2.79	0.50
19:XS:50:ALA:CB	19:XS:57:HIS:HB3	2.37	0.50
31:YH:169:VAL:HG13	31:YH:170:ARG:N	2.26	0.50
1:XA:1370:G:O3'	9:XI:12:GLU:HG3	2.12	0.50
9:XI:83:ARG:HA	9:XI:86:VAL:CG1	2.42	0.50
25:YA:1728:G:H5'	25:YA:1729:A:OP2	2.11	0.50
38:RS:62:LYS:HB3	38:RS:97:ARG:CD	2.39	0.50
25:YA:1826:G:H4'	27:YD:242:ARG:NH2	2.23	0.50
25:YA:83:G:N1	25:YA:102:G:H1'	2.27	0.50
6:QF:63:TYR:CD2	6:QF:63:TYR:N	2.79	0.50
25:YA:443:A:H1'	25:YA:1201:C:O4'	2.11	0.50
39:RT:51:ARG:HG3	39:RT:98:LYS:HG3	1.93	0.50
25:YA:1937:A:N7	25:YA:1939:U:H2'	2.26	0.50
25:YA:1204:A:O2'	25:YA:1205:U:O5'	2.30	0.50
31:YH:143:GLN:C	31:YH:143:GLN:HE21	2.15	0.50
25:RA:507:A:H5''	25:RA:508:G:H5'	1.93	0.50
1:QA:597:G:N2	8:QH:94:TYR:OH	2.43	0.50
1:XA:1511:G:H2'	1:XA:1512:U:O4'	2.12	0.50
4:QD:107:ARG:C	4:QD:109:GLY:H	2.14	0.50
10:XJ:84:GLN:C	10:XJ:86:MET:H	2.14	0.50
1:QA:946:A:H61	1:QA:1234:C:H42	1.57	0.50
15:XO:39:LEU:O	15:XO:40:SER:C	2.50	0.50
31:RH:16:SER:O	31:RH:17:VAL:HG23	2.12	0.50
1:QA:524:G:H2'	1:QA:525:C:C6	2.46	0.50
1:QA:302:G:O3'	12:QL:17:LYS:HE2	2.12	0.50
25:YA:1332:G:H21	25:YA:1610:A:H8	1.54	0.50
40:RU:112:ARG:HH11	40:RU:112:ARG:HG2	1.77	0.50
8:QH:95:VAL:HB	8:QH:99:GLU:O	2.12	0.50
25:RA:1579:A:H2'	25:RA:1580:A:C8	2.47	0.50
25:RA:270(R):G:H1'	47:R1:78:LYS:NZ	2.27	0.50
47:Y1:87:PRO:O	47:Y1:91:LYS:HB2	2.10	0.50
31:RH:133:VAL:HG12	31:RH:141:VAL:HG13	1.93	0.50
10:QJ:98:ILE:H	10:QJ:98:ILE:CD1	2.24	0.50
50:Y4:57:GLU:O	50:Y4:61:ARG:O	2.30	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RG:111:LEU:HB2	50:R4:38:LYS:HZ3	1.76	0.50
40:RU:92:ARG:NH1	40:RU:95:LEU:HD11	2.26	0.50
41:YV:51:VAL:CG1	41:YV:52:VAL:H	2.22	0.50
36:YQ:132:VAL:HG12	36:YQ:133:ARG:N	2.27	0.50
38:RS:26:LEU:CD2	38:RS:87:PHE:CD1	2.94	0.50
8:QH:20:TYR:HD1	8:QH:65:TYR:HD2	1.55	0.50
3:QC:34:LEU:O	3:QC:38:ARG:HG3	2.11	0.50
25:RA:2283:C:H2'	25:RA:2284:C:O4'	2.11	0.50
16:QP:59:TRP:HA	16:QP:59:TRP:HE3	1.77	0.50
22:QV:76:A:H2'	25:RA:2602:A:N6	2.27	0.50
30:RG:43:LEU:O	30:RG:88:ILE:HG12	2.12	0.50
21:XU:6:ARG:HH21	21:XU:15:ARG:NE	2.09	0.50
51:R5:48:GLU:HA	51:R5:59:GLU:HG2	1.94	0.50
1:XA:664:G:N2	1:XA:741:G:H1	2.00	0.50
13:XM:120:LYS:O	13:XM:121:LYS:HB2	2.10	0.50
1:QA:701:C:O2	1:QA:703:G:N1	2.44	0.50
48:Y2:41:ILE:HD11	48:Y2:44:LEU:CB	2.42	0.50
3:QC:52:LEU:H	3:QC:52:LEU:CD2	2.20	0.50
30:YG:6:ALA:H	50:Y4:23:GLU:CG	2.25	0.50
9:QI:5:TYR:HA	9:QI:17:VAL:O	2.12	0.50
4:QD:178:VAL:O	4:QD:180:GLY:N	2.44	0.50
31:RH:169:VAL:HG13	31:RH:170:ARG:N	2.26	0.50
9:QI:53:VAL:HG21	9:QI:92:TYR:CZ	2.45	0.50
42:YW:70:TYR:N	42:YW:70:TYR:CD2	2.75	0.50
25:YA:528:A:O2'	25:YA:529:A:H5'	2.11	0.50
1:XA:1125:U:OP2	1:XA:1145:C:N4	2.44	0.50
17:XQ:48:GLU:O	17:XQ:49:GLU:C	2.48	0.50
7:XG:50:ILE:HA	7:XG:54:THR:HG22	1.94	0.50
47:Y1:4:VAL:HG23	47:Y1:10:LYS:C	2.32	0.50
10:XJ:81:THR:C	10:XJ:83:GLU:N	2.64	0.50
12:XL:28:LYS:O	12:XL:29:GLY:C	2.50	0.50
31:RH:143:GLN:HE21	31:RH:143:GLN:C	2.15	0.50
26:RB:48:A:H2'	26:RB:49:C:C6	2.46	0.50
25:YA:1204:A:H2	25:YA:1241:A:N1	2.09	0.50
41:YV:29:PRO:O	41:YV:61:VAL:O	2.29	0.50
25:RA:2328:A:H2'	25:RA:2329:G:C8	2.47	0.50
25:RA:1588:C:H2'	25:RA:1589:C:H6	1.77	0.50
49:Y3:17:LYS:HA	49:Y3:20:LYS:HD2	1.92	0.50
1:XA:89:U:O2'	1:XA:90:C:OP1	2.27	0.50
1:QA:164:U:H2'	1:QA:165:C:H6	1.76	0.50
3:QC:139:GLN:O	3:QC:143:GLU:HB2	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1991:U:H2'	25:RA:1992:G:H5''	1.94	0.50
1:QA:181:G:O2'	1:QA:182:U:O5'	2.28	0.50
25:RA:2836:U:H2'	25:RA:2837:G:C8	2.47	0.50
34:YO:35:VAL:O	34:YO:35:VAL:HG23	2.11	0.50
25:YA:1914:C:H2'	25:YA:1915:U:O4'	2.12	0.50
1:QA:1301:U:H3'	1:QA:1302:U:H5'	1.92	0.50
14:YN:48:ALA:CA	14:YN:53:LEU:HD12	2.42	0.50
36:RQ:108:GLY:O	36:RQ:109:VAL:HG23	2.12	0.50
4:XD:20:TYR:CD2	4:XD:27:TYR:CD2	3.00	0.50
13:QM:65:LYS:NZ	50:R4:52:THR:HG21	2.26	0.50
54:R8:56:GLU:O	54:R8:57:ARG:C	2.50	0.50
28:RE:176:ILE:O	28:RE:176:ILE:HG22	2.10	0.50
3:QC:70:VAL:CG1	3:QC:71:ALA:N	2.73	0.50
3:XC:11:ARG:HG3	3:XC:15:THR:HG21	1.93	0.50
35:RP:114:ILE:HD13	35:RP:125:VAL:CG2	2.41	0.50
27:RD:32:SER:O	27:RD:33:LEU:CB	2.60	0.50
35:YP:104:GLY:C	35:YP:105:LEU:HD12	2.31	0.50
35:YP:147:LEU:O	35:YP:148:LEU:HB2	2.11	0.50
28:RE:61:ARG:CB	28:RE:62:PRO:HD3	2.41	0.50
1:QA:1055:A:N7	1:QA:1200:C:N4	2.59	0.50
50:R4:1:MET:O	50:R4:1:MET:HG3	2.12	0.50
26:RB:45:A:H1'	30:RG:95:ARG:NH2	2.26	0.50
2:QB:170:GLU:HA	2:QB:172:ILE:CD1	2.41	0.50
28:RE:203:LYS:HE3	28:RE:204:ALA:CB	2.40	0.50
38:YS:26:LEU:HD22	38:YS:87:PHE:CD1	2.46	0.50
8:QH:84:ARG:O	8:QH:135:CYS:HB2	2.12	0.50
52:R6:9:LEU:HD13	52:R6:26:ASN:HD22	1.76	0.50
13:XM:57:ARG:CB	13:XM:57:ARG:HH11	2.13	0.50
30:YG:111:LEU:N	30:YG:112:PRO:CD	2.75	0.50
37:RR:92:GLY:N	37:RR:94:TYR:HE2	2.09	0.50
30:YG:43:LEU:O	30:YG:88:ILE:HG12	2.12	0.50
34:RO:107:ARG:HA	34:RO:112:MET:HE1	1.94	0.50
27:YD:182:LEU:H	27:YD:272:ALA:CB	2.25	0.50
1:QA:1305:G:O2'	1:QA:1306:A:H8	1.94	0.50
1:XA:1347:G:N2	1:XA:1374:A:OP2	2.37	0.50
9:XI:105:ASP:C	9:XI:107:ARG:H	2.14	0.50
25:RA:530:G:O2'	25:RA:2021:C:O2'	2.29	0.50
10:XJ:40:LEU:HB2	10:XJ:69:ASN:CB	2.40	0.50
25:YA:1496:A:H8	25:YA:1577:C:O2'	1.93	0.50
15:QO:26:GLU:OE2	15:QO:77:ARG:NH1	2.43	0.50
15:XO:17:ARG:NH1	15:XO:77:ARG:CZ	2.74	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YN:87:LEU:HD23	33:YN:87:LEU:C	2.32	0.50
33:RN:87:LEU:C	33:RN:87:LEU:HD23	2.32	0.50
13:XM:102:ARG:O	13:XM:102:ARG:HG3	2.11	0.50
7:QG:50:ILE:HG21	7:QG:58:PRO:HA	1.93	0.50
42:RW:22:ASP:HA	42:RW:25:ARG:HH12	1.75	0.50
12:XL:62:SER:C	12:XL:64:TYR:H	2.14	0.50
27:RD:2:ALA:CB	27:RD:20:ASP:CB	2.89	0.50
1:QA:768:A:N3	1:QA:1512:U:O2'	2.43	0.50
25:RA:323:G:HO2'	25:RA:1205:U:H3	1.60	0.50
25:RA:1637:A:H4'	25:RA:2711:A:O2'	2.11	0.50
27:YD:233:HIS:H	27:YD:233:HIS:CD2	2.29	0.50
34:YO:15:GLY:O	34:YO:46:ALA:HB1	2.10	0.50
25:RA:2053:G:O6	25:RA:2614:A:H2	1.95	0.50
17:XQ:13:ASP:C	17:XQ:15:MET:H	2.15	0.50
32:YI:79:ILE:HB	32:YI:142:VAL:HA	1.93	0.50
3:XC:132:ARG:O	3:XC:136:GLN:HB2	2.11	0.50
1:QA:890:G:O2'	1:QA:906:G:O6	2.23	0.50
25:YA:1081:U:H3'	25:YA:1082:U:H4'	1.93	0.50
10:QJ:56:HIS:O	10:QJ:58:ASP:O	2.30	0.50
16:XP:83:GLU:HG3	16:XP:84:ALA:H	1.77	0.50
14:QN:22:THR:O	14:QN:23:ARG:CB	2.59	0.50
14:QN:48:ALA:CA	14:QN:53:LEU:HD12	2.42	0.50
47:R1:80:LEU:HB2	47:R1:81:LYS:CE	2.41	0.50
44:RY:88:LYS:HA	44:RY:88:LYS:NZ	2.27	0.50
44:RY:94:LYS:HE3	44:RY:101:LYS:HZ1	1.76	0.50
19:QS:41:VAL:CG1	19:QS:45:VAL:N	2.74	0.50
28:YE:105:THR:HB	28:YE:197:ILE:HG12	1.93	0.50
28:YE:2:LYS:HG2	28:YE:95:ILE:CG2	2.42	0.50
27:RD:35:LYS:HD2	27:RD:104:TYR:CD1	2.45	0.50
35:YP:138:LEU:HD11	35:YP:144:GLU:CG	2.42	0.50
11:XK:106:LYS:O	11:XK:107:SER:HB3	2.12	0.50
38:RS:83:LYS:HG2	38:RS:109:GLY:HA2	1.90	0.50
30:YG:16:ARG:HB3	30:YG:17:PRO:HD3	1.94	0.50
44:RY:48:ALA:HB2	44:RY:61:ILE:CD1	2.41	0.50
44:YY:48:ALA:HB2	44:YY:61:ILE:CD1	2.41	0.50
27:RD:28:GLU:OE1	27:RD:29:PRO:HD2	2.11	0.50
10:QJ:22:LYS:NZ	10:QJ:23:ILE:HG12	2.27	0.50
20:XT:49:ALA:CB	20:XT:99:LEU:HD22	2.42	0.50
8:XH:102:ARG:NH1	8:XH:105:ARG:HH12	2.09	0.50
19:XS:26:GLY:O	19:XS:27:GLU:HB2	2.11	0.50
33:RN:46:VAL:O	33:RN:47:ALA:CB	2.57	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:RR:96:ARG:NH2	37:RR:117:VAL:HG23	2.27	0.50
25:YA:2377:A:H2	38:YS:18:ILE:HD11	1.77	0.50
53:Y7:9:ARG:HH12	53:Y7:47:ARG:HG3	1.76	0.50
39:RT:38:ASN:O	39:RT:39:ARG:O	2.30	0.50
4:XD:54:TYR:CE1	4:XD:206:PHE:HE1	2.29	0.50
9:QI:48:GLU:N	9:QI:49:PRO:CD	2.74	0.50
1:QA:953:G:H5'	1:QA:965:A:H61	1.76	0.50
25:RA:28:A:N6	25:RA:512:G:H1'	2.26	0.50
18:QR:30:ASP:C	18:QR:32:ARG:H	2.15	0.50
1:XA:1225:A:N3	1:XA:1225:A:H2'	2.27	0.50
7:QG:11:GLN:C	7:QG:12:LEU:HD22	2.31	0.50
1:QA:1095:U:OP2	1:QA:1108:G:N1	2.30	0.50
25:RA:873:G:H1	25:RA:904:C:H42	1.58	0.50
1:XA:947:G:H2'	1:XA:948:C:C6	2.46	0.50
10:QJ:84:GLN:C	10:QJ:86:MET:H	2.15	0.50
50:R4:10:VAL:HG23	50:R4:11:PRO:HD2	1.93	0.50
36:YQ:36:ALA:HB1	36:YQ:127:ILE:HD12	1.93	0.50
1:QA:1311:G:N2	1:QA:1326:C:O2	2.44	0.50
16:QP:39:TYR:OH	16:QP:41:PRO:HB3	2.11	0.50
45:YZ:152:ALA:O	45:YZ:154:ASP:N	2.41	0.50
31:RH:19:VAL:HG13	31:RH:43:VAL:HG23	1.93	0.50
11:XK:25:TYR:CD1	11:XK:25:TYR:N	2.80	0.50
30:YG:35:GLU:CD	30:YG:35:GLU:C	2.71	0.50
3:QC:184:TYR:HA	3:QC:200:ALA:O	2.12	0.50
25:YA:1916:A:H2'	25:YA:1917:U:O4'	2.12	0.50
10:XJ:54:PHE:O	10:XJ:55:LYS:HG3	2.10	0.50
44:RY:90:LEU:H	44:RY:90:LEU:HD22	1.73	0.50
3:QC:11:ARG:HG3	3:QC:15:THR:HG21	1.94	0.50
27:YD:35:LYS:HE2	27:YD:104:TYR:HB2	1.94	0.50
40:YU:92:ARG:CD	40:YU:94:ASN:HB3	2.42	0.50
41:YV:51:VAL:CG1	41:YV:52:VAL:N	2.75	0.50
38:YS:35:ILE:CD1	38:YS:101:LEU:HD23	2.41	0.50
5:XE:32:VAL:O	5:XE:43:LEU:HD12	2.12	0.50
3:QC:36:ASP:HA	3:QC:39:ILE:HD12	1.94	0.50
8:XH:84:ARG:O	8:XH:135:CYS:HB2	2.12	0.50
52:R6:34:LEU:HD23	52:R6:36:LEU:HD22	1.92	0.50
30:YG:103:LEU:HD21	30:YG:178:PHE:CZ	2.47	0.50
52:R6:41:PRO:HD2	52:R6:46:HIS:H	1.77	0.50
20:QT:49:ALA:CB	20:QT:99:LEU:HD22	2.42	0.50
25:YA:747:U:C4	25:YA:2613:U:C4	3.00	0.50
1:QA:347:G:O2'	1:QA:348:G:OP2	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:QU:2:GLY:O	21:QU:4:GLY:N	2.45	0.50
39:RT:23:ARG:CB	39:RT:24:PRO:HD2	2.40	0.50
13:XM:117:VAL:O	13:XM:118:ALA:C	2.51	0.50
53:R7:46:VAL:HG12	53:R7:47:ARG:N	2.27	0.50
53:Y7:46:VAL:HG12	53:Y7:47:ARG:N	2.27	0.50
2:XB:23:ARG:HH11	2:XB:23:ARG:HG2	1.76	0.50
49:Y3:7:LYS:CB	49:Y3:34:GLU:HG2	2.41	0.50
1:XA:254:G:OP1	17:XQ:67:LYS:O	2.29	0.50
44:RY:16:ALA:O	44:RY:21:LYS:HD3	2.11	0.50
35:RP:6:LEU:CD2	35:RP:6:LEU:N	2.75	0.50
27:RD:237:GLU:OE1	27:RD:237:GLU:HA	2.12	0.50
4:QD:13:ARG:HH22	4:QD:36:ARG:CZ	2.24	0.50
36:RQ:2:LEU:HD23	36:RQ:2:LEU:N	2.27	0.50
51:R5:50:GLY:O	51:R5:51:TYR:CB	2.59	0.50
1:QA:833:U:H2'	1:QA:834:C:H6	1.77	0.50
4:QD:128:VAL:O	4:QD:130:GLY:N	2.45	0.50
33:RN:137:LYS:HG3	33:RN:138:LEU:H	1.77	0.50
31:YH:24:VAL:HG21	31:YH:72:ILE:HG12	1.94	0.50
25:RA:392:C:H5''	25:RA:409:C:H5''	1.94	0.50
34:YO:105:GLU:O	34:YO:108:GLU:HB2	2.12	0.50
8:XH:95:VAL:HB	8:XH:99:GLU:O	2.12	0.50
17:QQ:13:ASP:C	17:QQ:15:MET:H	2.15	0.50
4:XD:107:ARG:C	4:XD:109:GLY:H	2.14	0.50
25:YA:796:C:H2'	25:YA:797:C:C6	2.46	0.50
51:Y5:37:LYS:HD2	51:Y5:37:LYS:O	2.12	0.50
25:YA:1228:G:OP2	40:YU:16:LYS:NZ	2.22	0.50
36:YQ:108:GLY:O	36:YQ:109:VAL:HG23	2.12	0.50
31:RH:103:LEU:CD1	31:RH:131:VAL:HG21	2.41	0.50
28:RE:2:LYS:HG2	28:RE:95:ILE:CG2	2.42	0.50
13:XM:82:MET:O	13:XM:83:ASP:C	2.49	0.50
2:XB:172:ILE:CD1	2:XB:172:ILE:H	2.18	0.50
27:YD:65:ILE:HD13	27:YD:65:ILE:C	2.32	0.50
27:RD:35:LYS:HE2	27:RD:104:TYR:HB2	1.94	0.50
27:RD:35:LYS:CG	27:RD:64:ILE:HG22	2.42	0.50
35:YP:112:LEU:HD22	35:YP:113:LYS:N	2.25	0.50
30:RG:109:VAL:O	30:RG:113:ARG:HG3	2.10	0.50
2:QB:16:HIS:HB3	2:QB:210:SER:CB	2.42	0.50
4:QD:28:SER:CB	4:QD:29:PRO:CD	2.85	0.50
37:YR:28:LEU:CD2	37:YR:114:VAL:HG12	2.41	0.50
3:XC:36:ASP:HB3	3:XC:40:ARG:NH1	2.25	0.50
3:XC:34:LEU:O	3:XC:38:ARG:HG3	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:R2:16:LEU:O	48:R2:17:SER:CB	2.56	0.50
25:YA:483:A:H3'	25:YA:484:C:H6	1.77	0.50
5:QE:148:VAL:HG21	8:QH:107:LEU:HD13	1.93	0.50
48:Y2:69:ARG:CB	48:Y2:69:ARG:HH11	2.25	0.50
1:QA:411:A:C4	1:QA:413:G:H1'	2.46	0.50
34:RO:104:ARG:NE	39:RT:34:VAL:HG11	2.26	0.50
1:XA:1365:G:H2'	1:XA:1366:C:C6	2.46	0.50
13:XM:14:ARG:HG3	13:XM:16:ASP:OD2	2.12	0.50
28:RE:119:ARG:HD3	28:RE:160:TYR:CD2	2.47	0.50
50:Y4:22:ILE:HD12	50:Y4:22:ILE:H	1.77	0.50
34:YO:104:ARG:NE	39:YT:34:VAL:HG11	2.26	0.50
1:XA:1446:A:H5''	39:YT:122:ASP:OD1	2.12	0.50
1:QA:1346:A:H5'	9:QI:120:ARG:HH12	1.77	0.50
25:YA:83:G:H1	25:YA:102:G:H1'	1.77	0.50
7:XG:50:ILE:HG21	7:XG:58:PRO:HA	1.93	0.50
44:YY:16:ALA:O	44:YY:21:LYS:HD3	2.11	0.50
44:YY:19:LYS:O	44:YY:19:LYS:CG	2.60	0.50
9:XI:33:PHE:HZ	9:XI:47:LEU:HD21	1.76	0.50
12:QL:28:LYS:O	12:QL:29:GLY:C	2.50	0.50
25:RA:389:G:H1	35:RP:70:GLN:HB3	1.77	0.50
51:Y5:50:GLY:O	51:Y5:51:TYR:CB	2.59	0.50
55:R9:7:VAL:HG12	55:R9:25:VAL:HG21	1.94	0.50
53:Y7:12:ARG:HG3	53:Y7:12:ARG:NH1	2.27	0.50
25:YA:900:A:H3'	25:YA:901:A:H8	1.77	0.50
1:QA:538:G:OP1	12:QL:113:ARG:HD2	2.12	0.50
30:YG:49:ASP:OD1	30:YG:51:ARG:HG3	2.12	0.50
1:QA:946:A:O2'	1:QA:1333:A:N3	2.34	0.50
25:YA:2688:U:H5	25:YA:2720:U:OP2	1.95	0.50
1:QA:134:A:H61	16:QP:25:ARG:NH1	2.10	0.50
25:YA:86:C:H4'	25:YA:104:U:H1'	1.94	0.50
25:RA:1728:G:H3'	25:RA:1729:A:H5''	1.94	0.50
25:YA:1048:A:P	25:YA:1110:G:H22	2.34	0.50
1:QA:1256:A:P	3:QC:26:LYS:HZ3	2.34	0.50
48:Y2:9:GLN:O	48:Y2:12:GLU:HB3	2.10	0.50
28:YE:46:ALA:HB1	28:YE:80:GLU:HB2	1.94	0.50
25:YA:1500:G:H21	27:YD:100:GLY:HA3	1.77	0.50
25:RA:1061:U:H3'	25:RA:1062:G:H5''	1.94	0.50
31:YH:16:SER:O	31:YH:17:VAL:HG23	2.12	0.50
1:QA:186(A):C:H2'	1:QA:186(B):C:C6	2.47	0.50
27:YD:218:ARG:HB3	27:YD:219:PRO:HD2	1.94	0.50
47:Y1:93:GLU:O	47:Y1:97:LEU:HD11	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:QK:32:ILE:HD12	11:QK:72:ALA:CB	2.36	0.49
27:RD:72:LYS:O	27:RD:73:VAL:C	2.50	0.49
31:RH:153:LYS:O	31:RH:154:PRO:O	2.30	0.49
28:RE:61:ARG:O	28:RE:62:PRO:C	2.50	0.49
50:Y4:9:LEU:H	50:Y4:27:THR:CG2	2.25	0.49
30:YG:114:ILE:HG21	30:YG:117:PHE:HB2	1.93	0.49
50:R4:9:LEU:H	50:R4:27:THR:CG2	2.25	0.49
30:RG:103:LEU:HD21	30:RG:178:PHE:CZ	2.47	0.49
30:RG:111:LEU:N	30:RG:112:PRO:CD	2.75	0.49
36:RQ:80:GLU:HG3	36:RQ:81:VAL:N	2.27	0.49
3:QC:35:GLU:O	3:QC:39:ILE:HG13	2.12	0.49
52:R6:20:ASN:O	52:R6:21:TYR:CB	2.59	0.49
41:RV:41:GLY:N	41:RV:46:VAL:HG13	2.26	0.49
21:QU:6:ARG:HE	21:QU:15:ARG:NH2	2.09	0.49
13:XM:120:LYS:O	13:XM:121:LYS:CB	2.60	0.49
30:YG:83:ARG:HH11	30:YG:83:ARG:HG2	1.76	0.49
38:YS:52:SER:O	38:YS:56:LEU:CD2	2.60	0.49
25:RA:2377:A:H4'	38:RS:111:GLU:O	2.12	0.49
9:XI:29:ASN:OD1	9:XI:64:THR:HA	2.12	0.49
29:RF:11:VAL:CG1	29:RF:12:LEU:N	2.75	0.49
25:YA:2728:U:H2'	25:YA:2729:G:C8	2.47	0.49
50:R4:23:GLU:C	50:R4:24:THR:HG1	2.16	0.49
29:YF:11:VAL:CG1	29:YF:12:LEU:N	2.75	0.49
8:XH:91:ARG:NH1	8:XH:91:ARG:HG2	2.25	0.49
8:XH:91:ARG:HH11	8:XH:91:ARG:CG	2.22	0.49
15:QO:17:ARG:NH1	15:QO:77:ARG:CZ	2.74	0.49
12:QL:24:VAL:CG1	12:QL:24:VAL:O	2.58	0.49
27:YD:76:PRO:HA	27:YD:118:VAL:HG23	1.93	0.49
32:RI:5:LEU:HD12	32:RI:5:LEU:H	1.76	0.49
49:Y3:21:ALA:O	49:Y3:25:ALA:N	2.41	0.49
33:RN:73:THR:HG22	33:RN:82:LEU:HD11	1.93	0.49
33:YN:137:LYS:HG3	33:YN:138:LEU:H	1.77	0.49
25:YA:363(B):G:H2'	25:YA:363(C):G:H8	1.77	0.49
32:YI:115:ALA:HB3	32:YI:128:LEU:HD12	1.94	0.49
25:YA:1125:G:OP2	25:YA:1126:A:O2'	2.20	0.49
35:YP:36:LYS:HB2	35:YP:40:SER:HB3	1.94	0.49
25:RA:2469:A:H5''	25:RA:2470:G:C8	2.46	0.49
25:YA:1537:C:H2'	25:YA:1538:G:C8	2.47	0.49
25:RA:642:G:H21	25:RA:646:A:H2	1.59	0.49
1:XA:757:U:H2'	1:XA:758:G:O4'	2.12	0.49
14:XM:44:LEU:HD12	14:XM:53:LEU:HD12	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:Y1:81:LYS:O	47:Y1:82:LEU:O	2.30	0.49
44:RY:81:LYS:HD3	44:RY:97:ARG:HD3	1.94	0.49
44:YY:88:LYS:HA	44:YY:88:LYS:NZ	2.27	0.49
44:YY:81:LYS:CD	44:YY:97:ARG:HE	2.20	0.49
54:Y8:56:GLU:O	54:Y8:57:ARG:C	2.50	0.49
19:XS:65:ASN:HA	50:Y4:55:ARG:HH11	1.77	0.49
2:XB:16:HIS:HB3	2:XB:210:SER:CB	2.42	0.49
35:RP:61:ARG:HH21	54:R8:13:ARG:HD2	1.77	0.49
33:YN:6:PRO:HG2	33:YN:43:THR:OG1	2.11	0.49
34:YO:55:GLY:O	34:YO:56:ASP:C	2.50	0.49
8:QH:29:SER:CB	8:QH:32:LYS:HG3	2.28	0.49
26:RB:55:U:H4'	30:RG:28:VAL:HG21	1.93	0.49
52:Y6:44:ARG:O	52:Y6:45:LYS:CB	2.60	0.49
3:XC:35:GLU:O	3:XC:39:ILE:HG13	2.13	0.49
44:YY:44:ILE:CG1	44:YY:45:VAL:H	2.24	0.49
5:XE:41:VAL:CG1	5:XE:112:LEU:O	2.60	0.49
56:Z8:76:PPU:HN2	56:Z8:76:PPU:HD2	1.76	0.49
28:YE:37:ARG:H	28:YE:37:ARG:HE	1.59	0.49
5:XE:126:ARG:NH1	5:XE:126:ARG:HG3	2.19	0.49
9:QI:83:ARG:HA	9:QI:86:VAL:CG1	2.41	0.49
1:XA:375:U:H4'	16:XP:17:TYR:CE2	2.40	0.49
13:QM:108:ARG:O	13:QM:109:THR:C	2.50	0.49
49:R3:7:LYS:CB	49:R3:34:GLU:HG2	2.41	0.49
6:QF:72:VAL:HG13	6:QF:73:ASN:N	2.27	0.49
25:YA:780:G:N2	25:YA:783:A:H62	2.07	0.49
54:Y8:10:ALA:O	54:Y8:14:VAL:HG12	2.11	0.49
47:Y1:67:ILE:N	47:Y1:68:PRO:CD	2.76	0.49
1:QA:276:G:O3'	17:QQ:68:ARG:NH1	2.43	0.49
47:Y1:8:SER:HB3	47:Y1:66:HIS:CE1	2.46	0.49
13:XM:108:ARG:O	13:XM:109:THR:C	2.50	0.49
43:RX:18:TYR:C	43:RX:20:GLY:N	2.64	0.49
1:QA:190:G:H4'	1:QA:191(A):G:OP2	2.11	0.49
27:YD:2:ALA:CB	27:YD:20:ASP:HB3	2.42	0.49
33:YN:82:LEU:HD12	33:YN:83:LYS:N	2.27	0.49
53:R7:12:ARG:HG3	53:R7:12:ARG:NH1	2.27	0.49
16:QP:39:TYR:CE2	16:QP:41:PRO:HD3	2.48	0.49
31:RH:19:VAL:HG13	31:RH:43:VAL:CG2	2.41	0.49
25:YA:2591:C:OP2	27:YD:238:GLY:HA3	2.11	0.49
25:YA:2074:U:H2'	25:YA:2075:U:C6	2.47	0.49
27:RD:218:ARG:HB3	27:RD:219:PRO:HD2	1.94	0.49
25:YA:753:C:O5'	25:YA:753:C:H6	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:56:U:H2'	1:XA:57:G:C8	2.46	0.49
44:RY:77:PRO:O	44:RY:78:ALA:HB2	2.11	0.49
50:R4:57:GLU:O	50:R4:61:ARG:O	2.30	0.49
25:YA:241:A:H4'	25:YA:242:G:OP1	2.12	0.49
28:RE:179:GLU:O	28:RE:180:ASN:HB2	2.12	0.49
2:XB:207:ALA:O	2:XB:209:ARG:N	2.45	0.49
35:RP:114:ILE:HD11	35:RP:130:PHE:HE1	1.70	0.49
35:RP:147:LEU:O	35:RP:148:LEU:HB2	2.11	0.49
27:RD:123:ALA:HB3	27:RD:131:LEU:HG	1.94	0.49
28:YE:61:ARG:CB	28:YE:62:PRO:CD	2.90	0.49
25:YA:588:U:C2	29:YF:90:PHE:CE1	3.00	0.49
5:QE:11:ILE:CG1	5:QE:31:LEU:HD12	2.41	0.49
37:RR:67:LEU:HD13	37:RR:76:VAL:CG2	2.27	0.49
34:YO:47:ILE:CG1	34:YO:48:PRO:HD2	2.42	0.49
36:YQ:29:PHE:N	36:YQ:105:GLU:OE2	2.41	0.49
50:Y4:36:CYS:O	50:Y4:39:CYS:CB	2.55	0.49
27:RD:25:THR:O	27:RD:27:THR:HG22	2.12	0.49
38:RS:60:GLY:O	38:RS:61:ASN:CB	2.56	0.49
20:QT:97:ALA:HB3	20:QT:99:LEU:CD1	2.43	0.49
25:YA:1693:U:H1'	27:YD:14:ARG:NH2	2.27	0.49
20:XT:26:ASN:CB	20:XT:71:THR:HG23	2.43	0.49
21:QU:6:ARG:HH21	21:QU:15:ARG:NE	2.09	0.49
33:RN:42:TRP:HA	33:RN:48:MET:CE	2.42	0.49
28:RE:23:VAL:HG12	28:RE:173:VAL:HG21	1.94	0.49
43:RX:70:LEU:N	43:RX:70:LEU:CD2	2.72	0.49
4:QD:206:PHE:HD2	4:QD:207:TYR:CE1	2.30	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
11:QK:29:ILE:HG13	11:QK:44:SER:HB3	1.93	0.49
1:XA:880:C:OP1	12:XL:8:ASN:ND2	2.40	0.49
42:YW:29:LEU:O	42:YW:29:LEU:HD23	2.13	0.49
5:QE:82:VAL:HG12	5:QE:83:GLU:H	1.77	0.49
4:XD:196:LEU:C	4:XD:198:VAL:N	2.65	0.49
8:QH:14:ARG:HG2	8:QH:14:ARG:O	2.12	0.49
4:QD:13:ARG:CA	4:QD:33:MET:HE3	2.43	0.49
1:XA:1297:C:O2'	1:XA:1298:C:O5'	2.27	0.49
1:XA:1158:C:H4'	2:XB:133:LYS:HZ3	1.77	0.49
36:YQ:2:LEU:HD23	36:YQ:2:LEU:N	2.27	0.49
27:YD:2:ALA:CB	27:YD:20:ASP:CB	2.90	0.49
33:YN:73:THR:CG2	33:YN:82:LEU:HD11	2.43	0.49
8:XH:83:ILE:HB	8:XH:137:VAL:HG13	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:115:G:H4'	1:XA:116:A:O5'	2.12	0.49
41:YV:91:TYR:HD1	41:YV:91:TYR:C	2.16	0.49
32:RI:129:THR:HA	32:RI:137:PRO:HA	1.94	0.49
15:XO:32:LEU:O	15:XO:33:THR:C	2.51	0.49
25:YA:140:A:H8	25:YA:1408:C:HO2'	1.56	0.49
34:YO:69:ILE:O	34:YO:76:ALA:HA	2.12	0.49
47:Y1:19:GLN:OE1	47:Y1:19:GLN:HA	2.12	0.49
37:YR:18:LEU:C	37:YR:18:LEU:HD13	2.33	0.49
25:YA:975:G:H1'	25:YA:990:A:C2	2.47	0.49
25:YA:1165:U:H2'	25:YA:1166:C:C6	2.47	0.49
1:QA:1126:U:H1'	1:QA:1280:A:N7	2.27	0.49
47:R1:83:GLU:CD	47:R1:85:LEU:H	2.15	0.49
31:YH:103:LEU:H	31:YH:103:LEU:HD23	1.77	0.49
19:XS:62:ILE:C	19:XS:63:THR:HG22	2.32	0.49
2:XB:68:ILE:O	2:XB:91:PRO:HD2	2.13	0.49
28:RE:55:ASN:O	28:RE:57:LYS:N	2.44	0.49
5:QE:32:VAL:O	5:QE:43:LEU:HD12	2.12	0.49
40:RU:79:PHE:HE2	40:RU:83:LEU:HD22	1.78	0.49
2:QB:103:THR:N	2:QB:180:LEU:HD11	2.27	0.49
37:RR:18:LEU:C	37:RR:18:LEU:HD13	2.33	0.49
52:Y6:7:ILE:C	52:Y6:9:LEU:N	2.65	0.49
4:QD:30:LYS:CG	4:QD:35:ARG:NE	2.64	0.49
25:RA:2283:C:OP1	52:R6:5:VAL:HG13	2.12	0.49
12:QL:6:THR:O	12:QL:7:ILE:C	2.51	0.49
20:QT:37:SER:O	20:QT:41:ILE:HG12	2.12	0.49
10:XJ:22:LYS:NZ	10:XJ:23:ILE:HG12	2.28	0.49
38:YS:60:GLY:O	38:YS:61:ASN:CB	2.55	0.49
27:RD:10:THR:HG23	27:RD:13:ARG:CB	2.34	0.49
41:YV:3:ALA:HB3	41:YV:14:VAL:HG23	1.92	0.49
37:RR:118:GLU:OXT	37:RR:118:GLU:HG3	2.11	0.49
28:RE:7:VAL:HG11	39:RT:1:MET:HE3	1.94	0.49
48:R2:41:ILE:HD11	48:R2:44:LEU:CB	2.42	0.49
30:RG:83:ARG:HG2	30:RG:83:ARG:HH11	1.76	0.49
29:RF:196:LEU:C	29:RF:197:ASP:O	2.50	0.49
41:RV:76:LYS:HG3	41:RV:81:TYR:CD1	2.48	0.49
9:XI:5:TYR:HA	9:XI:17:VAL:O	2.12	0.49
21:XU:2:GLY:O	21:XU:4:GLY:N	2.45	0.49
9:QI:105:ASP:C	9:QI:107:ARG:H	2.14	0.49
42:RW:29:LEU:HD23	42:RW:29:LEU:O	2.13	0.49
33:YN:68:GLU:HG2	33:YN:88:GLU:CD	2.33	0.49
1:QA:34:C:H2'	1:QA:35:G:H8	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1218:C:H2'	1:QA:1219:U:C6	2.47	0.49
31:RH:120:GLY:HA3	31:RH:140:LYS:NZ	2.28	0.49
3:QC:178:LEU:N	3:QC:178:LEU:HD22	2.27	0.49
31:YH:19:VAL:HG13	31:YH:43:VAL:HG23	1.93	0.49
30:RG:49:ASP:OD1	30:RG:51:ARG:HG3	2.12	0.49
16:QP:83:GLU:HA	16:QP:83:GLU:OE2	2.12	0.49
25:YA:1228:G:OP1	40:YU:13:LYS:HG2	2.12	0.49
17:XQ:3:LYS:HD2	17:XQ:60:ILE:HD11	1.95	0.49
45:RZ:166:SER:HB2	45:RZ:168:GLU:N	2.27	0.49
1:QA:360:A:H2'	1:QA:361:G:C8	2.47	0.49
34:RO:69:ILE:O	34:RO:76:ALA:HA	2.12	0.49
1:XA:720:C:H5''	18:XR:52:PRO:HA	1.93	0.49
25:RA:2862:G:H2'	25:RA:2863:C:H6	1.76	0.49
1:QA:583:A:H2'	1:QA:584:G:O4'	2.12	0.49
41:RV:91:TYR:C	41:RV:91:TYR:HD1	2.16	0.49
47:Y1:60:PHE:HE2	47:Y1:91:LYS:HZ1	1.58	0.49
35:RP:49:ARG:HE	54:R8:59:LYS:HG2	1.76	0.49
13:XM:90:LEU:HA	13:XM:93:ARG:CD	2.34	0.49
31:YH:153:LYS:HA	31:YH:153:LYS:HZ3	1.75	0.49
31:YH:153:LYS:O	31:YH:154:PRO:O	2.29	0.49
27:YD:35:LYS:CG	27:YD:64:ILE:HG22	2.42	0.49
27:YD:72:LYS:O	27:YD:73:VAL:C	2.51	0.49
2:XB:178:ARG:NH2	8:XH:74:PRO:CB	2.72	0.49
2:QB:181:PHE:O	2:QB:183:PRO:HD3	2.12	0.49
33:YN:46:VAL:O	33:YN:47:ALA:CB	2.57	0.49
40:YU:92:ARG:NH1	40:YU:95:LEU:HD11	2.27	0.49
38:YS:99:LYS:O	38:YS:101:LEU:N	2.45	0.49
33:YN:95:PRO:O	33:YN:97:ARG:N	2.46	0.49
36:RQ:132:VAL:HG12	36:RQ:133:ARG:N	2.27	0.49
8:XH:61:VAL:HG12	8:XH:63:LEU:HD13	1.94	0.49
52:R6:37:ARG:HA	52:R6:37:ARG:HE	1.77	0.49
30:YG:107:LEU:HD11	30:YG:178:PHE:CD1	2.48	0.49
27:YD:227:ASN:HB3	27:YD:228:PRO:CD	2.30	0.49
16:XP:59:TRP:HE3	16:XP:59:TRP:HA	1.76	0.49
25:YA:2712:U:O2'	25:YA:2712(A):A:P	2.71	0.49
5:QE:41:VAL:CG1	5:QE:112:LEU:O	2.60	0.49
50:Y4:1:MET:O	50:Y4:1:MET:HG3	2.12	0.49
14:QN:8:GLU:O	14:QN:10:ALA:N	2.45	0.49
25:RA:2749:A:H3'	25:RA:2750:A:H2'	1.92	0.49
14:XN:8:GLU:O	14:XN:10:ALA:N	2.45	0.49
39:YT:57:PHE:O	39:YT:59:THR:N	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:R7:9:ARG:HH12	53:R7:47:ARG:HG3	1.76	0.49
39:YT:39:ARG:CG	39:YT:40:THR:H	2.22	0.49
44:RY:35:TYR:CD1	44:RY:69:ALA:HB3	2.48	0.49
1:XA:337:C:H2'	1:XA:338:A:C8	2.47	0.49
47:Y1:40:ARG:NH2	47:Y1:42:GLN:HG2	2.27	0.49
9:QI:79:LEU:HD13	9:QI:79:LEU:O	2.12	0.49
9:XI:43:ALA:C	9:XI:45:ALA:H	2.16	0.49
25:YA:1697:G:OP2	25:YA:1698:A:O2'	2.17	0.49
37:RR:2:ARG:HG2	37:RR:5:LYS:HZ2	1.75	0.49
6:XF:72:VAL:HG13	6:XF:73:ASN:N	2.27	0.49
33:RN:120:LEU:HD11	33:RN:122:VAL:CG2	2.42	0.49
3:XC:195:VAL:HG12	3:XC:196:LEU:H	1.75	0.49
8:XH:14:ARG:O	8:XH:14:ARG:HG2	2.12	0.49
26:YB:77:U:P	45:YZ:19:ARG:HH22	2.36	0.49
3:XC:178:LEU:N	3:XC:178:LEU:HD22	2.28	0.49
25:YA:2396:G:OP1	47:Y1:25:LYS:NZ	2.33	0.49
12:QL:62:SER:C	12:QL:64:TYR:H	2.14	0.49
25:RA:1508:A:O2'	25:RA:1509:C:O4'	2.30	0.49
32:YI:133:HIS:HB2	32:YI:134:PRO:HD2	1.95	0.49
25:RA:1786:A:H2	25:RA:2606:C:H1'	1.77	0.49
41:YV:29:PRO:O	41:YV:61:VAL:HG22	2.12	0.49
1:XA:57:G:H2'	1:XA:58:C:C6	2.48	0.49
48:R2:33:MET:O	48:R2:37:PHE:HD1	1.95	0.49
25:RA:760:G:H2'	25:RA:761:A:O4'	2.12	0.49
25:RA:896:A:C2	45:RZ:146:ILE:HD11	2.48	0.49
6:QF:51:PRO:HA	6:QF:55:ASP:O	2.12	0.49
40:YU:81:HIS:CE1	40:YU:117:GLN:HG3	2.48	0.49
25:RA:706:A:H2'	25:RA:707:G:O4'	2.13	0.49
31:RH:23:ARG:HD2	31:RH:34:GLU:OE2	2.12	0.49
4:XD:118:ARG:NH2	4:XD:136:PRO:HB2	2.28	0.49
42:YW:51:LEU:HD23	42:YW:105:VAL:HG11	1.95	0.49
50:R4:68:ARG:HD3	50:R4:69:LYS:HG2	1.92	0.49
28:YE:17:ASP:N	28:YE:17:ASP:OD2	2.46	0.49
45:YZ:5:LEU:HB3	45:YZ:59:LEU:HA	1.94	0.49
25:YA:1550:C:H2'	25:YA:1551:C:H6	1.77	0.49
31:RH:128:PRO:HD2	31:RH:129:THR:N	2.25	0.49
47:Y1:80:LEU:C	47:Y1:81:LYS:CE	2.77	0.49
4:QD:9:CYS:SG	4:QD:22:LYS:CE	3.01	0.49
4:QD:9:CYS:SG	4:QD:22:LYS:CD	2.98	0.49
31:RH:103:LEU:H	31:RH:103:LEU:HD23	1.77	0.49
19:QS:62:ILE:C	19:QS:63:THR:HG22	2.32	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:Y8:16:ILE:CD1	54:Y8:57:ARG:HG2	2.42	0.49
28:YE:179:GLU:O	28:YE:180:ASN:HB2	2.12	0.49
50:Y4:47:GLN:O	50:Y4:48:ARG:CB	2.60	0.49
19:XS:64:GLU:CG	50:Y4:55:ARG:HH12	2.25	0.49
31:YH:151:ILE:C	31:YH:152:ARG:O	2.49	0.49
27:YD:130:ALA:C	27:YD:131:LEU:HD12	2.33	0.49
35:RP:101:VAL:CG1	35:RP:102:ARG:N	2.75	0.49
50:R4:42:PHE:O	50:R4:44:THR:O	2.31	0.49
30:RG:107:LEU:HD11	30:RG:178:PHE:CD1	2.48	0.49
40:RU:92:ARG:CD	40:RU:94:ASN:HB3	2.42	0.49
51:R5:20:ARG:C	51:R5:22:HIS:H	2.14	0.49
25:RA:1266:G:OP2	51:R5:20:ARG:NE	2.45	0.49
25:RA:1021:A:H8	25:RA:1022:G:H5''	1.76	0.49
50:Y4:42:PHE:O	50:Y4:43:TYR:C	2.51	0.49
25:YA:1371:G:HO2'	25:YA:1372:U:H5	1.58	0.49
35:RP:64:LYS:C	35:RP:66:GLY:N	2.56	0.49
25:RA:482:A:H4'	44:RY:47:LYS:HD2	1.95	0.49
34:RO:8:LEU:N	34:RO:8:LEU:CD2	2.76	0.49
44:YY:61:ILE:HG22	44:YY:62:GLU:N	2.27	0.49
25:RA:2372:G:O2'	52:R6:46:HIS:NE2	2.24	0.49
34:YO:20:MET:HG2	34:YO:21:CYS:O	2.11	0.49
1:XA:192:U:H2'	1:XA:193:C:C6	2.47	0.49
1:QA:411:A:C5	1:QA:413:G:H1'	2.47	0.49
1:XA:971:G:C5	1:XA:1365:G:H5'	2.47	0.49
13:QM:14:ARG:HG3	13:QM:16:ASP:OD2	2.13	0.49
26:YB:42:C:N4	30:YG:91:ARG:NH2	2.55	0.49
39:RT:94:ALA:O	39:RT:95:ARG:CB	2.61	0.49
39:YT:38:ASN:O	39:YT:39:ARG:O	2.30	0.49
50:R4:22:ILE:HD12	50:R4:22:ILE:H	1.77	0.49
25:YA:1798:U:H5''	27:YD:259:THR:CG2	2.42	0.49
11:QK:62:GLN:O	11:QK:63:LEU:C	2.51	0.49
25:RA:262:A:H2'	25:RA:263:C:O4'	2.11	0.49
25:YA:49:A:N7	25:YA:120:U:C5	2.76	0.49
47:R1:67:ILE:N	47:R1:68:PRO:CD	2.76	0.49
4:XD:198:VAL:HG12	4:XD:199:ASN:H	1.74	0.49
8:XH:109:ILE:HG12	8:XH:110:ALA:N	2.27	0.49
1:QA:1127:G:H21	1:QA:1147:C:H41	1.61	0.49
33:RN:30:ILE:O	33:RN:34:LEU:HD23	2.13	0.49
25:RA:64:A:C4	43:RX:66:LEU:HD13	2.47	0.49
27:RD:2:ALA:CB	27:RD:20:ASP:HB3	2.42	0.49
1:XA:438:G:H4'	4:XD:123:HIS:CE1	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1158:C:H4'	2:QB:133:LYS:NZ	2.28	0.49
25:YA:2853:C:H2'	25:YA:2854:G:H8	1.77	0.49
25:RA:1257:C:O2'	29:RF:84:VAL:HG12	2.12	0.49
45:RZ:70:LEU:HB2	45:RZ:91:LEU:HD21	1.95	0.49
25:RA:1853:A:N1	25:RA:2087:G:H1'	2.26	0.49
25:RA:1889:A:N1	25:RA:2234:G:H1'	2.27	0.49
25:RA:345:A:H2'	25:RA:347:A:H62	1.77	0.49
34:RO:105:GLU:O	34:RO:108:GLU:HB2	2.12	0.49
29:YF:51:THR:O	29:YF:93:LYS:NZ	2.38	0.49
9:XI:110:GLU:HG3	9:XI:110:GLU:O	2.12	0.49
30:RG:35:GLU:C	30:RG:35:GLU:CD	2.71	0.49
13:XM:30:ALA:O	13:XM:31:LYS:C	2.49	0.49
4:QD:23:GLY:H	4:QD:26:CYS:HB2	1.77	0.49
44:RY:84:ARG:HD3	44:RY:86:ARG:NH1	2.28	0.49
44:YY:84:ARG:HD3	44:YY:86:ARG:NH1	2.28	0.49
54:Y8:58:ILE:O	54:Y8:61:LEU:HD12	2.13	0.49
28:YE:179:GLU:HA	28:YE:179:GLU:OE1	2.10	0.49
28:RE:95:ILE:H	28:RE:95:ILE:CD1	2.19	0.49
19:XS:9:VAL:O	19:XS:10:PHE:HB3	2.13	0.49
2:XB:15:VAL:H	2:XB:16:HIS:CE1	2.30	0.49
27:YD:123:ALA:HB3	27:YD:131:LEU:HG	1.94	0.49
30:YG:143:GLU:HA	50:Y4:28:LYS:HD3	1.95	0.49
30:RG:113:ARG:HD2	50:R4:33:VAL:CG1	2.43	0.49
30:RG:143:GLU:HA	50:R4:28:LYS:HD3	1.95	0.49
36:RQ:29:PHE:N	36:RQ:105:GLU:OE2	2.41	0.49
33:RN:95:PRO:O	33:RN:97:ARG:N	2.46	0.49
52:R6:7:ILE:C	52:R6:9:LEU:N	2.65	0.49
52:Y6:20:ASN:CG	52:Y6:21:TYR:N	2.66	0.49
51:Y5:2:ALA:O	51:Y5:3:LYS:CB	2.60	0.49
25:RA:2015:A:N3	51:R5:2:ALA:N	2.60	0.49
1:XA:1129:C:H5'	1:XA:1130:A:OP1	2.13	0.49
31:RH:54:ARG:HD3	31:RH:65:HIS:ND1	2.27	0.49
4:QD:166:LYS:CD	27:YD:134:ARG:HH12	2.23	0.49
25:YA:1007:C:OP1	33:YN:35:ARG:NH1	2.45	0.49
38:RS:18:ILE:O	38:RS:19:LYS:O	2.31	0.49
47:R1:40:ARG:NH2	47:R1:42:GLN:HG2	2.27	0.49
35:YP:30:THR:O	35:YP:33:ARG:HB2	2.12	0.49
41:YV:79:VAL:O	41:YV:79:VAL:HG22	2.12	0.49
4:XD:206:PHE:HD2	4:XD:207:TYR:CE1	2.30	0.49
9:QI:43:ALA:HA	9:QI:74:ILE:HD13	1.94	0.49
9:QI:43:ALA:C	9:QI:45:ALA:H	2.16	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:QM:120:LYS:O	13:QM:121:LYS:CB	2.60	0.49
25:YA:1689:A:N6	25:YA:1698:A:H2	2.08	0.49
37:YR:1:MET:O	37:YR:2:ARG:CB	2.60	0.49
38:YS:25:ARG:HH12	38:YS:42:ASP:CG	2.16	0.49
25:YA:704:G:H1'	25:YA:727:A:H61	1.78	0.49
13:QM:102:ARG:HG3	13:QM:102:ARG:O	2.12	0.49
6:QF:100:ASN:HD22	6:QF:100:ASN:HA	1.47	0.49
17:QQ:74:LEU:HD12	17:QQ:75:ARG:NE	2.28	0.49
11:QK:110:ASP:HB2	18:QR:88:LYS:HD3	1.95	0.49
25:RA:486:C:H4'	42:RW:60:ASN:OD1	2.12	0.49
36:RQ:23:GLY:O	36:RQ:24:GLY:O	2.30	0.49
39:RT:16:ARG:NE	39:RT:19:LEU:HD21	2.28	0.49
25:YA:389:G:H1	35:YP:70:GLN:HB3	1.78	0.49
1:XA:376:G:H5''	16:XP:5:ARG:HD2	1.94	0.49
43:YX:51:VAL:HG13	43:YX:81:VAL:HG23	1.93	0.49
4:XD:128:VAL:O	4:XD:130:GLY:N	2.45	0.49
6:QF:101:ALA:HA	18:QR:28:GLU:HG2	1.95	0.49
50:R4:10:VAL:CG2	50:R4:11:PRO:HD2	2.43	0.49
25:YA:1164:G:H2'	25:YA:1165:U:C6	2.47	0.49
25:YA:531:C:OP1	25:YA:561:G:N1	2.45	0.49
20:XT:60:GLU:HG3	20:XT:81:LYS:HE3	1.94	0.49
25:YA:2795:G:H3'	25:YA:2797:U:C5'	2.43	0.49
32:YI:93:THR:HG22	32:YI:119:PRO:HB3	1.94	0.49
25:RA:626:U:H5''	25:RA:627:A:H5'	1.95	0.49
9:QI:110:GLU:HG3	9:QI:110:GLU:O	2.12	0.49
1:XA:975:A:H8	1:XA:975:A:H5'	1.77	0.49
31:RH:98:LEU:HD12	31:RH:102:ALA:O	2.13	0.49
1:XA:890:G:O2'	1:XA:906:G:O6	2.20	0.49
31:YH:98:LEU:HD12	31:YH:102:ALA:O	2.13	0.49
20:QT:60:GLU:HG3	20:QT:81:LYS:HE3	1.94	0.49
4:XD:9:CYS:SG	4:XD:22:LYS:CD	2.98	0.49
10:QJ:49:VAL:HG22	14:QN:41:ARG:CG	2.42	0.49
44:YY:95:LYS:N	44:YY:95:LYS:CD	2.76	0.49
31:RH:124:GLU:HB3	31:RH:132:ARG:CG	2.42	0.49
1:QA:1316:G:N2	1:QA:1319:A:OP2	2.45	0.49
31:YH:124:GLU:HB3	31:YH:132:ARG:CG	2.43	0.49
3:QC:79:ARG:NE	11:XK:99:GLN:CD	2.66	0.49
28:YE:61:ARG:O	28:YE:62:PRO:C	2.51	0.49
13:XM:3:ARG:HA	13:XM:9:ILE:HG12	1.94	0.49
30:YG:115:ARG:HG2	30:YG:115:ARG:HH11	1.77	0.49
38:RS:99:LYS:O	38:RS:101:LEU:N	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:XE:45:PHE:CD2	5:XE:47:LYS:HD2	2.47	0.49
4:QD:30:LYS:HD2	4:QD:35:ARG:HH21	1.78	0.49
54:R8:33:ASN:O	54:R8:35:GLN:N	2.46	0.49
2:XB:7:VAL:CG2	2:XB:8:LYS:HD3	2.43	0.49
51:R5:48:GLU:HA	51:R5:59:GLU:CG	2.43	0.49
27:RD:182:LEU:H	27:RD:272:ALA:CB	2.25	0.49
13:XM:16:ASP:HB3	13:XM:34:LEU:HD11	1.93	0.49
3:XC:76:VAL:HG21	3:XC:103:VAL:HG11	1.95	0.49
28:RE:119:ARG:HD3	28:RE:160:TYR:HD2	1.78	0.49
15:QO:77:ARG:HA	15:QO:80:ALA:HB3	1.95	0.49
3:QC:173:VAL:N	3:QC:174:PRO:HD3	2.28	0.49
54:R8:41:ILE:HG13	54:R8:42:ARG:N	2.28	0.49
1:XA:537:G:H5''	12:XL:113:ARG:NH1	2.27	0.49
41:RV:7:THR:HG23	41:RV:22:VAL:HG11	1.94	0.49
4:XD:163:GLU:O	4:XD:165:MET:N	2.46	0.49
11:QK:82:VAL:O	11:QK:108:ILE:HA	2.13	0.49
44:RY:19:LYS:CG	44:RY:19:LYS:O	2.60	0.49
29:RF:45:ARG:HG2	29:RF:45:ARG:NH1	2.28	0.49
2:XB:134:GLU:HB3	2:XB:138:LEU:HD12	1.92	0.49
39:RT:16:ARG:HD3	39:RT:19:LEU:CG	2.43	0.49
1:XA:244:U:H4'	1:XA:245:C:O5'	2.12	0.49
12:XL:85:ILE:HD11	12:XL:98:TYR:CB	2.42	0.49
42:RW:30:GLU:O	42:RW:34:ASN:ND2	2.46	0.49
43:RX:51:VAL:HG13	43:RX:81:VAL:HG23	1.93	0.49
6:QF:97:PHE:CD2	18:QR:31:LEU:HD21	2.48	0.49
25:RA:774:A:H2	25:RA:787:U:O2'	1.96	0.49
33:RN:73:THR:CG2	33:RN:82:LEU:HD11	2.42	0.49
55:Y9:7:VAL:HG12	55:Y9:25:VAL:HG21	1.94	0.49
6:XF:101:ALA:HA	18:XR:28:GLU:HG2	1.95	0.49
41:YV:91:TYR:CD1	41:YV:91:TYR:C	2.86	0.49
25:RA:137(A):G:H2'	25:RA:139:G:N7	2.28	0.49
1:QA:769:G:H4'	1:QA:1513:A:H4'	1.95	0.49
25:RA:2721:A:H1'	25:RA:2873:A:O2'	2.12	0.49
25:YA:322:A:OP2	29:YF:169:ASN:HB2	2.13	0.49
1:XA:17:U:H2'	1:XA:18:C:C6	2.47	0.49
37:RR:71:GLN:HE21	37:RR:71:GLN:HA	1.77	0.49
51:R5:45:VAL:O	51:R5:45:VAL:HG12	2.13	0.49
25:YA:1178:C:H2'	25:YA:1179:C:C6	2.47	0.49
25:YA:2722:G:H4'	37:YR:4:LEU:HB2	1.94	0.49
10:QJ:49:VAL:CG1	10:QJ:50:ILE:N	2.76	0.49
10:QJ:49:VAL:HG23	14:QN:34:TYR:OH	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:RY:95:LYS:CD	44:RY:95:LYS:N	2.76	0.49
35:YP:47:ASP:OD1	35:YP:49:ARG:NH1	2.46	0.49
19:XS:11:VAL:O	19:XS:12:ASP:CB	2.61	0.49
2:XB:69:LEU:HB3	2:XB:162:ILE:HG22	1.95	0.49
2:QB:16:HIS:HB3	2:QB:210:SER:HB2	1.95	0.49
2:QB:170:GLU:C	2:QB:172:ILE:HD12	2.33	0.49
40:YU:64:ARG:NH2	40:YU:64:ARG:CG	2.70	0.49
2:QB:42:ILE:HD11	2:QB:202:PRO:HB2	1.95	0.49
52:Y6:9:LEU:HD13	52:Y6:26:ASN:HD22	1.76	0.49
8:QH:61:VAL:HG12	8:QH:63:LEU:HD13	1.94	0.49
52:R6:8:LYS:O	52:R6:27:LYS:HA	2.13	0.49
52:R6:27:LYS:CB	52:R6:27:LYS:NZ	2.73	0.49
52:R6:7:ILE:O	52:R6:9:LEU:N	2.46	0.49
37:RR:52:ILE:CG2	37:RR:94:TYR:CD1	2.96	0.49
39:RT:111:ARG:O	39:RT:112:ARG:CG	2.55	0.49
52:R6:44:ARG:O	52:R6:45:LYS:CB	2.60	0.49
20:QT:53:LEU:HA	20:QT:56:MET:CB	2.43	0.49
7:XG:23:VAL:O	7:XG:27:ILE:CD1	2.60	0.49
20:XT:37:SER:O	20:XT:41:ILE:HG12	2.12	0.49
51:R5:2:ALA:O	51:R5:3:LYS:CB	2.60	0.49
13:QM:7:VAL:HG11	30:RG:115:ARG:HH12	1.77	0.49
36:RQ:86:GLY:O	36:RQ:88:GLY:N	2.46	0.49
11:XK:41:THR:HG22	11:XK:42:TRP:N	2.28	0.49
37:YR:96:ARG:NH2	37:YR:117:VAL:HG23	2.27	0.49
25:RA:2882:A:OP1	37:RR:96:ARG:NH1	2.43	0.49
1:XA:1221:G:O3'	19:XS:77:THR:HG21	2.13	0.49
30:YG:77:ILE:O	30:YG:81:LYS:O	2.31	0.49
3:XC:87:LEU:C	3:XC:89:GLU:N	2.65	0.49
31:RH:12:PRO:HD3	31:RH:48:GLY:O	2.13	0.49
9:QI:18:PHE:O	9:QI:61:ALA:HA	2.13	0.49
35:YP:14:LYS:O	35:YP:15:ARG:C	2.51	0.49
10:QJ:94:VAL:CG1	10:QJ:95:GLU:N	2.76	0.49
30:RG:6:ALA:H	50:R4:23:GLU:CG	2.25	0.49
30:YG:3:LEU:HD21	50:Y4:25:TYR:CE1	2.48	0.49
25:RA:928:G:O2'	49:R3:43:ILE:HD11	2.12	0.49
9:QI:79:LEU:O	9:QI:83:ARG:HG2	2.13	0.49
16:QP:43:LYS:HE2	16:QP:48:TRP:CZ3	2.47	0.49
25:YA:2298:A:H2'	25:YA:2299:G:O4'	2.13	0.49
1:QA:1347:G:H22	1:QA:1374:A:P	2.35	0.49
1:XA:738:C:H5''	6:XF:69:GLU:HB2	1.95	0.49
3:XC:188:LEU:CD2	3:XC:188:LEU:N	2.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YN:56:ASN:ND2	33:YN:125:GLY:C	2.65	0.49
1:QA:35:G:H2'	1:QA:36:C:C6	2.48	0.49
11:XK:91:ARG:HH22	18:XR:88:LYS:NZ	2.09	0.49
25:YA:1434:A:H61	25:YA:1558:A:H62	1.60	0.49
47:R1:25:LYS:C	47:R1:27:GLU:H	2.16	0.49
15:QO:8:LYS:HZ2	15:QO:8:LYS:HB2	1.75	0.49
11:XK:13:GLN:HG3	11:XK:75:TYR:O	2.13	0.49
25:RA:1291:C:H2'	25:RA:1292:U:C6	2.47	0.49
25:YA:2212:A:H1'	25:YA:2215:G:C4	2.47	0.49
38:YS:11:LYS:HG2	38:YS:11:LYS:O	2.12	0.49
25:YA:277:C:H3'	25:YA:278:A:C5'	2.43	0.49
27:RD:233:HIS:CD2	27:RD:233:HIS:H	2.29	0.49
25:YA:2790:A:H2'	25:YA:2791:C:H5''	1.94	0.49
25:RA:137(A):G:H1'	43:RX:41:ASN:ND2	2.27	0.49
25:YA:606:U:H4'	25:YA:658:C:H4'	1.94	0.49
45:RZ:152:ALA:O	45:RZ:154:ASP:N	2.41	0.49
9:XI:22:GLY:HA3	9:XI:60:ASP:OD2	2.13	0.49
25:YA:1336:A:H2'	25:YA:1337:G:H8	1.77	0.49
52:Y6:37:ARG:HA	52:Y6:37:ARG:HE	1.77	0.49
7:XG:63:LYS:HD2	7:XG:63:LYS:O	2.13	0.49
47:R1:19:GLN:OE1	47:R1:19:GLN:HA	2.12	0.49
11:QK:25:TYR:N	11:QK:25:TYR:CD1	2.80	0.49
1:QA:644:G:H4'	8:QH:92:ARG:HH21	1.78	0.49
25:RA:848:G:H2'	25:RA:849:A:C8	2.48	0.49
47:R1:81:LYS:O	47:R1:82:LEU:O	2.30	0.49
44:RY:101:LYS:O	44:RY:102:CYS:SG	2.66	0.49
44:YY:81:LYS:HD3	44:YY:97:ARG:HD3	1.94	0.49
54:R8:58:ILE:O	54:R8:61:LEU:HD12	2.13	0.49
35:RP:47:ASP:OD1	35:RP:49:ARG:NH1	2.46	0.49
50:Y4:53:GLU:O	50:Y4:57:GLU:HG3	2.13	0.49
31:YH:153:LYS:CB	31:YH:154:PRO:CD	2.69	0.49
10:XJ:63:PHE:CD1	14:YN:58:LYS:HA	2.35	0.49
35:YP:101:VAL:CG1	35:YP:102:ARG:N	2.75	0.49
35:YP:52:GLU:OE2	35:YP:57:THR:HA	2.13	0.49
5:QE:51:VAL:CB	5:QE:52:PRO:HD3	2.38	0.49
2:QB:180:LEU:O	2:QB:181:PHE:HB2	2.12	0.49
2:QB:207:ALA:O	2:QB:209:ARG:N	2.45	0.49
2:QB:68:ILE:O	2:QB:91:PRO:HD2	2.13	0.49
33:YN:4:TYR:OH	33:YN:7:LYS:NZ	2.46	0.49
26:RB:55:U:H4'	30:RG:29:TRP:NE1	2.27	0.49
52:R6:20:ASN:CG	52:R6:21:TYR:N	2.66	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:YR:33:ARG:NH2	51:Y5:55:ARG:CG	2.66	0.49
10:QJ:33:GLN:HB2	10:QJ:75:ILE:CD1	2.43	0.49
37:RR:44:LEU:HD22	37:RR:48:VAL:CG2	2.43	0.49
5:QE:78:HIS:CE1	5:QE:142:LEU:HD23	2.48	0.49
20:XT:97:ALA:HB3	20:XT:99:LEU:CD1	2.43	0.49
41:RV:18:LEU:HB3	41:RV:96:ILE:CG1	2.43	0.49
2:XB:95:GLN:NE2	2:XB:147:LYS:HE2	2.27	0.49
36:YQ:86:GLY:O	36:YQ:88:GLY:N	2.46	0.49
35:RP:30:THR:O	35:RP:33:ARG:HB2	2.12	0.49
9:XI:79:LEU:HD13	9:XI:79:LEU:O	2.12	0.49
2:QB:39:ILE:O	2:QB:41:ILE:HD12	2.12	0.49
41:YV:76:LYS:HG3	41:YV:81:TYR:CD1	2.48	0.49
5:XE:42:GLY:CA	5:XE:136:MET:HE1	2.42	0.49
28:YE:119:ARG:HD3	28:YE:160:TYR:CD2	2.47	0.49
29:RF:129:PHE:CD2	29:RF:163:VAL:HG21	2.48	0.49
25:YA:1797:C:H2'	25:YA:1798:U:H5'	1.94	0.49
10:XJ:3:LYS:O	10:XJ:100:THR:HA	2.13	0.49
1:QA:267:C:OP2	17:QQ:67:LYS:HD2	2.12	0.49
36:YQ:23:GLY:O	36:YQ:24:GLY:O	2.30	0.49
31:RH:137:ASP:CB	31:RH:140:LYS:HB2	2.43	0.49
51:R5:52:TYR:O	51:R5:53:ALA:CB	2.60	0.49
25:RA:414:C:H2'	25:RA:415:A:H8	1.78	0.49
42:YW:88:ARG:HB3	42:YW:92:ARG:CB	2.42	0.49
1:XA:1126:U:H1'	1:XA:1280:A:C5	2.47	0.49
31:RH:24:VAL:HG21	31:RH:72:ILE:HG12	1.94	0.49
1:XA:148:G:H2'	1:XA:149:A:H8	1.78	0.49
16:XP:83:GLU:OE2	16:XP:83:GLU:HA	2.13	0.49
45:YZ:5:LEU:HD11	45:YZ:39:VAL:HB	1.95	0.49
25:YA:2319:G:N7	38:YS:3:ARG:HB3	2.28	0.49
25:RA:851:U:H1'	49:R3:46:ASN:HD21	1.78	0.49
25:YA:2151:G:H2'	25:YA:2152:G:H8	1.78	0.49
28:RE:38:THR:O	28:RE:42:ASP:HB2	2.13	0.49
28:RE:46:ALA:HB1	28:RE:80:GLU:HB2	1.94	0.49
25:RA:2537:U:H2'	25:RA:2538:C:C6	2.48	0.49
17:QQ:63:ARG:HG2	17:QQ:64:PRO:N	2.28	0.49
43:RX:44:GLU:OE1	43:RX:50:LYS:HD2	2.13	0.49
21:XU:9:ARG:HH11	21:XU:9:ARG:HG2	1.78	0.49
37:YR:71:GLN:HA	37:YR:71:GLN:HE21	1.77	0.49
16:XP:57:ARG:HG3	16:XP:57:ARG:HH11	1.78	0.49
25:RA:1657:C:H2'	25:RA:1658:C:C6	2.48	0.49
14:QN:23:ARG:HD3	14:QN:28:GLY:O	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:YY:97:ARG:HG2	44:YY:97:ARG:NH1	2.28	0.48
50:R4:47:GLN:O	50:R4:48:ARG:CB	2.61	0.48
13:XM:23:TYR:HB3	13:XM:67:GLU:CG	2.39	0.48
13:XM:73:GLU:O	13:XM:76:ALA:HB3	2.13	0.48
2:XB:154:LEU:O	2:XB:155:LEU:HB2	2.13	0.48
2:XB:206:ASP:HA	2:XB:211:ILE:HD11	1.94	0.48
35:YP:144:GLU:O	35:YP:144:GLU:OE1	2.31	0.48
54:Y8:52:LYS:H	54:Y8:53:PRO:HD2	1.66	0.48
13:QM:4:ILE:HG22	13:QM:5:ALA:H	1.75	0.48
36:YQ:34:LEU:HD23	36:YQ:104:PHE:HD1	1.77	0.48
34:RO:55:GLY:O	34:RO:56:ASP:C	2.51	0.48
5:XE:12:LEU:HD23	5:XE:13:ILE:H	1.77	0.48
36:RQ:31:ASP:O	36:RQ:32:TYR:CG	2.66	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
8:QH:122:ARG:O	8:QH:125:ARG:N	2.46	0.48
25:RA:2286:A:H2'	52:R6:31:PRO:HG2	1.94	0.48
51:Y5:49:CYS:SG	51:Y5:58:LEU:HB2	2.53	0.48
30:YG:113:ARG:HD2	50:Y4:33:VAL:CG1	2.43	0.48
10:XJ:33:GLN:HB2	10:XJ:75:ILE:CD1	2.43	0.48
41:RV:35:LEU:HD22	41:RV:57:VAL:O	2.13	0.48
41:YV:35:LEU:HD22	41:YV:57:VAL:O	2.13	0.48
27:YD:25:THR:O	27:YD:27:THR:HG22	2.12	0.48
12:XL:6:THR:O	12:XL:7:ILE:C	2.51	0.48
20:QT:26:ASN:CB	20:QT:71:THR:HG23	2.43	0.48
34:RO:107:ARG:NH1	39:RT:36:GLU:OE1	2.46	0.48
30:RG:115:ARG:HG2	30:RG:115:ARG:NH1	2.27	0.48
30:RG:114:ILE:HG21	30:RG:117:PHE:HB2	1.93	0.48
13:XM:12:ASN:O	13:XM:13:LYS:HB2	2.13	0.48
31:YH:54:ARG:HD3	31:YH:65:HIS:ND1	2.27	0.48
29:RF:155:LEU:HD23	29:RF:186:ILE:HA	1.95	0.48
44:RY:6:HIS:O	44:RY:7:VAL:CG1	2.59	0.48
41:RV:79:VAL:HG22	41:RV:79:VAL:O	2.12	0.48
25:RA:565:C:OP1	41:RV:82:ARG:NH2	2.46	0.48
9:XI:79:LEU:O	9:XI:83:ARG:HG2	2.13	0.48
16:XP:43:LYS:HE2	16:XP:48:TRP:CZ3	2.47	0.48
9:QI:112:LYS:HD3	9:QI:113:LYS:O	2.13	0.48
41:YV:7:THR:HG23	41:YV:22:VAL:HG11	1.94	0.48
17:QQ:67:LYS:HA	17:QQ:70:ARG:HH12	1.76	0.48
35:YP:6:LEU:O	35:YP:7:ARG:O	2.31	0.48
25:YA:226:G:O2'	25:YA:227:A:O5'	2.25	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:RX:11:PRO:HB3	43:RX:92:LEU:CD2	2.43	0.48
25:RA:277:C:H4'	25:RA:278:A:OP2	2.13	0.48
38:RS:48:LEU:CD1	38:RS:48:LEU:N	2.76	0.48
38:YS:48:LEU:CD1	38:YS:48:LEU:N	2.76	0.48
25:RA:1041:C:H2'	25:RA:1042:G:H8	1.78	0.48
8:XH:45:ILE:O	8:XH:45:ILE:HG13	2.13	0.48
1:XA:918:A:H2'	1:XA:919:A:C8	2.48	0.48
41:RV:29:PRO:O	41:RV:61:VAL:HG22	2.12	0.48
1:XA:1190:G:H5'	3:XC:176:HIS:NE2	2.28	0.48
1:QA:662:G:O2'	1:QA:836:G:OP1	2.26	0.48
12:QL:119:LYS:C	12:QL:120:TYR:HD1	2.16	0.48
16:XP:39:TYR:CE2	16:XP:41:PRO:HD3	2.47	0.48
41:RV:91:TYR:CD1	41:RV:91:TYR:C	2.87	0.48
25:RA:691:C:H2'	25:RA:692:C:H6	1.77	0.48
27:YD:198:ASN:C	27:YD:198:ASN:HD22	2.16	0.48
25:YA:589:C:H2'	25:YA:590:A:C8	2.48	0.48
25:RA:1792:G:H2'	25:RA:1793:C:H6	1.77	0.48
1:QA:1162:C:H2'	1:QA:1163:C:O4'	2.13	0.48
25:RA:605:C:O2	25:RA:657:U:O2'	2.30	0.48
42:RW:51:LEU:HD23	42:RW:105:VAL:HG11	1.95	0.48
25:YA:660:G:O3'	29:YF:38:ARG:NH2	2.46	0.48
6:XF:51:PRO:HA	6:XF:55:ASP:O	2.12	0.48
35:RP:36:LYS:HB2	35:RP:40:SER:HB3	1.94	0.48
25:RA:1525:G:H2'	25:RA:1526:G:C8	2.48	0.48
31:RH:42:ARG:O	31:RH:52:VAL:HA	2.12	0.48
1:XA:1291:G:H4'	9:XI:39:GLY:HA3	1.95	0.48
25:RA:2698:U:H2'	25:RA:2699:C:C6	2.48	0.48
31:RH:123:PHE:O	31:RH:125:VAL:HG23	2.13	0.48
1:XA:411:A:C4	1:XA:413:G:H1'	2.47	0.48
47:R1:93:GLU:O	47:R1:97:LEU:HD11	2.12	0.48
44:RY:81:LYS:HZ2	44:RY:98:VAL:CG1	2.25	0.48
25:YA:2635:C:H5''	28:YE:78:LEU:HA	1.93	0.48
11:QK:106:LYS:O	11:QK:107:SER:HB3	2.11	0.48
35:RP:52:GLU:OE2	35:RP:57:THR:HA	2.13	0.48
30:YG:115:ARG:HG2	30:YG:115:ARG:NH1	2.26	0.48
5:QE:10:MET:HB2	5:QE:32:VAL:HG22	1.93	0.48
30:RG:36:LYS:HA	30:RG:95:ARG:HG2	1.95	0.48
37:RR:70:LEU:C	37:RR:72:ASP:H	2.16	0.48
54:Y8:35:GLN:HA	54:Y8:35:GLN:OE1	2.13	0.48
2:QB:193:ASP:OD2	2:QB:196:LEU:CG	2.57	0.48
37:YR:52:ILE:CG2	37:YR:94:TYR:CD1	2.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:Y2:16:LEU:O	48:Y2:17:SER:CB	2.56	0.48
44:RY:47:LYS:C	44:RY:49:VAL:H	2.16	0.48
1:XA:1365:G:H2'	1:XA:1366:C:H6	1.79	0.48
41:YV:18:LEU:HB3	41:YV:96:ILE:CG1	2.43	0.48
31:YH:13:LYS:HE2	31:YH:13:LYS:CA	2.40	0.48
39:YT:58:ASN:N	39:YT:58:ASN:HD22	2.10	0.48
30:RG:77:ILE:O	30:RG:81:LYS:O	2.31	0.48
44:RY:5:MET:HE1	44:RY:32:PRO:HB3	1.94	0.48
25:YA:2232:U:P	47:Y1:40:ARG:HH12	2.36	0.48
25:YA:620:G:H4'	25:YA:621:A:H5'	1.94	0.48
9:QI:113:LYS:H	9:QI:119:ALA:HA	1.77	0.48
1:XA:1442:G:C5	1:XA:1446:A:C6	3.00	0.48
1:XA:259:G:OP2	20:XT:83:ARG:NH1	2.45	0.48
3:QC:188:LEU:CD2	3:QC:188:LEU:N	2.76	0.48
25:YA:860:U:C5	25:YA:917:A:H2	2.31	0.48
25:YA:486:C:H4'	42:YW:60:ASN:OD1	2.13	0.48
31:YH:137:ASP:CB	31:YH:140:LYS:HB2	2.43	0.48
25:RA:1292:U:H2'	25:RA:1293:C:H6	1.76	0.48
38:RS:11:LYS:O	38:RS:11:LYS:HG2	2.12	0.48
1:XA:148:G:H2'	1:XA:149:A:C8	2.47	0.48
35:RP:35:HIS:O	35:RP:36:LYS:O	2.31	0.48
25:YA:1657:C:H2'	25:YA:1658:C:C6	2.47	0.48
25:YA:1782:C:H1'	25:YA:2609:U:H5''	1.94	0.48
25:YA:1786:A:H1'	25:YA:1938:A:N6	2.28	0.48
25:RA:2821:A:OP2	25:RA:2822:G:OP2	2.31	0.48
1:QA:1450:U:O2'	1:QA:1451:A:N7	2.44	0.48
36:YQ:112:GLU:CD	36:YQ:112:GLU:H	2.17	0.48
30:YG:92:VAL:O	30:YG:92:VAL:HG13	2.12	0.48
25:RA:2123:G:H2'	25:RA:2124:G:H8	1.77	0.48
25:YA:2310:A:N6	30:YG:79:ASN:HB2	2.27	0.48
25:RA:817:C:H4'	25:RA:932:G:C5	2.49	0.48
46:Y0:23:VAL:HG22	46:Y0:38:VAL:HG22	1.94	0.48
1:XA:973:G:O4'	10:XJ:55:LYS:HG2	2.12	0.48
1:XA:411:A:N6	1:XA:413:G:H21	2.06	0.48
27:YD:44:ASN:H	27:YD:44:ASN:ND2	1.97	0.48
27:YD:48:ARG:HH11	27:YD:48:ARG:HG3	1.78	0.48
25:YA:618(A):C:OP2	29:YF:103:LYS:HE2	2.12	0.48
25:YA:2636:U:OP1	28:YE:79:ARG:HG3	2.13	0.48
25:RA:588:U:H1'	29:RF:90:PHE:CD1	2.48	0.48
2:XB:181:PHE:O	2:XB:183:PRO:HD3	2.12	0.48
28:RE:78:LEU:CD2	28:RE:79:ARG:HD2	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:QM:3:ARG:HA	13:QM:9:ILE:HG12	1.94	0.48
40:YU:91:ASP:O	40:YU:95:LEU:N	2.42	0.48
2:XB:5:ILE:HG21	2:XB:224:GLN:HG2	1.95	0.48
25:RA:675:A:OP1	29:RF:63:LYS:NZ	2.44	0.48
52:Y6:27:LYS:O	52:Y6:28:ARG:HG2	2.13	0.48
7:XG:80:VAL:HG12	7:XG:81:GLY:N	2.28	0.48
33:RN:95:PRO:O	33:RN:96:GLU:C	2.51	0.48
52:R6:14:THR:OG1	52:R6:19:ARG:NE	2.40	0.48
2:QB:214:ILE:O	2:QB:218:ALA:HB2	2.13	0.48
44:YY:47:LYS:C	44:YY:49:VAL:H	2.16	0.48
5:QE:100:VAL:O	5:QE:107:ARG:NH2	2.47	0.48
31:RH:10:PRO:C	31:RH:11:VAL:HG22	2.34	0.48
48:R2:69:ARG:HH11	48:R2:69:ARG:HB3	1.79	0.48
19:QS:27:GLU:O	19:QS:28:LYS:CG	2.53	0.48
38:YS:55:ALA:O	38:YS:56:LEU:HB3	2.14	0.48
9:QI:18:PHE:HB2	9:QI:62:TYR:HB3	1.96	0.48
10:XJ:94:VAL:CG1	10:XJ:95:GLU:N	2.76	0.48
30:RG:125:PHE:HB3	30:RG:166:ASP:HB2	1.95	0.48
2:XB:39:ILE:O	2:XB:41:ILE:HD12	2.13	0.48
1:QA:1226:C:H2'	13:QM:103:THR:HB	1.94	0.48
41:RV:22:VAL:HG12	41:RV:23:GLU:H	1.76	0.48
17:XQ:67:LYS:HA	17:XQ:70:ARG:HH12	1.76	0.48
25:YA:372:G:O2'	25:YA:373:U:P	2.71	0.48
35:YP:6:LEU:N	35:YP:6:LEU:CD2	2.75	0.48
4:XD:121:VAL:O	4:XD:134:ASP:HA	2.13	0.48
38:RS:33:LYS:HB3	38:RS:34:HIS:CD2	2.48	0.48
42:RW:36:LEU:CD1	42:RW:47:VAL:HG12	2.44	0.48
1:QA:519:C:H2'	1:QA:520:A:O4'	2.12	0.48
25:RA:1496:A:H8	25:RA:1577:C:O2'	1.95	0.48
25:RA:1204:A:H1'	25:RA:1206:G:C4	2.48	0.48
25:RA:1285:G:N2	25:RA:1329:U:OP1	2.40	0.48
37:RR:42:LYS:HA	37:RR:45:ARG:HD2	1.96	0.48
38:YS:33:LYS:HB3	38:YS:34:HIS:CD2	2.48	0.48
25:YA:1196:C:HO2'	25:YA:1228:G:HO2'	1.55	0.48
25:RA:2576:G:O2'	25:RA:2579:C:OP2	2.26	0.48
25:YA:1225:C:O2'	41:YV:85:LYS:HA	2.13	0.48
4:QD:118:ARG:NH2	4:QD:136:PRO:HB2	2.28	0.48
25:YA:1262:A:N3	51:Y5:10:LYS:HE3	2.29	0.48
25:YA:2820:A:O2'	25:YA:2821:A:OP1	2.28	0.48
36:RQ:112:GLU:CD	36:RQ:112:GLU:H	2.17	0.48
31:YH:42:ARG:O	31:YH:52:VAL:HA	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:QV:56:C:O2'	30:RG:78:SER:HB2	2.13	0.48
31:YH:23:ARG:HD2	31:YH:34:GLU:OE2	2.12	0.48
25:YA:1824:G:O3'	27:YD:249:PRO:HD3	2.14	0.48
10:XJ:98:ILE:H	10:XJ:98:ILE:CD1	2.24	0.48
11:QK:19:ALA:CB	11:QK:32:ILE:HG22	2.43	0.48
11:QK:34:ASP:HB2	11:QK:35:PRO:HD2	1.95	0.48
2:XB:180:LEU:O	2:XB:181:PHE:HB2	2.13	0.48
35:RP:112:LEU:HD12	35:RP:127:ALA:CB	2.44	0.48
2:QB:16:HIS:HD2	2:QB:210:SER:HA	1.77	0.48
2:QB:5:ILE:HG21	2:QB:224:GLN:HG2	1.95	0.48
2:XB:42:ILE:HD11	2:XB:202:PRO:HB2	1.95	0.48
25:YA:2420:C:OP1	54:Y8:34:TRP:HB2	2.13	0.48
8:XH:86:ILE:HG13	8:XH:133:LEU:CD2	2.44	0.48
25:RA:2419:U:O4	54:R8:30:ARG:NE	2.46	0.48
54:R8:35:GLN:HA	54:R8:35:GLN:OE1	2.12	0.48
2:QB:7:VAL:CG2	2:QB:8:LYS:HD3	2.43	0.48
38:RS:59:LYS:HG2	38:RS:60:GLY:N	2.13	0.48
20:XT:53:LEU:HA	20:XT:56:MET:CB	2.43	0.48
51:Y5:48:GLU:HA	51:Y5:59:GLU:HG2	1.94	0.48
29:YF:107:LYS:O	29:YF:110:LEU:N	2.47	0.48
2:XB:140:HIS:C	2:XB:142:LEU:H	2.16	0.48
31:YH:12:PRO:HD3	31:YH:48:GLY:O	2.13	0.48
12:QL:38:THR:CG2	12:QL:57:LYS:HB3	2.44	0.48
53:Y7:48:LYS:CG	53:Y7:49:ARG:H	2.23	0.48
29:YF:155:LEU:HD23	29:YF:186:ILE:HA	1.95	0.48
29:YF:198:ALA:O	29:YF:201:VAL:HG12	2.13	0.48
28:YE:47:VAL:O	28:YE:48:GLN:C	2.52	0.48
9:XI:112:LYS:HD3	9:XI:113:LYS:O	2.13	0.48
9:XI:118:LYS:CB	9:XI:118:LYS:NZ	2.75	0.48
47:Y1:56:GLN:H	47:Y1:56:GLN:NE2	2.10	0.48
16:QP:43:LYS:C	16:QP:45:THR:H	2.14	0.48
9:QI:118:LYS:NZ	9:QI:118:LYS:CB	2.76	0.48
5:XE:83:GLU:HG2	5:XE:88:LYS:CG	2.42	0.48
12:XL:119:LYS:C	12:XL:120:TYR:HD1	2.16	0.48
4:QD:196:LEU:HB3	4:QD:197:PRO:HD2	1.95	0.48
25:RA:1903:G:OP1	27:RD:241:PRO:HG2	2.13	0.48
44:YY:35:TYR:CD1	44:YY:69:ALA:HB3	2.48	0.48
4:QD:121:VAL:O	4:QD:134:ASP:HA	2.14	0.48
39:YT:16:ARG:HD3	39:YT:19:LEU:CG	2.43	0.48
33:YN:30:ILE:O	33:YN:34:LEU:HD23	2.13	0.48
51:Y5:52:TYR:O	51:Y5:53:ALA:CB	2.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2406:U:C2	35:YP:72:PRO:HB2	2.49	0.48
43:RX:35:THR:O	43:RX:37:THR:N	2.47	0.48
1:XA:1059:C:H2'	1:XA:1060:C:C6	2.48	0.48
39:YT:135:ALA:C	39:YT:137:LYS:H	2.16	0.48
33:RN:12:ARG:NH1	33:RN:50:ASP:CG	2.67	0.48
25:YA:415:A:H2'	25:YA:416:C:C6	2.48	0.48
25:YA:1336:A:H2'	25:YA:1337:G:C8	2.49	0.48
1:QA:222:U:H2'	1:QA:223:U:H6	1.77	0.48
15:QO:32:LEU:O	15:QO:33:THR:C	2.51	0.48
25:RA:1638:C:O3'	25:RA:2709:G:N2	2.47	0.48
44:YY:11:ASP:HB2	44:YY:27:VAL:HG11	1.94	0.48
5:XE:60:TYR:CE1	5:XE:64:ARG:NH2	2.77	0.48
25:YA:1972:A:H2'	25:YA:1973:G:H8	1.78	0.48
25:RA:1430:C:H2'	25:RA:1431:U:C6	2.49	0.48
25:RA:1178:C:H2'	25:RA:1179:C:C6	2.48	0.48
19:XS:43:GLU:OE2	19:XS:43:GLU:N	2.44	0.48
38:RS:46:VAL:HG12	38:RS:47:THR:N	2.28	0.48
1:QA:857:C:H2'	1:QA:858:G:O4'	2.13	0.48
10:XJ:56:HIS:O	10:XJ:58:ASP:O	2.30	0.48
45:YZ:69:THR:HG22	45:YZ:90:VAL:HG22	1.96	0.48
1:XA:963:G:H21	10:XJ:55:LYS:HD3	1.78	0.48
4:XD:9:CYS:SG	4:XD:22:LYS:CE	3.01	0.48
13:QM:73:GLU:O	13:QM:76:ALA:HB3	2.13	0.48
54:R8:56:GLU:O	54:R8:58:ILE:N	2.47	0.48
25:RA:588:U:C2	29:RF:90:PHE:CE1	3.01	0.48
2:XB:16:HIS:HD2	2:XB:210:SER:HA	1.77	0.48
2:XB:16:HIS:HB3	2:XB:210:SER:HB2	1.95	0.48
35:RP:101:VAL:C	35:RP:103:ALA:H	2.17	0.48
28:RE:77:ILE:CD1	28:RE:78:LEU:N	2.70	0.48
2:QB:15:VAL:H	2:QB:16:HIS:CE1	2.30	0.48
36:RQ:34:LEU:HD23	36:RQ:104:PHE:HD1	1.77	0.48
52:R6:27:LYS:O	52:R6:28:ARG:HG2	2.13	0.48
2:XB:193:ASP:OD2	2:XB:196:LEU:CG	2.58	0.48
25:YA:676:A:H8	25:YA:2069:G:N2	1.96	0.48
25:YA:2712:U:OP1	25:YA:2714:G:H4'	2.13	0.48
5:QE:42:GLY:CA	5:QE:136:MET:HE1	2.42	0.48
25:RA:704:G:C2'	25:RA:726:G:H22	2.26	0.48
48:R2:69:ARG:CB	48:R2:69:ARG:HH11	2.25	0.48
30:RG:136:ARG:O	30:RG:154:GLY:CA	2.62	0.48
11:XK:34:ASP:HB2	11:XK:35:PRO:HD2	1.95	0.48
30:RG:115:ARG:HH11	30:RG:115:ARG:HG2	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:QS:24:ALA:O	19:QS:25:LYS:HB2	2.13	0.48
4:QD:166:LYS:CG	27:YD:135:PHE:HZ	2.26	0.48
29:RF:198:ALA:O	29:RF:201:VAL:HG12	2.13	0.48
29:RF:128:ALA:O	29:RF:129:PHE:HB2	2.13	0.48
40:YU:52:ARG:NH1	40:YU:52:ARG:CG	2.76	0.48
29:YF:128:ALA:O	29:YF:129:PHE:HB2	2.13	0.48
16:XP:69:THR:O	16:XP:73:LEU:HG	2.14	0.48
25:YA:1162:G:H1'	41:YV:23:GLU:OE2	2.14	0.48
4:XD:196:LEU:HB3	4:XD:197:PRO:HD2	1.95	0.48
12:QL:27:LEU:C	12:QL:29:GLY:N	2.64	0.48
3:XC:173:VAL:N	3:XC:174:PRO:HD3	2.28	0.48
25:RA:859:G:O2'	25:RA:860:U:P	2.72	0.48
35:YP:71:VAL:HG13	35:YP:72:PRO:CD	2.43	0.48
43:RX:53:LYS:HZ2	43:RX:55:ASN:HD21	1.62	0.48
7:XG:107:ALA:CB	7:XG:134:ALA:HB2	2.44	0.48
5:QE:84:PHE:HD2	5:QE:130:ASN:O	1.97	0.48
45:RZ:45:ASP:O	45:RZ:49:ARG:HG2	2.13	0.48
1:XA:688:G:H2'	1:XA:689:C:C6	2.48	0.48
4:QD:100:ARG:CZ	4:QD:137:SER:HA	2.43	0.48
15:QO:50:HIS:O	15:QO:53:HIS:N	2.47	0.48
5:XE:96:PRO:HA	5:XE:117:ASP:OD2	2.14	0.48
4:XD:154:ASN:O	4:XD:155:LEU:O	2.32	0.48
25:RA:2335:A:O2'	25:RA:2336:A:H2'	2.13	0.48
25:YA:181:A:H5''	53:Y7:36:GLN:NE2	2.28	0.48
1:XA:1354:C:H2'	1:XA:1355:G:C8	2.48	0.48
1:QA:264:U:O2'	17:QQ:64:PRO:HD2	2.14	0.48
1:XA:210:U:O2'	1:XA:216:G:N7	2.43	0.48
25:RA:2795:G:H3'	25:RA:2797:U:C5'	2.44	0.48
4:XD:3:ARG:O	4:XD:5:ILE:HG13	2.14	0.48
4:XD:6:GLY:O	4:XD:8:VAL:HG23	2.14	0.48
1:XA:881:G:OP2	12:XL:12:ARG:NH2	2.46	0.48
28:YE:38:THR:O	28:YE:42:ASP:HB2	2.13	0.48
39:RT:132:LYS:O	39:RT:136:GLN:HG3	2.14	0.48
31:RH:104:GLU:HG3	31:RH:114:VAL:HG22	1.96	0.48
25:RA:828:U:H4'	25:RA:831:G:N1	2.28	0.48
1:XA:837:G:H1	1:XA:849:C:H42	1.59	0.48
4:QD:183:GLY:C	4:QD:184:LYS:HG3	2.34	0.48
2:XB:97:TRP:HZ2	2:XB:102:LEU:HD13	1.78	0.48
27:YD:35:LYS:HD2	27:YD:104:TYR:CE1	2.49	0.48
35:RP:138:LEU:HD11	35:RP:144:GLU:CG	2.42	0.48
27:RD:35:LYS:HD2	27:RD:104:TYR:CE1	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:R4:42:PHE:O	50:R4:43:TYR:C	2.51	0.48
41:RV:6:LYS:HD3	41:RV:11:GLN:HG2	1.96	0.48
2:QB:200:ILE:H	2:QB:200:ILE:HD12	1.79	0.48
33:YN:42:TRP:HA	33:YN:48:MET:CE	2.42	0.48
36:YQ:31:ASP:O	36:YQ:32:TYR:CG	2.66	0.48
7:QG:78:ARG:HH11	7:QG:78:ARG:HG3	1.79	0.48
50:Y4:42:PHE:O	50:Y4:44:THR:O	2.31	0.48
44:RY:57:GLN:O	44:RY:58:GLY:O	2.32	0.48
51:R5:56:LYS:HD2	51:R5:56:LYS:N	2.13	0.48
5:QE:78:HIS:CG	8:QH:104:ARG:HG2	2.49	0.48
20:XT:37:SER:HB3	20:XT:84:LEU:CD2	2.43	0.48
5:XE:100:VAL:O	5:XE:107:ARG:NH2	2.47	0.48
31:YH:7:LEU:N	31:YH:8:PRO:CD	2.77	0.48
5:XE:78:HIS:CE1	5:XE:142:LEU:HD23	2.48	0.48
10:XJ:49:VAL:CG1	10:XJ:50:ILE:N	2.76	0.48
29:RF:107:LYS:O	29:RF:110:LEU:N	2.47	0.48
25:RA:2729:G:C1'	28:RE:187:ALA:HB2	2.37	0.48
1:XA:1132:C:H2'	1:XA:1133:G:C8	2.48	0.48
19:QS:36:ARG:NH1	19:QS:36:ARG:HB3	2.28	0.48
12:XL:38:THR:CG2	12:XL:57:LYS:HB3	2.44	0.48
38:YS:18:ILE:O	38:YS:19:LYS:O	2.30	0.48
32:RI:49:ALA:O	32:RI:52:ARG:HG2	2.13	0.48
48:Y2:33:MET:O	48:Y2:37:PHE:HD1	1.95	0.48
9:XI:18:PHE:O	9:XI:61:ALA:HA	2.13	0.48
3:XC:153:VAL:HA	3:XC:197:GLY:O	2.14	0.48
25:RA:2529:G:O6	55:R9:31:LYS:NZ	2.40	0.48
10:QJ:3:LYS:O	10:QJ:100:THR:HA	2.14	0.48
1:QA:1446:A:N3	39:RT:118:ARG:HD2	2.29	0.48
25:YA:1365:A:OP2	47:Y1:3:LYS:HB2	2.13	0.48
4:QD:196:LEU:C	4:QD:198:VAL:N	2.66	0.48
4:QD:163:GLU:O	4:QD:165:MET:N	2.46	0.48
28:YE:174:ASP:O	28:YE:182:LEU:HD12	2.14	0.48
1:QA:752:G:H1'	1:QA:754:C:N4	2.28	0.48
9:XI:59:PHE:CZ	9:XI:88:TYR:CE1	3.01	0.48
8:QH:45:ILE:O	8:QH:45:ILE:HG13	2.13	0.48
32:YI:23:PRO:O	32:YI:27:ARG:HG2	2.14	0.48
16:XP:40:ASP:C	16:XP:42:ARG:H	2.17	0.48
25:YA:570:G:H2'	25:YA:2030:A:C5	2.48	0.48
31:YH:82:GLY:O	31:YH:83:TYR:O	2.32	0.48
1:XA:865:A:C2	1:XA:918:A:H4'	2.48	0.48
1:QA:1292:U:H2'	1:QA:1293:G:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:R7:12:ARG:HG3	53:R7:12:ARG:HH11	1.78	0.48
1:XA:310:G:H4'	16:XP:31:LYS:HD3	1.95	0.48
50:Y4:10:VAL:CG2	50:Y4:11:PRO:HD2	2.43	0.48
13:XM:50:GLU:O	13:XM:54:VAL:HG23	2.13	0.48
29:RF:51:THR:O	29:RF:93:LYS:NZ	2.38	0.48
25:RA:181:A:H1'	25:RA:435:C:H5'	1.94	0.48
32:YI:13:GLY:HA3	32:YI:17:GLN:OE1	2.14	0.48
25:YA:2283:C:P	52:Y6:5:VAL:HG13	2.54	0.48
31:YH:124:GLU:HB3	31:YH:132:ARG:CD	2.44	0.48
3:QC:71:ALA:HA	3:QC:106:VAL:HB	1.95	0.48
11:QK:19:ALA:CA	11:QK:32:ILE:HG22	2.43	0.48
27:RD:130:ALA:HA	27:RD:192:THR:HA	1.95	0.48
35:YP:101:VAL:C	35:YP:103:ALA:H	2.17	0.48
13:XM:3:ARG:HH21	30:YG:139:LEU:HD13	1.78	0.48
2:QB:154:LEU:O	2:QB:155:LEU:HB2	2.13	0.48
2:XB:5:ILE:O	2:XB:6:THR:O	2.32	0.48
7:QG:79:ARG:O	7:QG:80:VAL:HG23	2.14	0.48
33:YN:95:PRO:O	33:YN:96:GLU:C	2.51	0.48
30:RG:16:ARG:HB3	30:RG:17:PRO:HD3	1.94	0.48
2:XB:214:ILE:O	2:XB:218:ALA:HB2	2.13	0.48
44:RY:44:ILE:O	44:RY:62:GLU:O	2.32	0.48
27:YD:25:THR:O	27:YD:26:LYS:C	2.52	0.48
51:R5:49:CYS:SG	51:R5:58:LEU:HB2	2.53	0.48
1:QA:191:G:N9	20:QT:105:SER:HB3	2.28	0.48
31:RH:7:LEU:N	31:RH:8:PRO:CD	2.77	0.48
48:Y2:69:ARG:HH11	48:Y2:69:ARG:HB3	1.79	0.48
20:XT:30:LYS:O	20:XT:33:ILE:HG12	2.14	0.48
39:RT:57:PHE:O	39:RT:59:THR:N	2.46	0.48
28:YE:23:VAL:HG12	28:YE:173:VAL:HG21	1.94	0.48
11:QK:41:THR:HG22	11:QK:42:TRP:N	2.28	0.48
3:QC:87:LEU:C	3:QC:89:GLU:N	2.65	0.48
35:RP:14:LYS:O	35:RP:15:ARG:C	2.51	0.48
43:YX:44:GLU:OE1	43:YX:50:LYS:HD2	2.13	0.48
36:RQ:19:GLY:O	36:RQ:98:LYS:HD3	2.14	0.48
30:YG:125:PHE:HB3	30:YG:166:ASP:HB2	1.95	0.48
36:YQ:19:GLY:O	36:YQ:98:LYS:HD3	2.14	0.48
47:R1:56:GLN:H	47:R1:56:GLN:NE2	2.10	0.48
37:YR:107:ASP:C	37:YR:107:ASP:OD2	2.52	0.48
15:XO:24:SER:OG	15:XO:25:THR:N	2.47	0.48
25:RA:2119:A:N6	25:RA:2170:A:N7	2.62	0.48
39:YT:96:ARG:CB	39:YT:96:ARG:NH1	2.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:QO:61:GLY:C	15:QO:65:ARG:NH1	2.67	0.48
1:QA:1392:G:H21	1:QA:1502:A:H8	1.60	0.48
1:QA:1399:C:C2	1:QA:1502:A:N6	2.81	0.48
4:XD:33:MET:CE	4:XD:37:PRO:HA	2.43	0.48
4:QD:165:MET:CE	4:QD:168:ARG:HD2	2.44	0.48
11:XK:82:VAL:O	11:XK:108:ILE:HA	2.13	0.48
25:YA:2306:C:H2'	25:YA:2307:G:N2	2.29	0.48
36:RQ:87:LYS:O	36:RQ:89:ASN:N	2.43	0.48
33:YN:34:LEU:O	33:YN:49:GLY:HA3	2.13	0.48
35:RP:71:VAL:HG13	35:RP:72:PRO:CD	2.44	0.48
22:XV:74:C:C2'	22:XV:75:C:H5'	2.44	0.48
36:RQ:21:THR:HB	36:RQ:22:LYS:H	1.42	0.48
33:RN:75:TYR:C	33:RN:76:SER:O	2.52	0.48
45:RZ:111:VAL:O	45:RZ:113:ALA:N	2.46	0.48
45:YZ:10:ARG:HH21	45:YZ:26:GLY:H	1.61	0.48
25:YA:2854:G:H2'	25:YA:2855:C:C6	2.48	0.48
25:RA:1578:U:H2'	25:RA:1579:A:H5'	1.95	0.48
25:YA:1535:U:H5''	25:YA:1537:C:C4	2.49	0.48
32:YI:97:ILE:HD12	32:YI:140:LEU:HD11	1.95	0.48
1:XA:135:C:H2'	1:XA:136:C:H5'	1.96	0.48
25:YA:218:A:C2	25:YA:235:U:H4'	2.49	0.48
27:RD:198:ASN:HD22	27:RD:198:ASN:C	2.17	0.48
25:RA:478:A:N1	25:RA:500:G:H4'	2.28	0.48
25:RA:974(A):C:H4'	25:RA:975:G:O5'	2.14	0.48
25:RA:1274:A:N3	25:RA:1297:C:H1'	2.28	0.48
1:QA:565:U:H5''	1:QA:566:G:H2'	1.96	0.48
25:RA:910:A:N3	25:RA:2264:C:O2'	2.39	0.48
37:RR:61:HIS:O	37:RR:65:LEU:HD13	2.14	0.48
33:RN:10:GLU:HA	33:RN:11:PRO:HD3	1.73	0.48
31:RH:131:VAL:HG12	31:RH:132:ARG:N	2.29	0.48
19:QS:9:VAL:O	19:QS:10:PHE:HB3	2.13	0.48
50:R4:60:GLN:O	50:R4:63:TYR:HB3	2.14	0.48
28:YE:93:VAL:C	28:YE:95:ILE:H	2.17	0.48
1:XA:1308:U:OP1	13:XM:98:VAL:N	2.31	0.48
28:YE:55:ASN:O	28:YE:57:LYS:N	2.44	0.48
27:YD:130:ALA:HA	27:YD:192:THR:HA	1.95	0.48
27:YD:35:LYS:CG	27:YD:64:ILE:CG2	2.92	0.48
35:RP:144:GLU:OE1	35:RP:144:GLU:O	2.31	0.48
27:RD:130:ALA:C	27:RD:131:LEU:HD12	2.33	0.48
27:RD:65:ILE:C	27:RD:65:ILE:HD13	2.32	0.48
28:RE:61:ARG:CB	28:RE:62:PRO:CD	2.90	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:XM:8:GLU:C	13:XM:9:ILE:HG23	2.34	0.48
50:Y4:8:LYS:O	50:Y4:9:LEU:CB	2.62	0.48
5:XE:11:ILE:CG1	5:XE:31:LEU:HD12	2.42	0.48
7:QG:80:VAL:HG12	7:QG:81:GLY:N	2.28	0.48
52:Y6:8:LYS:O	52:Y6:27:LYS:HA	2.13	0.48
52:Y6:41:PRO:HD2	52:Y6:46:HIS:H	1.77	0.48
37:YR:44:LEU:HD22	37:YR:48:VAL:CG2	2.42	0.48
50:Y4:36:CYS:O	50:Y4:37:SER:C	2.52	0.48
16:QP:60:LEU:CA	16:QP:64:ALA:HB3	2.43	0.48
16:XP:34:GLU:HG2	16:XP:35:LYS:N	2.29	0.48
31:YH:10:PRO:C	31:YH:11:VAL:HG22	2.34	0.48
2:QB:140:HIS:C	2:QB:142:LEU:H	2.16	0.48
11:XK:19:ALA:CB	11:XK:32:ILE:HG22	2.42	0.48
10:XJ:74:ILE:HG12	10:XJ:74:ILE:O	2.13	0.48
38:YS:56:LEU:HD23	38:YS:56:LEU:C	2.34	0.48
9:XI:7:THR:O	9:XI:83:ARG:HD2	2.14	0.48
25:YA:942:G:O2'	25:YA:1189:A:N3	2.41	0.48
9:QI:17:VAL:HG11	9:QI:81:ILE:HA	1.96	0.48
11:QK:48:ILE:HG21	11:QK:63:LEU:HD13	1.96	0.48
29:YF:129:PHE:CD2	29:YF:163:VAL:HG21	2.48	0.48
47:Y1:76:ARG:HD2	47:Y1:76:ARG:N	2.29	0.48
3:XC:195:VAL:CG1	3:XC:196:LEU:H	2.27	0.48
25:RA:2867:G:O2'	25:RA:2868:A:P	2.72	0.48
47:Y1:8:SER:OG	47:Y1:10:LYS:HG3	2.14	0.48
29:YF:34:TRP:HD1	35:YP:6:LEU:HB3	1.79	0.48
29:RF:34:TRP:HD1	35:RP:6:LEU:HB3	1.79	0.48
4:QD:13:ARG:HA	4:QD:33:MET:CE	2.44	0.48
29:YF:45:ARG:HG2	29:YF:45:ARG:NH1	2.28	0.48
31:YH:120:GLY:HA3	31:YH:140:LYS:NZ	2.27	0.48
33:RN:34:LEU:O	33:RN:49:GLY:HA3	2.13	0.48
25:YA:2867:G:O2'	25:YA:2868:A:P	2.72	0.48
25:RA:250:G:C6	25:RA:251:A:C6	3.02	0.48
22:XV:61:C:H2'	22:XV:62:C:C6	2.47	0.48
14:XN:15:LYS:HD2	14:XN:16:PHE:CE2	2.49	0.48
25:YA:1264:G:H5'	51:Y5:11:THR:CG2	2.44	0.48
37:YR:42:LYS:HA	37:YR:45:ARG:HD2	1.95	0.48
35:YP:35:HIS:O	35:YP:36:LYS:O	2.31	0.48
25:YA:2151:G:H2'	25:YA:2152:G:C8	2.48	0.48
1:XA:760:G:O2'	17:XQ:98:LEU:HD23	2.14	0.48
11:XK:115:PRO:C	11:XK:117:ASN:H	2.17	0.48
38:YS:66:ALA:HA	38:YS:69:VAL:HG12	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1588:C:H2'	25:YA:1589:C:H6	1.79	0.48
3:XC:148:GLY:O	3:XC:202:ILE:HA	2.14	0.48
5:XE:84:PHE:HD2	5:XE:130:ASN:O	1.97	0.48
36:YQ:42:ILE:HD12	36:YQ:42:ILE:N	2.29	0.48
21:QU:9:ARG:HH11	21:QU:9:ARG:HG2	1.78	0.48
16:QP:57:ARG:HH11	16:QP:57:ARG:HG3	1.79	0.48
25:YA:2760:C:H2'	25:YA:2761:G:H5''	1.94	0.48
25:RA:2401:U:H2'	25:RA:2402:C:H5''	1.96	0.48
25:YA:459:U:H2'	25:YA:460:A:C8	2.48	0.48
27:RD:48:ARG:HG3	27:RD:48:ARG:HH11	1.78	0.48
10:XJ:47:PHE:CE1	10:XJ:63:PHE:HB2	2.32	0.48
28:RE:64:LYS:C	28:RE:66:HIS:N	2.67	0.48
28:YE:64:LYS:C	28:YE:66:HIS:N	2.67	0.48
28:YE:15:PHE:CD1	28:YE:20:ALA:HB2	2.49	0.48
25:YA:1266:G:C5	42:YW:15:ARG:NH1	2.82	0.48
40:YU:79:PHE:HE2	40:YU:83:LEU:CD2	2.27	0.48
7:XG:79:ARG:O	7:XG:80:VAL:HG23	2.14	0.48
37:RR:63:ARG:NH1	37:RR:63:ARG:HG3	2.29	0.48
27:RD:25:THR:O	27:RD:26:LYS:C	2.52	0.48
1:QA:191(F):U:O2	20:QT:105:SER:HB2	2.14	0.48
5:QE:75:THR:HG23	5:QE:76:ILE:O	2.14	0.48
31:YH:41:MET:HG3	31:YH:54:ARG:HA	1.96	0.48
39:YT:94:ALA:O	39:YT:95:ARG:CB	2.61	0.48
1:QA:686:U:O2'	1:QA:687:A:O5'	2.29	0.48
3:QC:153:VAL:HA	3:QC:197:GLY:O	2.13	0.48
36:RQ:119:ARG:O	36:RQ:123:HIS:HD2	1.97	0.48
28:YE:119:ARG:HD3	28:YE:160:TYR:HD2	1.78	0.48
1:QA:1376:U:OP1	7:QG:94:ARG:NH1	2.38	0.48
43:YX:6:ASP:OD1	48:Y2:29:LYS:NZ	2.47	0.48
6:QF:89:MET:O	6:QF:90:VAL:C	2.51	0.48
1:QA:1297:C:HO2'	1:QA:1298:C:P	2.36	0.48
1:QA:1072:G:H2'	1:QA:1073:U:C6	2.49	0.48
1:QA:186:C:O3'	20:QT:82:SER:HB3	2.14	0.48
54:R8:43:GLN:C	54:R8:44:LYS:HD2	2.34	0.48
6:XF:79:LEU:O	6:XF:85:VAL:HG11	2.14	0.48
46:Y0:68:GLU:HG2	46:Y0:80:HIS:HB2	1.95	0.48
1:XA:1443:G:N2	25:YA:2864:G:OP1	2.38	0.48
16:QP:71:ARG:HB2	16:QP:71:ARG:HH11	1.79	0.48
11:XK:110:ASP:HB2	18:XR:88:LYS:HD3	1.95	0.48
7:XG:97:GLN:O	7:XG:101:LEU:HG	2.14	0.48
7:QG:97:GLN:O	7:QG:101:LEU:HG	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:YT:16:ARG:NE	39:YT:19:LEU:HD21	2.27	0.48
8:QH:109:ILE:HG12	8:QH:110:ALA:N	2.28	0.48
33:RN:18:ALA:O	33:RN:19:GLU:C	2.53	0.48
18:QR:31:LEU:HD23	18:QR:31:LEU:N	2.29	0.48
25:RA:807:U:OP2	35:RP:41:ARG:NH1	2.46	0.48
33:RN:82:LEU:HD12	33:RN:83:LYS:N	2.27	0.48
39:RT:135:ALA:C	39:RT:137:LYS:H	2.16	0.48
53:Y7:12:ARG:HG3	53:Y7:12:ARG:HH11	1.79	0.48
25:YA:2870:C:C5'	37:YR:65:LEU:HD21	2.44	0.48
25:RA:1771:C:H1'	25:RA:1786:A:C8	2.48	0.48
33:YN:137:LYS:CG	33:YN:138:LEU:H	2.27	0.48
25:RA:442:G:H1'	29:RF:48:THR:HG21	1.96	0.48
41:YV:21:ARG:HD2	41:YV:91:TYR:CZ	2.49	0.48
25:RA:1869:G:H5'	25:RA:1870:C:OP2	2.13	0.48
25:YA:862:G:H2'	25:YA:863:A:O4'	2.14	0.48
4:XD:60:GLU:O	4:XD:63:LYS:HB3	2.14	0.48
44:RY:11:ASP:HB2	44:RY:27:VAL:HG11	1.94	0.48
25:YA:2051:A:H5'	25:YA:2578:G:O4'	2.13	0.48
26:RB:33:G:O5'	30:RG:2:PRO:HG3	2.13	0.48
44:YY:81:LYS:HZ2	44:YY:98:VAL:CG1	2.27	0.48
28:RE:93:VAL:H	28:RE:95:ILE:CD1	2.23	0.48
28:RE:93:VAL:C	28:RE:95:ILE:H	2.17	0.48
28:YE:77:ILE:CD1	28:YE:78:LEU:N	2.70	0.48
27:RD:35:LYS:CG	27:RD:64:ILE:CG2	2.92	0.48
1:QA:1200:C:O2'	1:QA:1201:A:OP2	2.23	0.48
26:RB:43:C:O5'	30:RG:67:LYS:HE3	2.14	0.48
40:RU:79:PHE:HE2	40:RU:83:LEU:CD2	2.27	0.48
41:YV:38:LEU:HD23	41:YV:39:LEU:H	1.79	0.48
8:QH:6:ILE:O	8:QH:10:LEU:HG	2.14	0.48
30:RG:12:TYR:O	30:RG:16:ARG:HB3	2.14	0.48
26:RB:55:U:H4'	30:RG:28:VAL:CG2	2.44	0.48
8:XH:86:ILE:HG22	8:XH:87:SER:N	2.29	0.48
44:RY:56:PRO:O	44:RY:58:GLY:N	2.47	0.48
41:RV:35:LEU:O	41:RV:37:VAL:N	2.47	0.48
27:YD:27:THR:O	27:YD:29:PRO:CD	2.62	0.48
20:QT:37:SER:HB3	20:QT:84:LEU:CD2	2.44	0.48
25:YA:2067:G:O2'	25:YA:2069:G:H5''	2.14	0.48
5:XE:78:HIS:CG	8:XH:104:ARG:HG2	2.49	0.48
25:RA:2445:G:OP1	29:RF:74:ARG:NH2	2.46	0.48
1:QA:347:G:O2'	1:QA:348:G:H5''	2.14	0.48
30:YG:97:ASP:N	30:YG:100:TRP:HD1	2.05	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:155:LEU:HA	29:RF:174:VAL:HG12	1.95	0.48
38:RS:56:LEU:C	38:RS:56:LEU:HD23	2.34	0.48
30:RG:3:LEU:HD21	50:R4:25:TYR:CE1	2.48	0.48
25:RA:530:G:N1	25:RA:2022:U:OP1	2.47	0.48
34:YO:107:ARG:NH1	39:YT:36:GLU:OE1	2.46	0.48
4:QD:153:ARG:CZ	4:QD:181:MET:HG3	2.44	0.48
37:RR:107:ASP:C	37:RR:107:ASP:OD2	2.52	0.48
25:YA:2724:C:OP1	37:YR:1:MET:HE3	2.14	0.48
1:QA:1074:G:C4'	2:QB:104:ASN:HB2	2.44	0.48
1:XA:1124:G:H3'	1:XA:1145:C:N4	2.27	0.48
25:RA:2563:U:H1'	25:RA:2566:A:N6	2.29	0.48
46:Y0:68:GLU:OE1	46:Y0:82:ARG:NH1	2.47	0.48
7:QG:8:GLU:N	7:QG:8:GLU:CD	2.67	0.48
4:QD:163:GLU:C	4:QD:165:MET:N	2.66	0.48
33:RN:56:ASN:ND2	33:RN:125:GLY:C	2.66	0.48
2:QB:24:TRP:CZ3	2:QB:26:PRO:HA	2.49	0.48
1:QA:760:G:O2'	17:QQ:98:LEU:HD23	2.14	0.48
9:QI:33:PHE:HZ	9:QI:47:LEU:HD21	1.76	0.48
2:XB:24:TRP:CD1	2:XB:26:PRO:HD3	2.49	0.48
43:YX:11:PRO:HB3	43:YX:92:LEU:CD2	2.43	0.48
17:XQ:74:LEU:HD12	17:XQ:75:ARG:NE	2.28	0.48
1:XA:1074:G:C4'	2:XB:104:ASN:HB2	2.43	0.48
4:XD:100:ARG:CZ	4:XD:137:SER:HA	2.44	0.48
8:XH:44:PHE:CD1	8:XH:80:ILE:HG12	2.49	0.48
25:RA:1990:C:H2'	25:RA:1991:U:C6	2.49	0.48
25:RA:1728:G:H5'	25:RA:1729:A:OP2	2.14	0.48
1:XA:201:C:N4	1:XA:209:U:O2	2.47	0.48
4:QD:6:GLY:O	4:QD:8:VAL:HG23	2.14	0.48
15:QO:39:LEU:O	15:QO:40:SER:C	2.50	0.48
30:RG:106:LEU:HA	30:RG:110:ALA:HB3	1.95	0.48
12:XL:61:THR:O	12:XL:63:GLY:N	2.45	0.48
25:YA:507:A:C5'	25:YA:508:G:H5'	2.43	0.48
1:QA:544:G:OP1	4:QD:59:ARG:NH2	2.30	0.48
25:YA:2364:C:H2'	25:YA:2365:G:O4'	2.14	0.48
7:XG:51:GLN:HA	7:XG:51:GLN:OE1	2.14	0.48
36:RQ:42:ILE:N	36:RQ:42:ILE:HD12	2.29	0.48
25:YA:2389:G:H5''	25:YA:2390:U:O4'	2.14	0.48
26:YB:24:G:H1'	26:YB:27:C:N4	2.29	0.48
11:QK:115:PRO:C	11:QK:117:ASN:H	2.17	0.48
25:RA:579:G:H2'	25:RA:580:C:C6	2.49	0.48
31:YH:127:GLU:HB3	31:YH:128:PRO:HD2	1.92	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:Y1:94:LEU:O	47:Y1:95:LEU:CB	2.62	0.47
44:RY:97:ARG:NH1	44:RY:97:ARG:HG2	2.28	0.47
19:QS:11:VAL:O	19:QS:12:ASP:CB	2.61	0.47
35:RP:47:ASP:OD1	35:RP:50:ARG:NH2	2.47	0.47
13:XM:72:ALA:O	13:XM:76:ALA:HB2	2.14	0.47
2:XB:170:GLU:C	2:XB:172:ILE:HD12	2.33	0.47
27:YD:33:LEU:HB3	27:YD:34:VAL:H	1.49	0.47
35:RP:126:VAL:HA	35:RP:145:PRO:HD2	1.95	0.47
31:RH:154:PRO:CG	31:RH:162:ILE:O	2.61	0.47
54:Y8:53:PRO:CD	54:Y8:54:GLU:N	2.77	0.47
1:XA:690:G:H2'	1:XA:691:G:O4'	2.13	0.47
40:RU:92:ARG:CZ	40:RU:94:ASN:HD22	2.27	0.47
2:QB:97:TRP:HZ2	2:QB:102:LEU:HD13	1.78	0.47
54:R8:53:PRO:CD	54:R8:54:GLU:N	2.77	0.47
37:YR:70:LEU:C	37:YR:72:ASP:H	2.16	0.47
41:RV:48:GLY:O	41:RV:49:THR:C	2.52	0.47
25:YA:1006:C:H1'	33:YN:106:MET:CE	2.43	0.47
8:QH:86:ILE:HG12	8:QH:135:CYS:HA	1.96	0.47
8:XH:86:ILE:HG12	8:XH:135:CYS:HA	1.96	0.47
33:RN:57:ALA:O	33:RN:58:ASP:CB	2.61	0.47
2:QB:87:ARG:NH1	2:QB:220:ASP:OD1	2.46	0.47
30:YG:111:LEU:HD22	30:YG:120:LEU:HD21	1.96	0.47
16:QP:21:VAL:HG23	16:QP:34:GLU:H	1.79	0.47
35:RP:75:ILE:CD1	35:RP:75:ILE:H	2.14	0.47
34:RO:8:LEU:HB2	34:RO:19:ILE:CD1	2.43	0.47
44:YY:57:GLN:O	44:YY:58:GLY:O	2.32	0.47
20:QT:50:GLU:HA	20:QT:100:ILE:CG2	2.44	0.47
27:RD:145:VAL:O	27:RD:153:ALA:HA	2.14	0.47
34:YO:8:LEU:HB2	34:YO:19:ILE:CD1	2.43	0.47
10:QJ:4:ILE:CB	10:QJ:74:ILE:HD11	2.36	0.47
21:XU:15:ARG:HG2	21:XU:15:ARG:NH1	2.29	0.47
20:QT:30:LYS:O	20:QT:33:ILE:HG12	2.14	0.47
19:XS:24:ALA:O	19:XS:25:LYS:HB2	2.13	0.47
13:QM:12:ASN:O	13:QM:13:LYS:HB2	2.13	0.47
33:RN:4:TYR:OH	33:RN:7:LYS:NZ	2.46	0.47
29:RF:53:THR:C	29:RF:55:GLY:N	2.67	0.47
1:XA:953:G:H2'	1:XA:954:G:O4'	2.14	0.47
19:XS:36:ARG:NH1	19:XS:36:ARG:HB3	2.29	0.47
38:RS:55:ALA:O	38:RS:56:LEU:HB3	2.13	0.47
20:QT:13:LEU:HD12	20:QT:13:LEU:C	2.34	0.47
13:QM:117:VAL:O	13:QM:118:ALA:C	2.51	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:738:C:H2'	1:XA:739:C:H6	1.79	0.47
42:RW:32:ALA:O	42:RW:33:ARG:C	2.52	0.47
25:RA:372:G:O2'	25:RA:373:U:P	2.72	0.47
33:RN:67:LEU:O	33:RN:88:GLU:HG3	2.14	0.47
25:RA:1079:C:H2'	25:RA:1080:C:O4'	2.14	0.47
20:QT:64:ASP:O	20:QT:67:ALA:N	2.47	0.47
4:QD:3:ARG:O	4:QD:5:ILE:HG13	2.14	0.47
4:XD:163:GLU:C	4:XD:165:MET:N	2.66	0.47
2:QB:24:TRP:CD1	2:QB:26:PRO:HD3	2.49	0.47
10:QJ:39:PRO:CB	10:QJ:70:ARG:HH12	2.27	0.47
45:YZ:15:PRO:O	45:YZ:19:ARG:HB2	2.13	0.47
18:XR:30:ASP:C	18:XR:32:ARG:H	2.15	0.47
1:QA:1095:U:H5''	1:QA:1109:C:O2	2.14	0.47
5:XE:87:SER:HB3	5:XE:131:ILE:HD13	1.95	0.47
17:QQ:3:LYS:HD2	17:QQ:60:ILE:HD11	1.95	0.47
5:XE:153:LYS:HB2	5:XE:153:LYS:HZ3	1.79	0.47
33:YN:75:TYR:C	33:YN:76:SER:O	2.52	0.47
8:QH:44:PHE:CD1	8:QH:80:ILE:HG12	2.49	0.47
36:YQ:60:ARG:HB2	36:YQ:60:ARG:NH2	2.28	0.47
16:XP:25:ARG:HH11	16:XP:25:ARG:HG3	1.79	0.47
1:XA:128:G:O2'	17:XQ:3:LYS:NZ	2.46	0.47
25:YA:185:U:H4'	25:YA:218:A:H4'	1.96	0.47
36:YQ:135:ASP:OD2	45:YZ:49:ARG:NH1	2.46	0.47
25:RA:2351:G:O6	54:R8:39:LYS:HG2	2.14	0.47
31:YH:45:VAL:HG13	31:YH:45:VAL:O	2.14	0.47
7:QG:51:GLN:OE1	7:QG:51:GLN:HA	2.14	0.47
53:Y7:25:PRO:HA	53:Y7:28:ARG:CZ	2.44	0.47
14:YN:26:ARG:NH1	14:YN:43:CYS:SG	2.86	0.47
14:QN:6:LEU:CD2	14:QN:23:ARG:NH2	2.77	0.47
44:RY:81:LYS:NZ	44:RY:98:VAL:HB	2.29	0.47
31:RH:124:GLU:HB3	31:RH:132:ARG:CD	2.44	0.47
54:Y8:56:GLU:O	54:Y8:58:ILE:N	2.47	0.47
35:YP:47:ASP:OD1	35:YP:50:ARG:NH2	2.47	0.47
25:RA:1815:A:OP2	27:RD:54:ARG:NH2	2.47	0.47
50:Y4:60:GLN:O	50:Y4:63:TYR:HB3	2.14	0.47
3:QC:16:ARG:NH2	3:QC:183:ASP:OD2	2.47	0.47
35:RP:19:VAL:CG2	35:RP:20:GLY:H	1.98	0.47
3:XC:71:ALA:HA	3:XC:106:VAL:HB	1.95	0.47
13:QM:90:LEU:HA	13:QM:93:ARG:CD	2.34	0.47
50:R4:36:CYS:O	50:R4:37:SER:C	2.52	0.47
41:RV:4:ILE:HA	41:RV:12:TYR:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1266:G:O5'	42:RW:15:ARG:NH2	2.44	0.47
2:QB:206:ASP:HA	2:QB:211:ILE:HD11	1.94	0.47
40:YU:79:PHE:HE2	40:YU:83:LEU:HD22	1.78	0.47
50:Y4:38:LYS:C	50:Y4:40:HIS:H	2.07	0.47
37:YR:63:ARG:NH1	37:YR:63:ARG:HG3	2.29	0.47
3:XC:36:ASP:HA	3:XC:39:ILE:HD12	1.94	0.47
52:Y6:20:ASN:ND2	52:Y6:42:TRP:CZ2	2.82	0.47
5:XE:75:THR:HG23	5:XE:76:ILE:O	2.14	0.47
42:RW:66:GLU:O	42:RW:69:LEU:HG	2.14	0.47
2:XB:96:ARG:HD2	2:XB:96:ARG:N	2.20	0.47
37:YR:117:VAL:O	37:YR:118:GLU:CB	2.62	0.47
33:RN:131:GLN:HE21	33:RN:132:ALA:H	1.58	0.47
41:RV:66:ARG:NH1	41:RV:88:ARG:NH1	2.61	0.47
30:YG:83:ARG:HB2	30:YG:86:MET:HE3	1.97	0.47
13:QM:50:GLU:O	13:QM:54:VAL:HG23	2.13	0.47
33:RN:113:GLY:O	33:RN:116:LEU:HB2	2.14	0.47
28:RE:120:TRP:O	28:RE:121:ASN:HB2	2.15	0.47
29:YF:196:LEU:C	29:YF:197:ASP:O	2.50	0.47
4:XD:79:PHE:HE2	4:XD:83:SER:HB2	1.79	0.47
11:XK:48:ILE:HG21	11:XK:63:LEU:HD13	1.96	0.47
12:QL:127:GLU:O	12:QL:128:ALA:CB	2.62	0.47
54:Y8:41:ILE:HG13	54:Y8:42:ARG:N	2.28	0.47
6:XF:89:MET:O	6:XF:90:VAL:C	2.51	0.47
47:R1:7:ILE:HD12	47:R1:62:VAL:HG11	1.96	0.47
4:XD:198:VAL:CG1	4:XD:199:ASN:N	2.75	0.47
35:RP:6:LEU:O	35:RP:7:ARG:O	2.31	0.47
7:QG:69:VAL:O	7:QG:69:VAL:CG1	2.62	0.47
47:Y1:25:LYS:C	47:Y1:27:GLU:H	2.17	0.47
11:QK:13:GLN:HG3	11:QK:75:TYR:O	2.14	0.47
29:YF:132:VAL:O	29:YF:133:ASN:C	2.52	0.47
42:YW:30:GLU:O	42:YW:34:ASN:ND2	2.46	0.47
33:YN:18:ALA:O	33:YN:19:GLU:C	2.53	0.47
5:QE:87:SER:HB3	5:QE:131:ILE:HD13	1.95	0.47
13:QM:30:ALA:O	13:QM:33:ALA:N	2.47	0.47
12:XL:50:SER:O	12:XL:51:ALA:HB2	2.14	0.47
37:YR:10:LEU:O	37:YR:12:ARG:HG3	2.14	0.47
33:RN:137:LYS:CG	33:RN:138:LEU:N	2.78	0.47
40:RU:107:ALA:O	40:RU:110:VAL:HB	2.14	0.47
25:YA:1637:A:H4'	25:YA:2711:A:O2'	2.14	0.47
41:RV:21:ARG:HD2	41:RV:91:TYR:CZ	2.49	0.47
1:QA:784:C:H4'	25:RA:1837:C:OP1	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2526:G:H5'	25:RA:2742:C:O2'	2.14	0.47
25:YA:137(A):G:H1'	43:YX:41:ASN:ND2	2.28	0.47
25:RA:1709:U:H2'	25:RA:1710:C:C6	2.49	0.47
39:YT:132:LYS:O	39:YT:136:GLN:HG3	2.13	0.47
7:QG:63:LYS:HD2	7:QG:63:LYS:O	2.13	0.47
31:RH:45:VAL:O	31:RH:45:VAL:HG13	2.14	0.47
9:QI:22:GLY:HA3	9:QI:60:ASP:OD2	2.13	0.47
25:RA:2760:C:H2'	25:RA:2761:G:H5''	1.95	0.47
1:QA:487:A:H2'	1:QA:488:C:O4'	2.14	0.47
25:YA:769:G:H5'	25:YA:1379:A:N6	2.29	0.47
31:YH:123:PHE:O	31:YH:125:VAL:HG23	2.13	0.47
4:XD:22:LYS:HD3	4:XD:26:CYS:SG	2.49	0.47
36:RQ:57:HIS:ND1	36:RQ:58:PHE:N	2.62	0.47
50:R4:50:VAL:CG1	50:R4:50:VAL:O	2.63	0.47
10:QJ:24:VAL:HG21	10:QJ:37:PRO:CG	2.43	0.47
10:XJ:24:VAL:HG21	10:XJ:37:PRO:CG	2.43	0.47
35:YP:112:LEU:HD12	35:YP:127:ALA:CB	2.44	0.47
35:YP:147:LEU:HD22	35:YP:147:LEU:N	2.29	0.47
28:RE:56:PRO:O	28:RE:57:LYS:CB	2.61	0.47
28:YE:61:ARG:CB	28:YE:62:PRO:HD3	2.41	0.47
40:RU:91:ASP:O	40:RU:92:ARG:C	2.53	0.47
41:YV:36:PRO:HA	41:YV:56:SER:CB	2.44	0.47
14:XN:6:LEU:HD22	14:XN:23:ARG:NH2	2.29	0.47
33:YN:57:ALA:O	33:YN:58:ASP:CB	2.62	0.47
37:YR:56:LYS:HE2	37:YR:94:TYR:OH	2.14	0.47
25:YA:2415:G:H4'	35:YP:66:GLY:C	2.35	0.47
41:YV:35:LEU:O	41:YV:37:VAL:N	2.47	0.47
51:R5:57:VAL:O	51:R5:57:VAL:HG13	2.14	0.47
5:QE:141:GLN:HA	5:QE:143:ARG:HH12	1.79	0.47
11:XK:19:ALA:CA	11:XK:32:ILE:HG22	2.43	0.47
1:XA:1366:C:O2'	10:XJ:60:ARG:NH1	2.48	0.47
1:XA:1224:G:C6	1:XA:1322:C:H1'	2.49	0.47
7:QG:44:TYR:C	7:QG:46:ALA:N	2.66	0.47
28:RE:195:LEU:HD12	28:RE:196:VAL:N	2.29	0.47
3:QC:76:VAL:HG21	3:QC:103:VAL:HG11	1.95	0.47
29:YF:155:LEU:HA	29:YF:174:VAL:HG12	1.95	0.47
9:QI:7:THR:O	9:QI:83:ARG:HD2	2.14	0.47
39:RT:96:ARG:CB	39:RT:96:ARG:NH1	2.76	0.47
11:XK:62:GLN:O	11:XK:63:LEU:C	2.51	0.47
25:RA:620:G:H4'	25:RA:621:A:C5'	2.41	0.47
42:YW:32:ALA:O	42:YW:33:ARG:C	2.52	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:QE:82:VAL:CG1	5:QE:83:GLU:H	2.27	0.47
47:R1:8:SER:OG	47:R1:10:LYS:HG3	2.13	0.47
25:YA:704:G:H1'	25:YA:727:A:N6	2.29	0.47
33:YN:120:LEU:HD11	33:YN:122:VAL:CG2	2.42	0.47
33:RN:68:GLU:HG2	33:RN:88:GLU:CD	2.33	0.47
20:XT:64:ASP:O	20:XT:67:ALA:N	2.47	0.47
4:QD:198:VAL:CG1	4:QD:199:ASN:N	2.75	0.47
25:YA:64:A:O3'	43:YX:71:GLY:HA3	2.14	0.47
25:RA:1820:U:H4'	25:RA:1821:A:OP2	2.14	0.47
25:YA:1993:U:H4'	28:YE:128:SER:OG	2.14	0.47
2:XB:24:TRP:CZ3	2:XB:26:PRO:HA	2.49	0.47
28:RE:174:ASP:O	28:RE:182:LEU:HD12	2.14	0.47
25:RA:2396:G:H1'	47:R1:30:VAL:HG13	1.96	0.47
41:YV:2:PHE:CD2	41:YV:13:ARG:NH2	2.83	0.47
12:QL:85:ILE:HD11	12:QL:98:TYR:CB	2.43	0.47
25:YA:389:G:N1	35:YP:70:GLN:HB3	2.28	0.47
1:XA:67:C:H2'	1:XA:68:G:H8	1.75	0.47
9:QI:9:ARG:HA	9:QI:76:ALA:HB1	1.96	0.47
31:RH:82:GLY:O	31:RH:83:TYR:O	2.32	0.47
25:RA:2331:G:H4'	46:R0:43:THR:H	1.79	0.47
25:RA:1427:A:H4'	25:RA:1428:C:O5'	2.13	0.47
33:YN:12:ARG:NH1	33:YN:50:ASP:CG	2.67	0.47
1:XA:1077:G:N2	1:XA:1080:A:OP2	2.44	0.47
25:YA:2645:G:C3'	25:YA:2646:C:H5'	2.44	0.47
37:YR:41:ALA:C	37:YR:43:GLU:N	2.68	0.47
1:QA:164:U:H2'	1:QA:165:C:C6	2.48	0.47
13:XM:30:ALA:O	13:XM:33:ALA:N	2.46	0.47
30:RG:106:LEU:HA	30:RG:110:ALA:CB	2.44	0.47
6:QF:22:GLU:CD	6:QF:82:ARG:HH21	2.18	0.47
1:QA:1135:U:H4'	1:QA:1136:U:H5	1.78	0.47
25:YA:754:C:H2'	25:YA:755:C:C6	2.49	0.47
25:RA:2243:U:H2'	25:RA:2244:U:C6	2.49	0.47
25:YA:1045:A:N3	25:YA:1047:G:N2	2.62	0.47
26:RB:94:C:H2'	26:RB:95:U:C6	2.49	0.47
25:RA:1998:G:OP2	28:RE:136:ARG:NH2	2.37	0.47
1:QA:737:A:H2'	1:QA:738:C:C6	2.49	0.47
38:RS:40:ILE:HG22	38:RS:41:ASP:N	2.29	0.47
38:YS:40:ILE:HG22	38:YS:41:ASP:N	2.28	0.47
4:XD:29:PRO:O	4:XD:30:LYS:HB3	2.15	0.47
4:XD:9:CYS:SG	4:XD:22:LYS:HE3	2.55	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)
19:XS:41:VAL:CB	19:XS:42:PRO:CA	2.76	0.47
28:YE:52:LEU:HB2	28:YE:75:VAL:CG2	2.40	0.47
25:RA:590:A:H2'	25:RA:591:C:C6	2.49	0.47
35:YP:61:ARG:HH21	54:Y8:13:ARG:HD2	1.77	0.47
28:YE:65:GLY:HA2	28:YE:70:ALA:HB3	1.95	0.47
1:QA:973:G:O4'	10:QJ:55:LYS:HG2	2.14	0.47
41:RV:2:PHE:CD2	41:RV:13:ARG:NH2	2.83	0.47
2:QB:69:LEU:HB3	2:QB:162:ILE:HG22	1.95	0.47
33:YN:9:VAL:HG21	33:YN:48:MET:CB	2.45	0.47
30:YG:12:TYR:O	30:YG:16:ARG:HB3	2.15	0.47
7:QG:79:ARG:NH1	7:QG:79:ARG:HG2	2.29	0.47
33:YN:57:ALA:HA	33:YN:60:ILE:CD1	2.43	0.47
33:RN:97:ARG:HA	33:RN:100:GLU:HB3	1.97	0.47
52:R6:8:LYS:O	52:R6:27:LYS:HG2	2.14	0.47
3:XC:95:THR:CG2	3:XC:96:GLY:H	2.09	0.47
48:Y2:17:SER:CB	48:Y2:18:PRO:CA	2.92	0.47
44:YY:44:ILE:CG1	44:YY:45:VAL:N	2.70	0.47
1:QA:1432:G:OP1	39:RT:107:ASP:HB2	2.15	0.47
22:QV:74:C:C2'	22:QV:75:C:H5'	2.44	0.47
20:XT:50:GLU:CG	20:XT:51:GLU:N	2.76	0.47
5:XE:141:GLN:HA	5:XE:143:ARG:HH12	1.79	0.47
20:XT:26:ASN:ND2	20:XT:26:ASN:N	2.62	0.47
41:RV:16:PRO:HA	41:RV:96:ILE:O	2.14	0.47
41:YV:59:ALA:HB2	41:YV:96:ILE:HD13	1.97	0.47
7:XG:44:TYR:C	7:XG:46:ALA:N	2.66	0.47
29:YF:53:THR:C	29:YF:55:GLY:N	2.68	0.47
1:XA:986:A:N3	19:XS:52:TYR:OH	2.47	0.47
27:RD:134:ARG:HB2	27:RD:135:PHE:CD2	2.49	0.47
11:QK:124:LYS:O	11:QK:126:ARG:N	2.40	0.47
10:QJ:40:LEU:HB2	10:QJ:69:ASN:CB	2.40	0.47
30:YG:5:VAL:HG22	50:Y4:25:TYR:CE2	2.50	0.47
39:YT:36:GLU:O	39:YT:37:GLY:C	2.53	0.47
9:XI:42:ARG:NH2	9:XI:75:ASP:OD2	2.47	0.47
9:QI:42:ARG:NH2	9:QI:75:ASP:OD2	2.47	0.47
15:QO:24:SER:OG	15:QO:25:THR:N	2.47	0.47
25:RA:1184:G:OP1	49:R3:29:ARG:NH1	2.48	0.47
5:XE:82:VAL:CG1	5:XE:83:GLU:H	2.27	0.47
47:Y1:7:ILE:HD12	47:Y1:62:VAL:HG11	1.96	0.47
12:XL:115:LYS:O	12:XL:117:ARG:N	2.47	0.47
33:YN:67:LEU:O	33:YN:88:GLU:HG3	2.14	0.47
4:XD:165:MET:CE	4:XD:168:ARG:HD2	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:QQ:98:LEU:O	17:QQ:99:SER:C	2.53	0.47
2:QB:164:VAL:HB	2:QB:186:ALA:HB1	1.95	0.47
44:RY:19:LYS:HE3	44:RY:20:TYR:CE1	2.49	0.47
1:XA:1227:A:OP2	13:XM:111:LYS:HE3	2.14	0.47
47:R1:29:GLY:C	47:R1:30:VAL:CG2	2.82	0.47
1:XA:1022:G:H2'	1:XA:1023:G:C8	2.50	0.47
25:RA:900:A:H5'	25:RA:901:A:OP2	2.14	0.47
8:XH:39:LEU:HD11	8:XH:111:ILE:HD11	1.96	0.47
6:XF:97:PHE:CD2	18:XR:31:LEU:HD21	2.48	0.47
18:QR:31:LEU:H	18:QR:31:LEU:CD2	2.27	0.47
14:QN:15:LYS:HD2	14:QN:16:PHE:CE2	2.49	0.47
4:QD:135:LEU:O	4:QD:137:SER:N	2.48	0.47
17:XQ:63:ARG:HG2	17:XQ:64:PRO:N	2.28	0.47
5:QE:96:PRO:HA	5:QE:117:ASP:OD2	2.14	0.47
37:RR:10:LEU:O	37:RR:12:ARG:HG3	2.14	0.47
33:YN:137:LYS:CG	33:YN:138:LEU:N	2.77	0.47
37:RR:41:ALA:C	37:RR:43:GLU:N	2.68	0.47
1:XA:1081:G:P	5:XE:16:THR:OG1	2.72	0.47
25:YA:141:A:C8	25:YA:1408:C:H1'	2.49	0.47
26:YB:27:C:H5'	26:YB:28:C:OP2	2.15	0.47
25:YA:1292:U:H2'	25:YA:1293:C:C6	2.48	0.47
12:XL:43:VAL:HG23	12:XL:93:LEU:HD22	1.97	0.47
25:YA:10:G:N2	25:YA:2802:G:OP1	2.48	0.47
25:RA:1354:A:OP1	27:RD:38:LYS:HE2	2.14	0.47
26:RB:24:G:H5''	26:RB:25:A:OP1	2.14	0.47
55:Y9:27:CYS:SG	55:Y9:28:GLU:N	2.87	0.47
31:YH:127:GLU:OE2	31:YH:130:ARG:NH2	2.48	0.47
14:QN:43:CYS:O	14:QN:46:GLU:N	2.43	0.47
25:RA:2638:G:P	28:RE:82:ARG:HH22	2.38	0.47
28:YE:56:PRO:O	28:YE:57:LYS:CB	2.61	0.47
31:YH:154:PRO:CG	31:YH:162:ILE:O	2.61	0.47
2:XB:200:ILE:H	2:XB:200:ILE:HD12	1.79	0.47
3:XC:16:ARG:NH2	3:XC:183:ASP:OD2	2.47	0.47
27:RD:72:LYS:CG	27:RD:103:ARG:NH2	2.77	0.47
25:RA:2636:U:OP1	28:RE:79:ARG:HG3	2.14	0.47
1:QA:972:C:H4'	10:QJ:57:LYS:CG	2.44	0.47
41:RV:38:LEU:HD23	41:RV:39:LEU:H	1.79	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:HG	1.79	0.47
5:XE:13:ILE:O	5:XE:13:ILE:HG22	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RG:13:GLU:O	30:RG:13:GLU:HG3	2.14	0.47
16:QP:34:GLU:HG2	16:QP:35:LYS:N	2.29	0.47
16:XP:21:VAL:HG23	16:XP:34:GLU:H	1.79	0.47
20:XT:50:GLU:HA	20:XT:100:ILE:CG2	2.44	0.47
20:XT:49:ALA:HB2	20:XT:99:LEU:HD22	1.97	0.47
51:Y5:48:GLU:HA	51:Y5:59:GLU:CG	2.43	0.47
20:QT:28:ALA:C	20:QT:30:LYS:N	2.67	0.47
2:QB:116:GLU:HA	2:QB:119:GLU:HB3	1.96	0.47
11:XK:32:ILE:HD11	11:XK:68:ALA:O	2.14	0.47
10:XJ:49:VAL:HG23	14:XN:34:TYR:OH	2.13	0.47
14:QN:8:GLU:C	14:QN:10:ALA:N	2.68	0.47
28:RE:129:HIS:O	28:RE:130:GLY:C	2.53	0.47
38:YS:56:LEU:O	38:YS:57:LYS:C	2.53	0.47
36:YQ:59:ARG:CD	36:YQ:59:ARG:N	2.72	0.47
30:RG:5:VAL:HG22	50:R4:25:TYR:CE2	2.50	0.47
20:XT:13:LEU:HD12	20:XT:13:LEU:C	2.34	0.47
25:YA:2566:A:H4'	25:YA:2567:G:O5'	2.13	0.47
25:RA:96:G:H4'	48:R2:48:HIS:NE2	2.30	0.47
6:XF:19:LEU:C	6:XF:19:LEU:HD23	2.35	0.47
43:RX:6:ASP:OD1	48:R2:29:LYS:NZ	2.47	0.47
15:XO:61:GLY:C	15:XO:65:ARG:NH1	2.67	0.47
6:QF:79:LEU:O	6:QF:85:VAL:HG11	2.14	0.47
33:RN:118:LYS:O	33:RN:120:LEU:N	2.43	0.47
44:YY:19:LYS:HE3	44:YY:20:TYR:CE1	2.49	0.47
1:QA:1152:A:H2'	1:QA:1153:C:C6	2.49	0.47
1:QA:939:G:H2'	1:QA:940:C:C6	2.50	0.47
7:QG:107:ALA:CB	7:QG:134:ALA:HB2	2.44	0.47
8:XH:16:ALA:HB2	8:XH:24:THR:CG2	2.44	0.47
1:XA:1158:C:H4'	2:XB:133:LYS:HZ1	1.79	0.47
8:QH:39:LEU:HD11	8:QH:111:ILE:HD11	1.96	0.47
43:YX:35:THR:O	43:YX:37:THR:N	2.47	0.47
12:QL:50:SER:O	12:QL:51:ALA:HB2	2.14	0.47
1:QA:792:A:O2'	1:QA:794:A:N7	2.34	0.47
31:RH:67:LEU:O	31:RH:71:LEU:HB2	2.14	0.47
25:YA:2564:A:C2	25:YA:2647:U:H4'	2.50	0.47
25:RA:690:G:H2'	25:RA:691:C:C6	2.50	0.47
4:XD:183:GLY:C	4:XD:184:LYS:HG3	2.34	0.47
4:QD:60:GLU:O	4:QD:63:LYS:HB3	2.14	0.47
1:QA:512:U:H2'	1:QA:513:C:C6	2.49	0.47
1:QA:1521:G:H2'	1:QA:1522:U:C6	2.49	0.47
50:R4:55:ARG:C	50:R4:59:PHE:HB3	2.35	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2238:G:H2'	25:RA:2238:G:N3	2.30	0.47
26:RB:13:A:O2'	26:RB:14:U:H3'	2.14	0.47
47:R1:94:LEU:O	47:R1:95:LEU:CB	2.62	0.47
13:QM:72:ALA:O	13:QM:76:ALA:HB2	2.14	0.47
31:YH:131:VAL:HG12	31:YH:132:ARG:N	2.29	0.47
28:RE:3:GLY:HA3	28:RE:81:ILE:HG21	1.97	0.47
2:XB:172:ILE:O	2:XB:175:ARG:CB	2.63	0.47
27:YD:35:LYS:HD3	27:YD:63:ARG:HB3	1.96	0.47
35:RP:147:LEU:N	35:RP:147:LEU:HD22	2.29	0.47
38:RS:108:GLY:O	38:RS:110:LEU:N	2.48	0.47
36:RQ:66:ILE:H	36:RQ:104:PHE:HA	1.80	0.47
7:XG:78:ARG:HG3	7:XG:78:ARG:HH11	1.78	0.47
30:YG:88:ILE:CD1	30:YG:88:ILE:O	2.54	0.47
27:YD:134:ARG:HB2	27:YD:135:PHE:CD2	2.49	0.47
55:R9:1:MET:SD	55:R9:31:LYS:O	2.73	0.47
9:QI:112:LYS:HD3	9:QI:112:LYS:C	2.35	0.47
37:YR:1:MET:SD	37:YR:1:MET:N	2.75	0.47
17:XQ:29:HIS:N	17:XQ:33:GLY:O	2.48	0.47
54:Y8:43:GLN:C	54:Y8:44:LYS:HD2	2.34	0.47
38:RS:25:ARG:HH12	38:RS:42:ASP:CG	2.16	0.47
54:R8:44:LYS:HD2	54:R8:44:LYS:N	2.30	0.47
30:RG:56:ALA:HB2	30:RG:153:ARG:NE	2.28	0.47
47:Y1:29:GLY:C	47:Y1:30:VAL:CG2	2.82	0.47
18:QR:82:THR:HG22	18:QR:83:GLU:H	1.79	0.47
29:RF:162:LEU:HD23	29:RF:165:ARG:HH21	1.80	0.47
1:QA:15:G:H4'	5:QE:24:ARG:HH12	1.79	0.47
39:YT:29:ARG:NH1	39:YT:46:GLU:OE1	2.48	0.47
1:QA:1119:C:H2'	1:QA:1120:G:H8	1.80	0.47
25:RA:1062:G:H2'	25:RA:1063:G:C8	2.50	0.47
25:YA:1045:A:O2'	25:YA:1046:A:OP2	2.31	0.47
25:YA:1385:G:H1'	25:YA:1386:C:C6	2.49	0.47
1:QA:1060:C:C5	3:QC:2:GLY:HA2	2.49	0.47
3:QC:148:GLY:O	3:QC:202:ILE:HA	2.14	0.47
1:QA:715:A:H2'	1:QA:716:A:C8	2.49	0.47
14:QN:36:PHE:CD1	14:QN:36:PHE:C	2.88	0.47
1:QA:399:G:H2'	1:QA:400:C:C6	2.50	0.47
4:XD:31:CYS:O	4:XD:32:ALA:CB	2.62	0.47
1:QA:430:A:P	4:QD:9:CYS:H	2.38	0.47
44:RY:75:ILE:HG12	44:RY:76:CYS:H	1.79	0.47
40:RU:8:VAL:O	40:RU:9:VAL:C	2.53	0.47
28:RE:197:ILE:CD1	28:RE:199:ARG:HH12	2.26	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:XM:23:TYR:HB2	13:XM:67:GLU:OE1	2.15	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
28:YE:78:LEU:CD2	28:YE:79:ARG:HD2	2.43	0.47
3:QC:11:ARG:HH11	3:QC:11:ARG:HG2	1.79	0.47
11:QK:32:ILE:HD11	11:QK:68:ALA:O	2.14	0.47
3:XC:203:PHE:O	3:XC:204:LEU:HD23	2.14	0.47
27:YD:32:SER:O	27:YD:33:LEU:CB	2.60	0.47
27:YD:72:LYS:CG	27:YD:103:ARG:NH2	2.76	0.47
27:RD:102:LYS:O	27:RD:103:ARG:HG3	2.15	0.47
35:YP:81:GLN:HB3	35:YP:110:TYR:HB3	1.97	0.47
35:YP:115:LEU:CD1	35:YP:116:GLY:N	2.78	0.47
35:YP:126:VAL:HA	35:YP:145:PRO:HD2	1.95	0.47
28:RE:65:GLY:HA2	28:RE:70:ALA:HB3	1.95	0.47
1:QA:690:G:H22	11:QK:55:LYS:HZ1	1.62	0.47
8:XH:68:ARG:HG2	8:XH:68:ARG:HH11	1.80	0.47
28:YE:22:PRO:O	28:YE:22:PRO:CG	2.63	0.47
50:R4:8:LYS:O	50:R4:9:LEU:CB	2.62	0.47
41:RV:2:PHE:C	41:RV:2:PHE:CD1	2.88	0.47
41:RV:36:PRO:HA	41:RV:56:SER:CB	2.44	0.47
41:YV:48:GLY:O	41:YV:49:THR:C	2.52	0.47
37:RR:74:LYS:O	37:RR:76:VAL:N	2.45	0.47
40:YU:91:ASP:O	40:YU:92:ARG:C	2.53	0.47
2:QB:5:ILE:O	2:QB:6:THR:O	2.32	0.47
2:XB:224:GLN:HA	2:XB:229:VAL:HG23	1.97	0.47
36:YQ:80:GLU:HG3	36:YQ:81:VAL:N	2.27	0.47
30:YG:16:ARG:NH2	30:YG:28:VAL:O	2.48	0.47
30:YG:14:GLU:O	30:YG:17:PRO:HG2	2.15	0.47
29:RF:184:TYR:CD2	29:RF:188:ARG:HD2	2.50	0.47
33:YN:57:ALA:CA	33:YN:60:ILE:HD11	2.44	0.47
25:RA:872:A:H4'	36:RQ:66:ILE:HD11	1.97	0.47
2:QB:168:THR:CB	2:QB:192:SER:HB2	2.41	0.47
8:XH:10:LEU:H	8:XH:10:LEU:CD2	2.15	0.47
7:XG:70:LYS:O	7:XG:138:LYS:HE3	2.15	0.47
52:R6:20:ASN:ND2	52:R6:42:TRP:CZ2	2.82	0.47
2:QB:223:ILE:HA	2:QB:226:ARG:HB3	1.97	0.47
2:QB:220:ASP:O	2:QB:223:ILE:N	2.48	0.47
2:XB:220:ASP:O	2:XB:223:ILE:N	2.48	0.47
2:XB:223:ILE:HA	2:XB:226:ARG:HB3	1.97	0.47
50:Y4:33:VAL:CG1	50:Y4:34:GLU:H	2.22	0.47
4:XD:94:LEU:HD12	4:XD:94:LEU:N	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:168:THR:CB	2:XB:192:SER:HB2	2.41	0.47
44:RY:61:ILE:HG22	44:RY:62:GLU:N	2.27	0.47
25:RA:2372:G:H4'	52:R6:46:HIS:NE2	2.30	0.47
42:YW:66:GLU:O	42:YW:69:LEU:HG	2.15	0.47
30:RG:44:GLY:HA2	30:RG:88:ILE:HG12	1.96	0.47
2:QB:95:GLN:NE2	2:QB:147:LYS:HE2	2.27	0.47
2:XB:116:GLU:HA	2:XB:119:GLU:HB3	1.96	0.47
1:XA:686:U:O4	1:XA:703:G:H1'	2.15	0.47
37:RR:117:VAL:O	37:RR:118:GLU:CB	2.62	0.47
1:XA:1221:G:OP1	19:XS:36:ARG:HD3	2.15	0.47
4:XD:173:TRP:C	4:XD:186:LEU:HB2	2.35	0.47
4:QD:173:TRP:C	4:QD:186:LEU:HB2	2.35	0.47
9:XI:18:PHE:HB2	9:XI:62:TYR:HB3	1.96	0.47
28:YE:36:ARG:HH11	28:YE:36:ARG:CB	2.28	0.47
35:RP:12:ALA:C	35:RP:14:LYS:H	2.17	0.47
9:XI:5:TYR:OH	9:XI:7:THR:HG23	2.15	0.47
34:YO:104:ARG:HD3	39:YT:36:GLU:OE2	2.15	0.47
4:XD:153:ARG:CZ	4:XD:181:MET:HG3	2.44	0.47
6:QF:19:LEU:HD23	6:QF:19:LEU:C	2.35	0.47
25:RA:177:G:N3	25:RA:177:G:H5''	2.28	0.47
16:QP:69:THR:O	16:QP:73:LEU:HG	2.14	0.47
15:XO:76:GLU:O	15:XO:78:TYR:N	2.48	0.47
8:QH:33:GLU:C	8:QH:35:ILE:N	2.65	0.47
6:XF:40:VAL:HG22	6:XF:41:GLU:N	2.30	0.47
8:XH:33:GLU:C	8:XH:35:ILE:N	2.65	0.47
44:RY:39:VAL:O	44:RY:40:GLU:OE2	2.32	0.47
44:YY:39:VAL:O	44:YY:40:GLU:OE2	2.32	0.47
4:QD:165:MET:HE3	4:QD:168:ARG:HD2	1.97	0.47
18:QR:32:ARG:HH11	18:QR:65:ILE:HD13	1.80	0.47
2:QB:71:VAL:HG23	2:QB:164:VAL:HG13	1.97	0.47
17:QQ:76:LEU:HD11	17:QQ:79:SER:H	1.80	0.47
6:QF:40:VAL:HG22	6:QF:41:GLU:N	2.30	0.47
1:QA:403:C:H4'	4:QD:122:ARG:NH2	2.30	0.47
11:XK:102:GLY:O	11:XK:103:LEU:C	2.53	0.47
25:RA:635:C:H2'	25:RA:636:G:O4'	2.15	0.47
25:RA:307:G:H22	25:RA:310:A:P	2.37	0.47
3:XC:127:ARG:NH1	3:XC:127:ARG:CG	2.74	0.47
39:YT:51:ARG:CG	39:YT:98:LYS:HG3	2.44	0.47
25:YA:458:G:O2'	53:Y7:39:ARG:HD3	2.14	0.47
16:QP:40:ASP:C	16:QP:42:ARG:H	2.17	0.47
25:YA:389:G:H22	35:YP:72:PRO:CG	2.27	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1179:A:O3'	9:QI:103:THR:HG23	2.15	0.47
43:YX:43:VAL:HG11	43:YX:51:VAL:HG21	1.97	0.47
35:RP:37:GLY:O	35:RP:41:ARG:HD3	2.15	0.47
25:YA:1937:A:C8	25:YA:1939:U:H2'	2.50	0.47
34:RO:120:GLU:OE1	39:RT:67:SER:OG	2.24	0.47
43:YX:53:LYS:HZ2	43:YX:55:ASN:HD21	1.62	0.47
50:R4:3:GLU:HG3	50:R4:4:GLY:H	1.79	0.47
5:XE:152:ARG:HD3	8:XH:44:PHE:CZ	2.50	0.47
8:XH:82:HIS:CD2	8:XH:83:ILE:N	2.82	0.47
25:YA:99:U:O2'	25:YA:101:G:OP2	2.30	0.47
25:YA:278:A:H2'	25:YA:279:C:C6	2.50	0.47
8:QH:82:HIS:CD2	8:QH:83:ILE:N	2.82	0.47
8:QH:80:ILE:HG23	8:QH:137:VAL:HG12	1.97	0.47
33:RN:137:LYS:CG	33:RN:138:LEU:H	2.27	0.47
31:YH:67:LEU:O	31:YH:71:LEU:HB2	2.15	0.47
7:XG:92:SER:HB3	7:XG:95:ARG:CB	2.45	0.47
26:YB:52:A:N6	38:YS:33:LYS:HG3	2.29	0.47
1:QA:1065:U:O5'	1:QA:1190:G:N2	2.47	0.47
4:QD:154:ASN:O	4:QD:155:LEU:O	2.32	0.47
25:RA:2721:A:H2'	25:RA:2722:G:O4'	2.15	0.47
1:XA:580:U:H2'	1:XA:581:G:O4'	2.14	0.47
1:XA:1203:C:H2'	1:XA:1204:A:H8	1.78	0.47
1:XA:1402:C:H2'	1:XA:1403:C:O4'	2.15	0.47
34:RO:37:ASP:O	34:RO:62:VAL:HG23	2.15	0.47
28:YE:89:ASP:O	28:YE:90:THR:O	2.33	0.47
30:YG:106:LEU:HA	30:YG:110:ALA:CB	2.44	0.47
38:YS:46:VAL:HG12	38:YS:47:THR:N	2.28	0.47
25:RA:57:C:H2'	25:RA:58:G:O4'	2.14	0.47
3:QC:23:TYR:CG	3:QC:24:ALA:N	2.83	0.47
28:RE:17:ASP:OD2	28:RE:17:ASP:N	2.46	0.47
9:XI:106:ALA:O	9:XI:108:VAL:HG13	2.15	0.47
25:YA:870:A:OP1	36:YQ:6:ARG:NH2	2.47	0.47
14:YN:41:ARG:NE	14:YN:42:ILE:HG13	2.29	0.47
14:QN:41:ARG:HH11	14:QN:41:ARG:CG	2.28	0.47
25:RA:153:C:OP2	47:R1:88:LYS:HE2	2.15	0.47
25:RA:270(T):G:H5''	47:R1:97:LEU:CD2	2.43	0.47
47:Y1:81:LYS:HE2	47:Y1:81:LYS:H	1.62	0.47
44:YY:81:LYS:NZ	44:YY:98:VAL:HB	2.30	0.47
13:QM:23:TYR:HB3	13:QM:67:GLU:CG	2.39	0.47
25:RA:583:G:H5''	40:RU:10:ARG:NH1	2.21	0.47
13:XM:87:TYR:C	13:XM:89:GLY:H	2.18	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:203:PHE:O	3:QC:204:LEU:HD23	2.15	0.47
2:XB:92:TYR:CD1	2:XB:92:TYR:C	2.88	0.47
41:YV:4:ILE:HA	41:YV:12:TYR:O	2.14	0.47
8:QH:86:ILE:HG22	8:QH:87:SER:N	2.30	0.47
8:XH:6:ILE:O	8:XH:10:LEU:HG	2.14	0.47
4:QD:30:LYS:CD	4:QD:30:LYS:H	2.24	0.47
33:RN:57:ALA:CA	33:RN:60:ILE:HD11	2.44	0.47
25:RA:1020:A:N6	25:RA:1141:U:O2'	2.47	0.47
25:YA:2839:G:H5''	37:YR:46:GLY:HA2	1.97	0.47
7:QG:70:LYS:O	7:QG:138:LYS:HE3	2.15	0.47
6:XF:9:VAL:HB	6:XF:87:ARG:HB2	1.97	0.47
37:RR:56:LYS:C	37:RR:58:GLY:H	2.18	0.47
25:YA:1340:U:OP2	43:YX:78:LYS:NZ	2.48	0.47
10:QJ:74:ILE:HG12	10:QJ:74:ILE:O	2.14	0.47
4:XD:114:ARG:CG	4:XD:114:ARG:NH1	2.77	0.47
11:XK:32:ILE:HD12	11:XK:72:ALA:CB	2.36	0.47
27:YD:205:VAL:O	27:YD:206:LEU:C	2.52	0.47
14:XN:8:GLU:C	14:XN:10:ALA:N	2.68	0.47
3:XC:52:LEU:H	3:XC:52:LEU:CD2	2.20	0.47
1:XA:1346:A:C5	7:XG:10:ARG:NH1	2.83	0.47
40:YU:66:ASN:CB	40:YU:76:TYR:HB2	2.44	0.47
29:YF:127:GLU:OE1	29:YF:127:GLU:HA	2.07	0.47
1:QA:1224:G:H1	1:QA:1322:C:HO2'	1.63	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
2:XB:71:VAL:HG23	2:XB:164:VAL:HG13	1.97	0.47
43:RX:26:TYR:HB3	43:RX:92:LEU:HD12	1.97	0.47
18:XR:31:LEU:H	18:XR:31:LEU:CD2	2.28	0.47
27:RD:165:ILE:C	27:RD:166:GLN:HE21	2.18	0.47
25:RA:806:C:OP2	35:RP:41:ARG:NE	2.47	0.47
4:QD:135:LEU:C	4:QD:137:SER:H	2.18	0.47
33:YN:73:THR:HA	33:YN:83:LYS:O	2.15	0.47
17:XQ:63:ARG:HG2	17:XQ:64:PRO:CD	2.45	0.47
4:QD:110:PHE:H	4:QD:110:PHE:HD1	1.63	0.47
25:RA:1264:G:H5'	51:R5:11:THR:CG2	2.45	0.47
25:YA:27:G:HO2'	25:YA:28:A:H8	1.59	0.47
25:RA:67:U:H3	25:RA:74:A:H2	1.58	0.47
17:XQ:98:LEU:O	17:XQ:99:SER:C	2.53	0.47
25:RA:78:A:H2'	25:RA:79:G:H8	1.79	0.47
1:QA:1412:C:H2'	1:QA:1413:A:C8	2.50	0.47
1:XA:1182:G:H4'	1:XA:1183:A:H5''	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YI:113:ARG:HB3	32:YI:131:LYS:HD3	1.97	0.47
2:XB:86:GLU:C	2:XB:88:ALA:H	2.17	0.47
25:RA:964:C:O2'	25:RA:2273:A:N3	2.43	0.47
1:QA:173:U:H5''	1:QA:197:A:O4'	2.14	0.47
25:RA:2468:G:H5''	36:RQ:120:ILE:HD12	1.97	0.47
25:RA:717:G:H2'	25:RA:718:A:O4'	2.15	0.47
47:Y1:83:GLU:OE1	47:Y1:85:LEU:HB2	2.15	0.47
4:QD:9:CYS:SG	4:QD:22:LYS:HE3	2.55	0.47
50:Y4:55:ARG:C	50:Y4:59:PHE:HB3	2.35	0.47
25:YA:2636:U:OP2	28:YE:79:ARG:NH1	2.47	0.47
27:YD:136:ILE:HD12	27:YD:136:ILE:N	2.30	0.47
28:RE:63:LEU:O	28:RE:64:LYS:CB	2.62	0.47
34:RO:53:LYS:CD	34:RO:56:ASP:OD1	2.63	0.47
25:YA:2420:C:H41	54:Y8:30:ARG:HD2	1.79	0.47
51:Y5:57:VAL:O	51:Y5:57:VAL:HG13	2.14	0.47
30:YG:36:LYS:HA	30:YG:95:ARG:HG2	1.95	0.47
48:R2:17:SER:CB	48:R2:18:PRO:CA	2.92	0.47
44:YY:44:ILE:O	44:YY:62:GLU:O	2.32	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	2.48	0.47
38:RS:61:ASN:O	38:RS:65:VAL:HG23	2.15	0.47
27:YD:145:VAL:O	27:YD:153:ALA:HA	2.14	0.47
5:XE:77:PRO:HG2	5:XE:142:LEU:HD22	1.97	0.47
21:QU:15:ARG:HG2	21:QU:15:ARG:NH1	2.29	0.47
21:QU:14:TRP:CE3	21:QU:15:ARG:NH1	2.83	0.47
27:RD:205:VAL:O	27:RD:206:LEU:C	2.52	0.47
1:XA:701:C:O2'	1:XA:702:A:OP2	2.26	0.47
31:RH:41:MET:HG3	31:RH:54:ARG:HA	1.96	0.47
25:RA:2467:C:H4'	36:RQ:123:HIS:ND1	2.30	0.47
42:YW:4:LYS:HA	42:YW:106:ILE:HA	1.97	0.47
15:QO:76:GLU:O	15:QO:78:TYR:N	2.48	0.47
25:RA:265:A:O2'	25:RA:266:G:H4'	2.13	0.47
4:QD:146:ILE:HG22	4:QD:146:ILE:O	2.15	0.47
29:RF:65:TRP:CH2	29:RF:72:ARG:HB3	2.50	0.47
6:XF:40:VAL:HG22	6:XF:41:GLU:H	1.80	0.47
25:RA:2356:C:O3'	46:R0:20:ARG:HD3	2.15	0.47
27:YD:231:HIS:ND1	27:YD:232:PRO:HD2	2.30	0.47
1:XA:1072:G:H2'	1:XA:1073:U:C6	2.50	0.47
40:YU:27:LEU:O	40:YU:30:LYS:N	2.41	0.47
25:RA:184:C:H2'	25:RA:185:U:H6	1.79	0.47
9:XI:128:ARG:HH21	22:XV:35:A:P	2.38	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:YU:107:ALA:O	40:YU:110:VAL:HB	2.14	0.47
28:YE:120:TRP:O	28:YE:121:ASN:HB2	2.14	0.47
1:QA:1296:C:HO2'	1:QA:1302:U:H5	1.63	0.47
1:QA:1513:A:H2'	1:QA:1514:C:C6	2.50	0.47
30:YG:106:LEU:HA	30:YG:110:ALA:HB3	1.95	0.47
34:YO:37:ASP:O	34:YO:62:VAL:HG23	2.14	0.47
1:XA:1292:U:OP1	7:XG:41:ARG:NH2	2.48	0.47
20:XT:93:GLU:HG2	20:XT:93:GLU:O	2.15	0.47
32:YI:8:PRO:HG3	32:YI:14:ASP:HB2	1.97	0.47
4:QD:7:PRO:O	4:QD:10:ARG:HG2	2.15	0.47
50:R4:53:GLU:O	50:R4:57:GLU:HG3	2.14	0.47
31:YH:86:GLU:O	31:YH:132:ARG:HA	2.15	0.47
11:QK:104:GLN:O	11:QK:106:LYS:HG3	2.15	0.47
35:RP:98:GLU:HG2	35:RP:99:LEU:N	2.30	0.47
15:QO:82:ILE:O	15:QO:86:GLY:N	2.48	0.47
54:Y8:9:GLY:O	54:Y8:13:ARG:HG2	2.15	0.47
33:RN:134:ARG:N	33:RN:135:PRO:CD	2.58	0.47
13:QM:8:GLU:C	13:QM:9:ILE:HG23	2.34	0.47
51:R5:20:ARG:C	51:R5:22:HIS:N	2.68	0.47
2:QB:172:ILE:O	2:QB:175:ARG:CB	2.63	0.47
25:RA:2250:G:C4	36:RQ:82:ARG:HG3	2.50	0.47
34:YO:53:LYS:CD	34:YO:56:ASP:OD1	2.63	0.47
36:RQ:34:LEU:HD11	36:RQ:129:THR:CB	2.35	0.47
28:YE:101:ARG:HD2	28:YE:171:GLU:HA	1.97	0.47
28:YE:103:ASP:OD2	28:YE:168:MET:HG2	2.15	0.47
30:RG:16:ARG:NH2	30:RG:28:VAL:O	2.48	0.47
7:XG:140:ASP:HA	7:XG:143:ARG:HH11	1.79	0.47
52:R6:48:VAL:O	52:R6:49:HIS:HB2	2.15	0.47
52:Y6:20:ASN:O	52:Y6:21:TYR:HB2	2.15	0.47
1:QA:1306:A:N6	1:QA:1331:G:H1'	2.30	0.47
33:YN:35:ARG:O	33:YN:35:ARG:HG3	2.15	0.47
1:XA:1161:C:H2'	1:XA:1162:C:C6	2.50	0.47
1:QA:1321:C:H3'	1:QA:1322:C:H5''	1.96	0.47
1:XA:713:G:H2'	1:XA:714:G:C8	2.50	0.47
15:XO:76:GLU:C	15:XO:78:TYR:N	2.69	0.47
6:XF:69:GLU:O	6:XF:71:ARG:N	2.48	0.47
3:QC:195:VAL:CG1	3:QC:196:LEU:H	2.27	0.47
6:QF:41:GLU:HG2	6:QF:43:LEU:CD1	2.44	0.47
27:RD:18:VAL:CG1	27:RD:19:ALA:N	2.78	0.47
27:RD:231:HIS:ND1	27:RD:232:PRO:HD2	2.30	0.47
25:YA:2469:A:H2	25:YA:2481:G:N2	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1506:C:H3'	25:YA:1507:A:H5''	1.96	0.47
29:YF:162:LEU:HD23	29:YF:165:ARG:HH21	1.79	0.47
4:XD:135:LEU:C	4:XD:137:SER:H	2.18	0.47
4:XD:135:LEU:O	4:XD:137:SER:N	2.47	0.47
44:RY:68:HIS:O	44:RY:71:LYS:HB2	2.15	0.47
37:YR:61:HIS:O	37:YR:65:LEU:HD13	2.14	0.47
5:XE:96:PRO:HA	5:XE:117:ASP:CG	2.35	0.47
30:YG:52:ILE:HG22	30:YG:52:ILE:O	2.15	0.47
17:QQ:63:ARG:HG2	17:QQ:64:PRO:CD	2.45	0.47
1:XA:676:A:H1'	11:XK:115:PRO:HB3	1.96	0.47
38:RS:66:ALA:HA	38:RS:69:VAL:HG12	1.96	0.47
25:RA:1005:C:O2'	33:RN:28:THR:HG21	2.15	0.47
22:QV:53:G:H4'	22:QV:54:U:OP1	2.14	0.47
2:QB:86:GLU:C	2:QB:88:ALA:H	2.17	0.47
9:QI:106:ALA:O	9:QI:108:VAL:HG13	2.15	0.47
25:RA:29:U:H2'	25:RA:30:G:C8	2.50	0.47
18:XR:46:GLU:HG3	18:XR:47:THR:N	2.29	0.47
32:RI:14:ASP:O	32:RI:16:GLY:N	2.48	0.47
53:R7:25:PRO:HA	53:R7:28:ARG:CZ	2.45	0.47
1:QA:606:G:H22	1:QA:631:G:H5'	1.80	0.47
31:YH:18:GLU:HA	31:YH:18:GLU:OE2	2.15	0.47
55:R9:19:ARG:NH2	55:R9:26:ILE:HD11	2.29	0.47
51:Y5:45:VAL:HG12	51:Y5:45:VAL:O	2.13	0.47
25:YA:1268:A:H2'	25:YA:1269:A:O4'	2.15	0.47
25:RA:1930:G:HO2'	25:RA:1931:U:P	2.37	0.47
31:YH:104:GLU:HG3	31:YH:114:VAL:HG22	1.96	0.47
31:YH:89:ILE:HD13	31:YH:89:ILE:H	1.80	0.46
28:YE:61:ARG:O	28:YE:63:LEU:CG	2.57	0.46
13:XM:11:ARG:HH21	30:YG:146:TYR:HD2	1.61	0.46
33:YN:46:VAL:HG13	33:YN:47:ALA:N	2.31	0.46
41:YV:6:LYS:HD3	41:YV:11:GLN:HG2	1.96	0.46
36:YQ:34:LEU:HD11	36:YQ:129:THR:CB	2.35	0.46
52:Y6:8:LYS:O	52:Y6:27:LYS:HG2	2.15	0.46
2:QB:174:VAL:O	2:QB:178:ARG:HB3	2.16	0.46
3:QC:58:GLU:O	3:QC:59:ARG:HG3	2.15	0.46
4:QD:30:LYS:CD	4:QD:30:LYS:N	2.73	0.46
37:YR:56:LYS:C	37:YR:58:GLY:H	2.18	0.46
20:QT:53:LEU:HD12	20:QT:100:ILE:HG23	1.97	0.46
20:QT:99:LEU:O	20:QT:100:ILE:HB	2.15	0.46
20:XT:99:LEU:O	20:XT:100:ILE:HB	2.14	0.46
17:QQ:29:HIS:N	17:QQ:33:GLY:O	2.47	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RH:4:ILE:H	31:RH:4:ILE:CD1	2.25	0.46
31:YH:9:ILE:O	31:YH:10:PRO:O	2.33	0.46
19:QS:24:ALA:O	19:QS:25:LYS:CB	2.63	0.46
17:QQ:59:ILE:N	17:QQ:59:ILE:CD1	2.78	0.46
39:RT:57:PHE:O	39:RT:58:ASN:C	2.53	0.46
38:RS:52:SER:O	38:RS:56:LEU:CD2	2.60	0.46
25:YA:2729:G:C1'	28:YE:187:ALA:HB2	2.38	0.46
10:QJ:80:LYS:NZ	10:QJ:80:LYS:HB2	2.30	0.46
30:YG:104:GLU:OE1	50:Y4:23:GLU:HB3	2.15	0.46
9:XI:112:LYS:C	9:XI:112:LYS:HD3	2.35	0.46
4:XD:146:ILE:CD1	4:XD:146:ILE:N	2.73	0.46
54:R8:29:LYS:HE3	54:R8:41:ILE:O	2.15	0.46
1:QA:1001:G:H2'	1:QA:1002:G:O4'	2.15	0.46
50:Y4:15:ILE:HG22	50:Y4:20:ASN:CA	2.45	0.46
25:RA:458:G:O2'	53:R7:39:ARG:HD3	2.14	0.46
25:RA:1188:U:O2'	25:RA:1189:A:H5'	2.15	0.46
25:RA:1677:A:H2'	25:RA:1678:G:O4'	2.15	0.46
1:XA:1297:C:HO2'	1:XA:1298:C:P	2.39	0.46
1:XA:939:G:H5''	7:XG:102:ARG:NH1	2.30	0.46
25:RA:389:G:H22	35:RP:72:PRO:CG	2.28	0.46
30:YG:135:LEU:HD11	30:YG:157:ILE:HD12	1.98	0.46
4:XD:126:ILE:HG22	4:XD:127:THR:H	1.80	0.46
25:YA:415:A:H2'	25:YA:416:C:H6	1.79	0.46
25:RA:780:G:H21	25:RA:783:A:H62	1.62	0.46
1:XA:136:C:H42	1:XA:227:G:H1	1.63	0.46
45:YZ:128:VAL:HB	45:YZ:161:VAL:HG13	1.96	0.46
25:YA:1217:C:OP1	40:YU:15:LYS:NZ	2.39	0.46
25:YA:2432:A:C8	47:Y1:33:LYS:HE2	2.50	0.46
3:XC:124:ILE:C	3:XC:126:ARG:H	2.19	0.46
31:RH:18:GLU:HA	31:RH:18:GLU:OE2	2.15	0.46
51:R5:43:HIS:N	51:R5:43:HIS:ND1	2.63	0.46
38:YS:24:LEU:HB2	38:YS:85:VAL:HG12	1.97	0.46
25:RA:2052:G:H4'	28:RE:143:ASN:O	2.14	0.46
53:R7:2:LYS:HG2	53:R7:3:ARG:N	2.31	0.46
35:YP:46:LYS:O	35:YP:48:PRO:N	2.48	0.46
25:YA:2653:U:O2'	31:YH:110:SER:HB2	2.14	0.46
1:QA:429:U:H3'	4:QD:9:CYS:HB2	1.97	0.46
13:QM:23:TYR:HB2	13:QM:67:GLU:OE1	2.15	0.46
19:QS:40:ILE:CG1	19:QS:41:VAL:N	2.78	0.46
19:XS:40:ILE:CG1	19:XS:41:VAL:N	2.78	0.46
10:QJ:47:PHE:CE1	10:QJ:63:PHE:HB2	2.32	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:XC:6:HIS:C	3:XC:8:ILE:H	2.18	0.46
28:YE:20:ALA:C	28:YE:21:VAL:HG13	2.35	0.46
30:RG:95:ARG:O	30:RG:96:ARG:C	2.54	0.46
33:RN:1:MET:HE3	40:RU:95:LEU:HD21	1.97	0.46
30:YG:13:GLU:O	30:YG:13:GLU:HG3	2.14	0.46
38:YS:28:VAL:HG11	38:YS:98:VAL:HG12	1.97	0.46
37:RR:56:LYS:HE2	37:RR:94:TYR:OH	2.15	0.46
27:RD:27:THR:O	27:RD:29:PRO:CD	2.62	0.46
31:RH:9:ILE:O	31:RH:10:PRO:O	2.33	0.46
20:QT:26:ASN:ND2	20:QT:26:ASN:N	2.62	0.46
33:RN:9:VAL:HG21	33:RN:48:MET:CB	2.45	0.46
28:RE:188:VAL:HG13	28:RE:188:VAL:O	2.15	0.46
28:YE:188:VAL:O	28:YE:188:VAL:HG13	2.15	0.46
25:RA:2295:C:OP1	38:RS:10:ARG:HD2	2.16	0.46
9:XI:17:VAL:HG11	9:XI:81:ILE:HA	1.96	0.46
48:R2:7:ARG:NH1	48:R2:7:ARG:HG3	2.25	0.46
3:QC:172:ARG:O	3:QC:173:VAL:HG23	2.15	0.46
42:RW:4:LYS:HA	42:RW:106:ILE:HA	1.97	0.46
37:YR:1:MET:O	37:YR:2:ARG:HB2	2.15	0.46
1:XA:486:U:H2'	1:XA:487:A:C8	2.49	0.46
1:XA:486:U:H2'	1:XA:487:A:H8	1.80	0.46
16:XP:13:HIS:C	16:XP:15:PRO:HD3	2.36	0.46
7:QG:50:ILE:CG2	7:QG:61:VAL:HG21	2.45	0.46
43:YX:26:TYR:HB3	43:YX:92:LEU:HD12	1.97	0.46
25:YA:860:U:C5	25:YA:917:A:C2	2.98	0.46
1:XA:926:G:C6	1:XA:1505:G:C6	3.04	0.46
25:YA:443:A:H3'	29:YF:45:ARG:HH12	1.79	0.46
36:YQ:87:LYS:O	36:YQ:89:ASN:N	2.43	0.46
1:QA:189:U:HO2'	1:QA:190:G:P	2.38	0.46
25:YA:458:G:O2'	25:YA:469:G:O6	2.20	0.46
8:XH:39:LEU:C	8:XH:45:ILE:HG12	2.35	0.46
18:XR:31:LEU:HD23	18:XR:31:LEU:N	2.29	0.46
35:YP:37:GLY:O	35:YP:41:ARG:HD3	2.15	0.46
25:YA:1888:G:H5'	25:YA:1889:A:OP1	2.16	0.46
1:XA:865:A:H2	1:XA:918:A:H4'	1.80	0.46
16:XP:30:GLY:O	16:XP:31:LYS:C	2.54	0.46
27:YD:198:ASN:ND2	27:YD:198:ASN:C	2.69	0.46
25:YA:1771:C:H1'	25:YA:1786:A:C8	2.50	0.46
41:RV:30:GLY:O	41:RV:31:ALA:O	2.34	0.46
28:RE:87:GLU:O	28:RE:89:ASP:N	2.49	0.46
11:QK:96:ARG:O	11:QK:97:ALA:C	2.54	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:224:G:O6	25:YA:419:C:O2'	2.33	0.46
25:RA:1425:G:H2'	25:RA:1426:G:C8	2.50	0.46
30:YG:20:ILE:HD13	30:YG:25:TYR:HB2	1.98	0.46
1:XA:1267:C:O2	21:XU:20:LYS:HD2	2.15	0.46
14:XN:36:PHE:C	14:XN:36:PHE:CD1	2.88	0.46
10:XJ:80:LYS:HB2	10:XJ:80:LYS:NZ	2.30	0.46
35:RP:23:PRO:HG2	35:RP:23:PRO:O	2.15	0.46
44:YY:68:HIS:O	44:YY:71:LYS:HB2	2.14	0.46
31:YH:94:TYR:N	31:YH:94:TYR:CD1	2.82	0.46
13:QM:65:LYS:NZ	13:QM:69:GLU:HG2	2.31	0.46
40:YU:8:VAL:O	40:YU:9:VAL:C	2.53	0.46
25:YA:2636:U:H2'	25:YA:2637:U:C6	2.51	0.46
11:QK:34:ASP:HB2	11:QK:35:PRO:CD	2.45	0.46
2:XB:15:VAL:HG23	2:XB:209:ARG:HE	1.80	0.46
2:XB:77:ALA:HB1	2:XB:211:ILE:HG21	1.97	0.46
3:XC:11:ARG:HG2	3:XC:11:ARG:HH11	1.79	0.46
3:XC:42:LEU:HD12	3:XC:45:LYS:HZ3	1.80	0.46
13:QM:80:ARG:O	13:QM:82:MET:O	2.34	0.46
2:XB:174:VAL:O	2:XB:178:ARG:HB3	2.16	0.46
30:YG:116:ASP:O	30:YG:117:PHE:CB	2.51	0.46
11:XK:80:VAL:O	11:XK:106:LYS:HD3	2.16	0.46
37:RR:78:LYS:HG2	37:RR:78:LYS:O	2.15	0.46
40:YU:98:LEU:HD23	40:YU:98:LEU:C	2.36	0.46
2:QB:224:GLN:HA	2:QB:229:VAL:HG23	1.97	0.46
29:YF:46:ARG:NH1	29:YF:46:ARG:CG	2.71	0.46
38:RS:26:LEU:HD22	38:RS:87:PHE:CD1	2.46	0.46
8:XH:86:ILE:CG1	8:XH:133:LEU:HD22	2.46	0.46
39:YT:111:ARG:C	39:YT:113:LYS:N	2.64	0.46
16:XP:60:LEU:CA	16:XP:64:ALA:HB3	2.43	0.46
37:RR:29:LEU:CD1	37:RR:29:LEU:N	2.78	0.46
20:QT:49:ALA:HB2	20:QT:99:LEU:HD22	1.97	0.46
27:RD:183:ARG:NH1	27:RD:183:ARG:CG	2.69	0.46
30:RG:98:ARG:CA	30:RG:101:ILE:HG12	2.40	0.46
29:YF:108:LYS:HA	29:YF:108:LYS:HZ3	1.79	0.46
34:RO:112:MET:O	34:RO:115:VAL:CG2	2.64	0.46
34:RO:104:ARG:HD3	39:RT:36:GLU:OE2	2.15	0.46
41:YV:5:VAL:HG13	41:YV:14:VAL:HG21	1.98	0.46
1:XA:779:C:H4'	11:XK:121:PRO:O	2.15	0.46
3:XC:73:PRO:O	3:XC:77:ILE:HG13	2.16	0.46
3:XC:134:ILE:HG23	3:XC:151:VAL:HB	1.98	0.46
34:YO:104:ARG:HG2	34:YO:121:VAL:HG12	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R1:76:ARG:HD2	47:R1:76:ARG:N	2.29	0.46
54:Y8:29:LYS:HE3	54:Y8:41:ILE:O	2.15	0.46
54:Y8:40:GLU:C	54:Y8:42:ARG:N	2.68	0.46
12:XL:127:GLU:O	12:XL:128:ALA:CB	2.62	0.46
47:Y1:76:ARG:CD	47:Y1:76:ARG:H	2.29	0.46
43:RX:12:VAL:HG13	43:RX:12:VAL:O	2.15	0.46
43:YX:12:VAL:O	43:YX:12:VAL:HG13	2.15	0.46
47:R1:49:VAL:HG12	47:R1:51:VAL:CG2	2.45	0.46
34:YO:61:VAL:O	34:YO:84:ALA:HB1	2.16	0.46
12:QL:115:LYS:O	12:QL:117:ARG:N	2.47	0.46
44:RY:15:VAL:O	44:RY:21:LYS:HA	2.15	0.46
32:YI:31:LEU:HD21	32:YI:38:LEU:HG	1.97	0.46
41:YV:2:PHE:CD1	41:YV:2:PHE:C	2.88	0.46
11:QK:102:GLY:O	11:QK:103:LEU:C	2.53	0.46
3:XC:172:ARG:O	3:XC:173:VAL:CG2	2.63	0.46
42:YW:36:LEU:CD1	42:YW:47:VAL:HG12	2.44	0.46
9:XI:9:ARG:HA	9:XI:76:ALA:HB1	1.96	0.46
8:XH:80:ILE:HG23	8:XH:137:VAL:HG12	1.97	0.46
5:QE:96:PRO:HA	5:QE:117:ASP:CG	2.35	0.46
4:XD:110:PHE:H	4:XD:110:PHE:HD1	1.62	0.46
39:RT:29:ARG:NH1	39:RT:46:GLU:OE1	2.48	0.46
25:YA:814:C:H41	35:YP:25:SER:HA	1.81	0.46
7:QG:92:SER:HB3	7:QG:95:ARG:CB	2.45	0.46
25:RA:2572:A:N3	28:RE:144:ARG:NH2	2.62	0.46
36:YQ:109:VAL:HG13	36:YQ:113:GLN:OE1	2.16	0.46
16:QP:25:ARG:HG3	16:QP:25:ARG:HH11	1.79	0.46
25:RA:1657:C:H2'	25:RA:1658:C:H6	1.81	0.46
25:RA:1179:C:H2'	25:RA:1180:C:O4'	2.15	0.46
25:YA:2283:C:OP1	52:Y6:5:VAL:HG13	2.15	0.46
25:YA:755:C:H2'	25:YA:756:C:C6	2.51	0.46
28:RE:33:VAL:HG12	28:RE:90:THR:H	1.81	0.46
10:QJ:44:VAL:HG12	10:QJ:45:ARG:N	2.30	0.46
25:YA:479:A:N3	25:YA:481:G:H5''	2.31	0.46
25:RA:1025:G:C4	25:RA:1135:C:H1'	2.51	0.46
25:YA:2695:C:H2'	25:YA:2696:U:C6	2.51	0.46
25:YA:1059:G:H3'	25:YA:1060:U:H5''	1.96	0.46
25:YA:192:C:O2'	25:YA:802:A:N3	2.41	0.46
1:QA:546:G:P	4:QD:72:GLU:HB3	2.55	0.46
18:QR:46:GLU:HG3	18:QR:47:THR:N	2.29	0.46
1:XA:1356:G:H2'	1:XA:1357:A:C8	2.50	0.46
3:XC:23:TYR:CG	3:XC:24:ALA:N	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RH:127:GLU:OE2	31:RH:130:ARG:NH2	2.47	0.46
47:R1:79:GLY:N	47:R1:80:LEU:HD23	2.30	0.46
10:XJ:38:ILE:CD1	10:XJ:71:LEU:HB3	2.46	0.46
3:XC:113:ALA:O	3:XC:115:LEU:N	2.48	0.46
27:RD:35:LYS:HD3	27:RD:63:ARG:HB3	1.96	0.46
31:RH:153:LYS:HG3	31:RH:162:ILE:H	1.79	0.46
35:YP:144:GLU:N	35:YP:144:GLU:OE1	2.48	0.46
5:QE:12:LEU:HD21	5:QE:14:ARG:HB3	1.98	0.46
37:RR:75:LEU:HA	37:RR:78:LYS:HB3	1.97	0.46
40:YU:73:GLY:O	40:YU:74:LEU:CB	2.63	0.46
2:QB:17:PHE:CD2	2:QB:44:LEU:HD21	2.47	0.46
38:RS:28:VAL:HG11	38:RS:98:VAL:HG12	1.98	0.46
37:YR:78:LYS:HG2	37:YR:78:LYS:O	2.15	0.46
36:RQ:133:ARG:CG	36:RQ:134:ARG:N	2.78	0.46
8:QH:28:ALA:CB	8:QH:57:PRO:HB2	2.45	0.46
29:YF:184:TYR:CD2	29:YF:188:ARG:HD2	2.50	0.46
52:Y6:15:GLU:HB3	52:Y6:16:CYS:H	1.46	0.46
37:YR:79:LEU:HD23	37:YR:79:LEU:O	2.16	0.46
30:YG:36:LYS:O	30:YG:37:VAL:HG23	2.15	0.46
39:YT:6:LEU:O	39:YT:10:VAL:HG23	2.16	0.46
34:YO:7:TYR:CD1	34:YO:20:MET:HB2	2.50	0.46
12:QL:10:LEU:CD1	17:QQ:32:TYR:CE2	2.91	0.46
31:YH:4:ILE:HG13	31:YH:6:ARG:HD3	1.97	0.46
20:XT:28:ALA:C	20:XT:30:LYS:N	2.67	0.46
30:YG:102:PHE:HA	30:YG:105:LYS:HE3	1.98	0.46
4:QD:166:LYS:HD3	27:YD:134:ARG:HH11	1.80	0.46
44:RY:35:TYR:O	44:RY:35:TYR:CD1	2.69	0.46
18:XR:43:PHE:C	18:XR:44:LEU:HD12	2.36	0.46
49:R3:56:VAL:CG1	49:R3:57:GLU:N	2.74	0.46
10:QJ:95:GLU:HA	10:QJ:95:GLU:OE2	2.16	0.46
17:XQ:92:ARG:NH1	17:XQ:92:ARG:HG3	2.30	0.46
1:QA:377:G:P	16:QP:5:ARG:HH11	2.37	0.46
1:QA:1372:U:OP1	9:QI:71:SER:HB3	2.14	0.46
15:XO:77:ARG:HA	15:XO:80:ALA:HB3	1.96	0.46
27:YD:117:VAL:CG2	27:YD:128:GLY:C	2.84	0.46
1:QA:502:G:C2	1:QA:503:C:C2	3.03	0.46
29:RF:31:HIS:O	29:RF:34:TRP:HB3	2.15	0.46
25:YA:443:A:H5"	25:YA:444:C:OP1	2.15	0.46
29:RF:132:VAL:O	29:RF:133:ASN:C	2.52	0.46
3:QC:108:ASN:HB3	3:QC:111:LEU:HG	1.98	0.46
8:QH:39:LEU:C	8:QH:45:ILE:HG12	2.35	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1582:C:O2'	25:RA:1586:A:H8	1.97	0.46
25:RA:2646:C:H2'	25:RA:2647:U:O4'	2.15	0.46
27:YD:165:ILE:C	27:YD:166:GLN:HE21	2.18	0.46
1:XA:233:C:H2'	1:XA:234:C:H6	1.80	0.46
7:XG:108:ALA:C	7:XG:110:GLN:H	2.19	0.46
25:RA:384:U:H2'	25:RA:385:C:C6	2.48	0.46
1:QA:921:U:O2	5:QE:19:MET:HB2	2.16	0.46
15:XO:50:HIS:O	15:XO:53:HIS:N	2.46	0.46
55:Y9:19:ARG:NH2	55:Y9:26:ILE:HD11	2.31	0.46
7:QG:89:MET:HE1	7:QG:156:TRP:H	1.80	0.46
1:XA:1034:G:H2'	1:XA:1035:A:H8	1.79	0.46
1:QA:1190:G:OP1	3:QC:5:ILE:HD12	2.16	0.46
25:YA:459:U:H2'	25:YA:460:A:H8	1.81	0.46
12:QL:43:VAL:HG23	12:QL:93:LEU:HD22	1.97	0.46
1:XA:679:C:H2'	1:XA:680:C:C6	2.51	0.46
32:YI:76:THR:OG1	32:YI:139:GLN:OE1	2.32	0.46
25:RA:2532:G:H1'	25:RA:2663:G:N2	2.30	0.46
48:Y2:4:SER:OG	48:Y2:5:GLU:OE2	2.26	0.46
17:XQ:100:LYS:O	17:XQ:101:ARG:HB2	2.15	0.46
25:RA:195:A:H61	25:RA:198:C:H3'	1.80	0.46
25:YA:275:G:H21	25:YA:276:A:H62	1.62	0.46
1:XA:560:U:O2'	1:XA:561:U:OP2	2.25	0.46
14:QN:41:ARG:HH11	14:QN:41:ARG:HG2	1.79	0.46
25:RA:270(S):G:O2'	25:RA:270(T):G:H5'	2.15	0.46
28:YE:3:GLY:HA3	28:YE:81:ILE:HG21	1.97	0.46
31:YH:86:GLU:O	31:YH:87:LEU:CB	2.64	0.46
1:XA:1316:G:N2	1:XA:1318:A:H3'	2.30	0.46
28:YE:54:GLN:CA	28:YE:54:GLN:HE21	2.27	0.46
27:YD:102:LYS:O	27:YD:103:ARG:HG3	2.15	0.46
27:YD:61:LEU:HB3	27:YD:63:ARG:NH1	2.31	0.46
27:RD:69:ARG:C	27:RD:71:ASP:N	2.69	0.46
35:YP:144:GLU:HA	35:YP:145:PRO:HD3	1.76	0.46
28:RE:54:GLN:CA	28:RE:54:GLN:HE21	2.27	0.46
28:RE:20:ALA:C	28:RE:21:VAL:HG13	2.35	0.46
28:YE:63:LEU:O	28:YE:64:LYS:CB	2.62	0.46
25:RA:2313:C:H2'	25:RA:2314:C:H6	1.78	0.46
25:RA:1266:G:O4'	42:RW:15:ARG:NH2	2.47	0.46
33:YN:36:GLY:O	33:YN:42:TRP:HE3	1.98	0.46
54:R8:52:LYS:O	54:R8:52:LYS:CG	2.64	0.46
37:YR:75:LEU:HA	37:YR:78:LYS:HB3	1.97	0.46
25:RA:1140:C:P	33:RN:66:LYS:HZ3	2.39	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:R6:18:ARG:O	52:R6:19:ARG:O	2.33	0.46
51:Y5:54:GLY:O	51:Y5:55:ARG:C	2.53	0.46
25:RA:483:A:H4'	44:RY:49:VAL:CA	2.42	0.46
25:YA:483:A:C4'	44:YY:49:VAL:HA	2.36	0.46
38:YS:61:ASN:O	38:YS:65:VAL:HG23	2.15	0.46
35:YP:1:MET:O	35:YP:2:LYS:HG3	2.16	0.46
20:XT:96:GLY:O	20:XT:99:LEU:HD13	2.16	0.46
27:YD:183:ARG:CG	27:YD:183:ARG:NH1	2.69	0.46
25:YA:1021:A:C8	25:YA:1022:G:H5''	2.47	0.46
21:XU:14:TRP:CE3	21:XU:15:ARG:NH1	2.83	0.46
39:RT:36:GLU:O	39:RT:37:GLY:C	2.53	0.46
11:XK:34:ASP:HB2	11:XK:35:PRO:CD	2.45	0.46
25:RA:2277:G:P	36:RQ:85:LYS:HB2	2.56	0.46
33:RN:46:VAL:HG13	33:RN:47:ALA:N	2.31	0.46
27:YD:211:ARG:HG2	27:YD:211:ARG:HH11	1.80	0.46
31:YH:53:GLU:HA	31:YH:53:GLU:OE1	2.16	0.46
28:RE:47:VAL:O	28:RE:48:GLN:C	2.52	0.46
33:YN:131:GLN:HE21	33:YN:132:ALA:H	1.58	0.46
38:YS:13:ARG:O	38:YS:14:VAL:HB	2.15	0.46
35:RP:45:LEU:CD1	35:RP:45:LEU:N	2.79	0.46
8:XH:122:ARG:O	8:XH:125:ARG:N	2.46	0.46
35:YP:12:ALA:C	35:YP:14:LYS:H	2.17	0.46
1:XA:1348:U:N3	1:XA:1374:A:H2	2.06	0.46
3:XC:58:GLU:O	3:XC:59:ARG:HG3	2.15	0.46
39:RT:96:ARG:CB	39:RT:96:ARG:HH11	2.29	0.46
9:QI:40:LEU:C	9:QI:42:ARG:H	2.18	0.46
12:QL:126:LYS:C	12:QL:128:ALA:N	2.69	0.46
39:YT:118:ARG:NH2	39:YT:121:ILE:HD12	2.31	0.46
37:RR:85:PRO:C	37:RR:87:TYR:H	2.19	0.46
39:YT:96:ARG:CB	39:YT:96:ARG:HH11	2.29	0.46
6:XF:41:GLU:HG2	6:XF:43:LEU:CD1	2.44	0.46
6:QF:3:ARG:HH11	6:QF:3:ARG:HG3	1.80	0.46
43:YX:65:ARG:N	43:YX:65:ARG:CD	2.79	0.46
27:YD:18:VAL:CG1	27:YD:19:ALA:N	2.78	0.46
33:RN:30:ILE:O	33:RN:34:LEU:CD2	2.63	0.46
34:RO:101:PRO:HA	34:RO:120:GLU:O	2.16	0.46
48:R2:15:LYS:H	48:R2:67:LYS:HZ3	1.63	0.46
1:XA:1414:U:H2'	1:XA:1415:G:C8	2.50	0.46
25:YA:1028:A:N6	25:YA:1125:G:H2'	2.30	0.46
25:RA:605:C:H1'	25:RA:657:U:O2'	2.15	0.46
1:XA:581:G:N2	1:XA:760:G:N7	2.62	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:89:ASP:O	28:RE:90:THR:O	2.33	0.46
25:RA:947:G:H2'	25:RA:948:G:C8	2.51	0.46
25:YA:2405:G:O2'	25:YA:2411:A:N6	2.49	0.46
49:Y3:28:LEU:HA	49:Y3:33:GLN:OE1	2.16	0.46
25:YA:220:G:O2'	25:YA:233:A:N3	2.39	0.46
51:Y5:36:CYS:C	51:Y5:38:ALA:H	2.19	0.46
43:RX:24:GLY:O	43:RX:82:GLN:HA	2.16	0.46
25:YA:273(F):C:H2'	25:YA:274:G:H5''	1.97	0.46
31:YH:106:THR:HG22	31:YH:112:PRO:HB3	1.97	0.46
1:XA:51:A:N7	1:XA:114:U:O2'	2.45	0.46
10:QJ:49:VAL:HG22	14:QN:41:ARG:CD	2.45	0.46
47:R1:83:GLU:OE1	47:R1:85:LEU:HB2	2.15	0.46
36:RQ:109:VAL:HG13	36:RQ:113:GLN:OE1	2.16	0.46
31:RH:86:GLU:O	31:RH:132:ARG:HA	2.15	0.46
27:YD:48:ARG:NH1	27:YD:48:ARG:HG3	2.31	0.46
31:YH:151:ILE:O	31:YH:152:ARG:O	2.34	0.46
3:QC:113:ALA:O	3:QC:115:LEU:N	2.48	0.46
27:YD:35:LYS:HE3	27:YD:65:ILE:N	2.31	0.46
35:RP:81:GLN:HB3	35:RP:110:TYR:HB3	1.97	0.46
28:RE:50:GLY:CA	28:RE:74:PRO:HG3	2.45	0.46
28:YE:21:VAL:HG23	28:YE:22:PRO:CD	2.46	0.46
5:QE:55:VAL:O	5:QE:58:ALA:HB3	2.16	0.46
50:R4:38:LYS:C	50:R4:40:HIS:H	2.07	0.46
2:QB:162:ILE:CD1	2:QB:184:VAL:HG13	2.44	0.46
36:YQ:66:ILE:H	36:YQ:104:PHE:HA	1.79	0.46
36:YQ:63:LYS:HE2	36:YQ:65:PHE:CZ	2.51	0.46
33:YN:97:ARG:HA	33:YN:100:GLU:HB3	1.97	0.46
36:RQ:66:ILE:O	36:RQ:104:PHE:N	2.49	0.46
28:RE:103:ASP:OD2	28:RE:168:MET:HG2	2.15	0.46
8:QH:86:ILE:HG13	8:QH:133:LEU:CD2	2.44	0.46
25:RA:1021:A:H3'	25:RA:1022:G:H5''	1.97	0.46
44:RY:56:PRO:O	44:RY:57:GLN:C	2.53	0.46
20:QT:44:ALA:O	20:QT:91:LEU:HB3	2.16	0.46
8:QH:49:GLU:O	8:QH:49:GLU:HG3	2.14	0.46
41:YV:16:PRO:HA	41:YV:96:ILE:O	2.14	0.46
39:RT:58:ASN:N	39:RT:58:ASN:HD22	2.10	0.46
1:XA:1221:G:P	19:XS:36:ARG:HD3	2.56	0.46
54:Y8:48:PHE:N	54:Y8:48:PHE:HD1	2.14	0.46
25:RA:1309:G:P	53:R7:9:ARG:HD3	2.55	0.46
38:RS:13:ARG:O	38:RS:14:VAL:HB	2.16	0.46
9:XI:28:VAL:O	9:XI:29:ASN:C	2.53	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:QI:28:VAL:O	9:QI:29:ASN:C	2.53	0.46
18:QR:43:PHE:C	18:QR:51:LEU:HD12	2.36	0.46
25:RA:1332:G:N2	25:RA:1610:A:C8	2.80	0.46
25:YA:1188:U:O2'	25:YA:1189:A:H5'	2.16	0.46
1:QA:1446:A:C5	39:RT:118:ARG:NH1	2.84	0.46
39:RT:118:ARG:NH2	39:RT:121:ILE:HD12	2.31	0.46
54:Y8:44:LYS:HD2	54:Y8:44:LYS:N	2.30	0.46
6:QF:68:PRO:HG3	6:QF:71:ARG:NH2	2.31	0.46
12:XL:126:LYS:HB2	12:XL:126:LYS:HZ3	1.80	0.46
41:YV:22:VAL:HG12	41:YV:23:GLU:H	1.76	0.46
50:R4:15:ILE:HG22	50:R4:20:ASN:CA	2.45	0.46
35:RP:6:LEU:HD22	35:RP:6:LEU:N	2.31	0.46
25:RA:2396:G:H4'	47:R1:30:VAL:HA	1.96	0.46
33:YN:30:ILE:O	33:YN:34:LEU:CD2	2.64	0.46
39:RT:51:ARG:CG	39:RT:98:LYS:HG3	2.44	0.46
43:RX:35:THR:HG23	43:RX:35:THR:O	2.16	0.46
34:YO:101:PRO:HA	34:YO:120:GLU:O	2.16	0.46
1:QA:1203:C:H2'	1:QA:1204:A:C8	2.51	0.46
49:R3:18:ASP:O	49:R3:21:ALA:N	2.49	0.46
7:QG:57:GLU:O	7:QG:59:LEU:N	2.49	0.46
41:YV:61:VAL:HA	41:YV:94:LEU:HD23	1.97	0.46
25:RA:13:A:N1	25:RA:525:U:H2'	2.31	0.46
7:QG:95:ARG:NE	7:QG:99:LEU:HD11	2.31	0.46
2:QB:92:TYR:C	2:QB:92:TYR:CD1	2.88	0.46
27:YD:148:GLU:HB2	27:YD:151:LYS:HD2	1.98	0.46
25:RA:2233:U:H2'	25:RA:2234:G:C8	2.51	0.46
25:RA:451:C:H4'	29:RF:52:LYS:NZ	2.31	0.46
25:YA:2159:G:H2'	25:YA:2160:G:C8	2.51	0.46
42:YW:48:ALA:O	42:YW:49:LYS:C	2.53	0.46
1:QA:971:G:N2	1:QA:1363:A:OP2	2.29	0.46
25:RA:1538:G:H2'	25:RA:1539:G:H8	1.81	0.46
6:XF:22:GLU:CD	6:XF:82:ARG:HH21	2.18	0.46
35:YP:23:PRO:O	35:YP:23:PRO:HG2	2.15	0.46
25:YA:527:C:OP2	25:YA:2779:U:H5	1.98	0.46
25:YA:2572:A:C8	28:YE:144:ARG:HB3	2.51	0.46
1:QA:1034:G:H2'	1:QA:1035:A:C8	2.51	0.46
27:YD:105:ILE:HG23	27:YD:106:ILE:O	2.15	0.46
27:RD:61:LEU:HB3	27:RD:63:ARG:NH1	2.31	0.46
13:QM:87:TYR:C	13:QM:89:GLY:H	2.19	0.46
5:QE:12:LEU:HB3	5:QE:31:LEU:HB2	1.98	0.46
13:QM:3:ARG:O	13:QM:4:ILE:HD13	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RG:111:LEU:HD22	30:RG:120:LEU:HD21	1.97	0.46
2:QB:170:GLU:CA	2:QB:172:ILE:HD12	2.46	0.46
2:XB:17:PHE:CD2	2:XB:44:LEU:HD21	2.47	0.46
41:RV:47:VAL:O	41:RV:48:GLY:O	2.34	0.46
10:XJ:32:ALA:HB3	10:XJ:76:ASN:CB	2.34	0.46
27:RD:27:THR:CG2	27:RD:28:GLU:N	2.66	0.46
20:QT:98:PRO:O	20:QT:100:ILE:N	2.42	0.46
27:YD:79:VAL:HG21	27:YD:111:LEU:HD21	1.98	0.46
34:YO:8:LEU:N	34:YO:8:LEU:CD2	2.76	0.46
35:YP:85:LEU:HD23	35:YP:88:LEU:HD22	1.97	0.46
35:RP:90:ARG:HB3	35:RP:91:PHE:H	1.60	0.46
30:RG:88:ILE:O	30:RG:88:ILE:CD1	2.54	0.46
20:QT:22:ARG:O	20:QT:26:ASN:ND2	2.49	0.46
2:QB:95:GLN:OE1	2:QB:95:GLN:HA	2.16	0.46
8:XH:49:GLU:O	8:XH:49:GLU:HG3	2.14	0.46
27:YD:206:LEU:HD23	27:YD:206:LEU:HA	1.49	0.46
28:YE:195:LEU:HD12	28:YE:196:VAL:N	2.29	0.46
28:YE:7:VAL:HG11	39:YT:1:MET:CE	2.45	0.46
33:YN:128:HIS:HB2	33:YN:129:PRO:CD	2.46	0.46
11:QK:41:THR:CG2	11:QK:42:TRP:N	2.79	0.46
28:YE:137:HIS:CB	28:YE:138:PRO:HD2	2.42	0.46
49:Y3:43:ILE:O	49:Y3:47:VAL:HG23	2.16	0.46
9:XI:40:LEU:C	9:XI:42:ARG:H	2.18	0.46
9:XI:42:ARG:O	9:XI:45:ALA:HB3	2.16	0.46
27:RD:117:VAL:CG2	27:RD:128:GLY:C	2.84	0.46
31:RH:59:ARG:CG	31:RH:59:ARG:NH1	2.79	0.46
51:Y5:20:ARG:C	51:Y5:22:HIS:N	2.68	0.46
44:YY:15:VAL:O	44:YY:21:LYS:HA	2.16	0.46
7:QG:54:THR:HG23	7:QG:54:THR:O	2.16	0.46
28:YE:129:HIS:O	28:YE:130:GLY:C	2.53	0.46
31:YH:88:LEU:HD22	31:YH:163:TYR:O	2.16	0.46
2:XB:24:TRP:CZ2	2:XB:26:PRO:HB3	2.51	0.46
4:QD:13:ARG:NH2	4:QD:36:ARG:NH2	2.64	0.46
36:RQ:23:GLY:O	36:RQ:24:GLY:C	2.54	0.46
9:QI:59:PHE:CZ	9:QI:88:TYR:CE1	3.01	0.46
8:QH:110:ALA:HB3	8:QH:121:ASP:HB3	1.98	0.46
49:R3:59:VAL:CG1	49:R3:60:GLU:H	2.28	0.46
25:YA:330:A:O2'	25:YA:331:A:H8	1.98	0.46
25:RA:612:G:O2'	25:RA:616:A:N1	2.45	0.46
25:YA:142:G:O3'	43:YX:35:THR:HG21	2.15	0.46
40:RU:27:LEU:HD12	40:RU:31:SER:HB3	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:XG:57:GLU:O	7:XG:59:LEU:N	2.49	0.46
30:RG:135:LEU:HD11	30:RG:157:ILE:HD12	1.97	0.46
1:QA:1112:C:H1'	3:QC:179:ARG:NH1	2.30	0.46
25:YA:286:C:H2'	25:YA:287:C:C6	2.50	0.46
35:YP:36:LYS:HG3	35:YP:36:LYS:HZ3	1.39	0.46
1:XA:1216:G:H5''	14:XN:5:ALA:CB	2.46	0.46
16:QP:30:GLY:O	16:QP:31:LYS:C	2.54	0.46
3:QC:124:ILE:C	3:QC:126:ARG:H	2.19	0.46
1:QA:892:A:O2'	1:QA:1415:G:H4'	2.16	0.46
25:RA:2788:C:O2'	25:RA:2809:A:N3	2.45	0.46
25:YA:1597:A:H5''	25:YA:1598:C:OP1	2.16	0.46
43:RX:8:ILE:CD1	43:RX:42:ALA:HB1	2.46	0.46
25:YA:2086:U:H2'	25:YA:2087:G:C8	2.51	0.46
45:RZ:54:HIS:CD2	45:RZ:101:PRO:HG3	2.50	0.46
1:QA:137:C:O4'	16:QP:63:GLY:HA2	2.16	0.46
1:QA:828:A:H2'	1:QA:829:G:O4'	2.15	0.46
5:QE:150:ARG:HG2	5:QE:150:ARG:O	2.16	0.46
4:QD:187:ARG:HG2	4:QD:187:ARG:HH11	1.81	0.46
25:RA:741:G:H2'	25:RA:742:G:H8	1.81	0.46
25:RA:108:U:H2'	25:RA:109:G:C8	2.51	0.46
4:XD:30:LYS:O	4:XD:32:ALA:N	2.49	0.46
50:R4:50:VAL:O	50:R4:50:VAL:HG13	2.15	0.46
3:QC:15:THR:HG22	3:QC:15:THR:O	2.15	0.46
3:QC:53:ALA:O	3:QC:54:ARG:HB2	2.16	0.46
3:QC:6:HIS:C	3:QC:8:ILE:H	2.18	0.46
10:QJ:63:PHE:CD1	14:QN:58:LYS:HA	2.35	0.46
2:XB:162:ILE:CD1	2:XB:184:VAL:HG13	2.44	0.46
2:XB:163:PHE:CE1	2:XB:215:LEU:HD22	2.50	0.46
3:XC:53:ALA:O	3:XC:54:ARG:HB2	2.16	0.46
27:RD:136:ILE:N	27:RD:136:ILE:HD12	2.30	0.46
5:QE:13:ILE:HG22	5:QE:13:ILE:O	2.14	0.46
30:RG:37:VAL:HG22	30:RG:159:VAL:CA	2.34	0.46
2:QB:163:PHE:CE1	2:QB:215:LEU:HD22	2.50	0.46
40:YU:69:CYS:O	40:YU:74:LEU:HD12	2.16	0.46
38:YS:74:ALA:O	38:YS:75:GLU:C	2.54	0.46
30:YG:14:GLU:O	30:YG:17:PRO:HD2	2.16	0.46
7:XG:140:ASP:C	7:XG:142:GLU:N	2.69	0.46
30:YG:95:ARG:O	30:YG:96:ARG:C	2.54	0.46
35:RP:1:MET:O	35:RP:2:LYS:HG3	2.16	0.46
20:QT:56:MET:HG3	20:QT:88:VAL:HG21	1.98	0.46
1:QA:564:C:H5'	17:QQ:32:TYR:CE2	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1129:C:O2'	1:XA:1131:G:N7	2.45	0.46
28:RE:7:VAL:HG11	39:RT:1:MET:CE	2.45	0.46
38:RS:56:LEU:O	38:RS:57:LYS:C	2.53	0.46
3:XC:78:GLY:HA3	3:XC:83:ARG:HB3	1.98	0.46
1:XA:1148:U:OP1	9:XI:7:THR:HG21	2.16	0.46
9:XI:83:ARG:C	9:XI:86:VAL:HG12	2.36	0.46
30:RG:104:GLU:OE1	50:R4:23:GLU:HB3	2.15	0.46
28:YE:111:ARG:NE	28:YE:160:TYR:CE1	2.76	0.46
9:QI:5:TYR:OH	9:QI:7:THR:HG23	2.15	0.46
1:XA:1306:A:N6	1:XA:1331:G:O2'	2.49	0.46
15:QO:76:GLU:C	15:QO:78:TYR:N	2.68	0.46
1:QA:1187:G:H21	14:QN:60:SER:HB3	1.80	0.46
25:YA:2468:G:H5''	36:YQ:120:ILE:HD12	1.97	0.46
7:XG:8:GLU:N	7:XG:8:GLU:CD	2.67	0.46
17:XQ:76:LEU:HD11	17:XQ:79:SER:H	1.80	0.46
28:RE:172:VAL:HG13	28:RE:182:LEU:HD11	1.98	0.46
36:YQ:87:LYS:HG2	36:YQ:87:LYS:O	2.15	0.46
3:QC:127:ARG:NH1	3:QC:127:ARG:CG	2.74	0.46
42:YW:28:SER:C	42:YW:30:GLU:N	2.69	0.46
43:RX:43:VAL:HG11	43:RX:51:VAL:HG21	1.97	0.46
1:QA:1511:G:H2'	1:QA:1512:U:O4'	2.16	0.46
43:YX:35:THR:O	43:YX:35:THR:HG23	2.16	0.46
36:YQ:136:ALA:HB1	45:YZ:52:SER:HB2	1.98	0.46
33:RN:73:THR:HA	33:RN:83:LYS:O	2.15	0.46
1:XA:437:U:H2'	1:XA:438:G:O4'	2.14	0.46
25:YA:1930:G:HO2'	25:YA:1931:U:P	2.39	0.46
6:QF:101:ALA:HA	18:QR:28:GLU:CG	2.46	0.46
44:YY:11:ASP:HB2	44:YY:27:VAL:CG1	2.46	0.46
28:YE:87:GLU:O	28:YE:89:ASP:N	2.48	0.46
25:RA:198:C:O2'	25:RA:199:A:H5'	2.16	0.46
45:RZ:74:VAL:HG13	45:RZ:86:VAL:HG22	1.98	0.46
1:XA:75:C:H2'	1:XA:76:G:O4'	2.16	0.46
38:RS:24:LEU:HB2	38:RS:85:VAL:HG12	1.98	0.46
9:QI:11:LYS:O	9:QI:12:GLU:HB2	2.16	0.46
1:XA:546:G:P	4:XD:72:GLU:HB3	2.56	0.46
1:XA:667:G:H4'	15:XO:51:HIS:CE1	2.51	0.46
51:R5:41:PRO:HA	51:R5:42:PRO:HD3	1.82	0.46
31:RH:37:VAL:HG11	31:RH:68:THR:HG23	1.98	0.46
25:YA:2271:G:OP1	46:Y0:18:ALA:HB1	2.15	0.46
10:XJ:21:GLN:O	10:XJ:21:GLN:HG2	2.16	0.46
32:RI:101:LEU:HD13	32:RI:109:ILE:HD13	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1003:G:O2'	25:RA:1010:A:N1	2.37	0.46
47:R1:80:LEU:C	47:R1:81:LYS:CE	2.77	0.46
47:R1:60:PHE:CE2	47:R1:91:LYS:NZ	2.84	0.46
47:Y1:80:LEU:CB	47:Y1:81:LYS:HE2	2.43	0.46
13:XM:23:TYR:HB3	13:XM:67:GLU:HA	1.98	0.46
15:XO:82:ILE:HD11	15:XO:88:ARG:HG2	1.95	0.46
11:QK:80:VAL:O	11:QK:106:LYS:HD3	2.15	0.46
27:YD:36:PRO:HB3	27:YD:62:TYR:O	2.16	0.46
27:RD:35:LYS:HE3	27:RD:65:ILE:N	2.30	0.46
28:RE:61:ARG:O	28:RE:63:LEU:CG	2.57	0.46
25:YA:587:C:H4'	25:YA:588:U:O5'	2.16	0.46
40:RU:106:PHE:O	40:RU:109:LEU:HB2	2.15	0.46
2:QB:77:ALA:HB1	2:QB:211:ILE:HG21	1.97	0.46
33:YN:36:GLY:O	33:YN:42:TRP:CE3	2.69	0.46
5:XE:12:LEU:HB3	5:XE:31:LEU:HB2	1.97	0.46
38:RS:89:ARG:O	38:RS:90:GLY:C	2.54	0.46
36:RQ:26:TYR:O	36:RQ:27:VAL:O	2.34	0.46
36:RQ:63:LYS:HE2	36:RQ:65:PHE:CZ	2.50	0.46
52:Y6:11:LEU:HD11	52:Y6:51:GLU:HG3	1.98	0.46
30:RG:14:GLU:O	30:RG:17:PRO:HD2	2.16	0.46
30:RG:14:GLU:O	30:RG:17:PRO:HG2	2.15	0.46
4:QD:29:PRO:CD	4:QD:30:LYS:H	2.29	0.46
52:Y6:45:LYS:HD3	52:Y6:45:LYS:HA	1.79	0.46
34:RO:7:TYR:CD1	34:RO:20:MET:HB2	2.50	0.46
20:QT:98:PRO:C	20:QT:100:ILE:H	2.18	0.46
27:YD:14:ARG:HG3	27:YD:15:PHE:N	2.31	0.46
19:XS:24:ALA:O	19:XS:25:LYS:CB	2.63	0.46
33:RN:36:GLY:O	33:RN:42:TRP:HE3	1.98	0.46
33:RN:112:LEU:O	33:RN:116:LEU:HG	2.16	0.46
3:QC:87:LEU:C	3:QC:89:GLU:H	2.20	0.46
1:QA:779:C:H4'	11:QK:121:PRO:O	2.16	0.46
6:QF:72:VAL:HG23	6:QF:90:VAL:HG11	1.98	0.46
25:RA:1999:C:H4'	25:RA:2723:C:O2	2.16	0.46
25:YA:372:G:H5''	47:Y1:66:HIS:CD2	2.50	0.46
7:QG:107:ALA:O	7:QG:110:GLN:HB2	2.15	0.46
36:YQ:11:LYS:HE2	36:YQ:87:LYS:HA	1.98	0.46
27:YD:2:ALA:HB1	27:YD:20:ASP:CB	2.46	0.46
49:Y3:59:VAL:CG1	49:Y3:60:GLU:H	2.29	0.46
25:YA:2168:G:N3	25:YA:2168:G:H2'	2.31	0.46
17:QQ:84:LEU:O	17:QQ:86:GLU:N	2.49	0.46
5:QE:64:ARG:HG3	5:QE:64:ARG:HH11	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RG:52:ILE:O	30:RG:52:ILE:HG22	2.15	0.46
25:YA:184:C:H2'	25:YA:185:U:C6	2.51	0.46
7:XG:40:ALA:O	7:XG:41:ARG:C	2.54	0.46
25:YA:470:A:H2'	25:YA:471:A:O4'	2.16	0.46
25:YA:1300:U:H4'	25:YA:1301:A:H5''	1.98	0.46
25:RA:99:U:H4'	25:RA:101:G:O5'	2.15	0.46
16:XP:19:ILE:HB	16:XP:37:GLY:O	2.16	0.46
1:XA:1405:G:OP2	58:XA:1675:PAR:O34	2.32	0.46
13:QM:10:PRO:HG3	13:QM:18:ALA:O	2.16	0.46
35:RP:46:LYS:O	35:RP:48:PRO:N	2.48	0.46
20:QT:93:GLU:O	20:QT:93:GLU:HG2	2.15	0.46
1:QA:109:A:C6	1:QA:326:G:C6	3.04	0.46
10:XJ:44:VAL:HG12	10:XJ:45:ARG:N	2.30	0.46
25:YA:2491:U:O2'	25:YA:2570:G:OP1	2.25	0.46
47:Y1:79:GLY:N	47:Y1:80:LEU:HD23	2.30	0.46
28:RE:95:ILE:O	28:RE:95:ILE:HG22	2.16	0.46
3:QC:68:VAL:HG12	3:QC:70:VAL:HG23	1.98	0.46
35:RP:21:ARG:HB3	35:RP:22:GLY:H	1.65	0.46
15:XO:82:ILE:O	15:XO:86:GLY:N	2.49	0.46
3:XC:15:THR:HG22	3:XC:15:THR:O	2.15	0.46
35:YP:98:GLU:HG2	35:YP:99:LEU:N	2.30	0.46
13:XM:3:ARG:O	13:XM:4:ILE:HD13	2.16	0.46
30:RG:179:PRO:CG	50:R4:38:LYS:HZ1	2.22	0.46
40:RU:69:CYS:O	40:RU:74:LEU:HD12	2.16	0.46
40:RU:79:PHE:CE2	40:RU:83:LEU:HD13	2.51	0.46
38:RS:109:GLY:O	38:RS:110:LEU:HB2	2.16	0.46
38:YS:108:GLY:O	38:YS:110:LEU:N	2.48	0.46
39:YT:107:ASP:HB2	39:YT:108:ARG:H	1.48	0.46
52:R6:7:ILE:O	52:R6:8:LYS:HG2	2.16	0.46
52:R6:15:GLU:OE2	52:R6:44:ARG:NH1	2.49	0.46
31:RH:4:ILE:HG13	31:RH:6:ARG:HD3	1.97	0.46
35:RP:85:LEU:HD23	35:RP:88:LEU:HD22	1.97	0.46
10:XJ:4:ILE:O	10:XJ:74:ILE:HD13	2.16	0.46
2:XB:95:GLN:OE1	2:XB:95:GLN:HA	2.16	0.46
28:RE:47:VAL:HG23	28:RE:47:VAL:O	2.16	0.46
4:XD:92:VAL:O	4:XD:96:LEU:CD2	2.64	0.46
39:YT:54:ARG:HG2	39:YT:54:ARG:NH1	2.23	0.46
25:RA:1993:U:H4'	28:RE:128:SER:OG	2.16	0.46
4:XD:173:TRP:NE1	4:XD:174:LEU:HG	2.31	0.46
31:RH:13:LYS:HE2	31:RH:13:LYS:CA	2.40	0.46
30:YG:6:ALA:HB3	30:YG:104:GLU:OE2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:79:PHE:HE2	4:QD:83:SER:HB2	1.79	0.46
4:QD:180:GLY:O	4:QD:181:MET:C	2.54	0.46
49:R3:7:LYS:HE2	49:R3:32:GLN:HA	1.98	0.46
37:YR:3:HIS:C	37:YR:5:LYS:H	2.17	0.46
1:QA:1298:C:H4'	1:QA:1299:A:C4	2.50	0.46
1:QA:1343:G:H2'	1:QA:1344:C:C6	2.51	0.46
54:R8:40:GLU:C	54:R8:42:ARG:N	2.68	0.46
8:XH:33:GLU:O	8:XH:35:ILE:N	2.49	0.46
7:XG:54:THR:HG23	7:XG:54:THR:O	2.16	0.46
6:XF:3:ARG:HH11	6:XF:3:ARG:HG3	1.80	0.46
31:RH:88:LEU:HD22	31:RH:163:TYR:O	2.17	0.46
16:XP:71:ARG:HH11	16:XP:71:ARG:HB2	1.79	0.46
10:XJ:29:ARG:HH11	10:XJ:29:ARG:HG2	1.81	0.46
44:YY:35:TYR:O	44:YY:35:TYR:CD1	2.69	0.46
25:RA:900:A:H3'	25:RA:901:A:C8	2.47	0.46
16:XP:40:ASP:O	16:XP:42:ARG:N	2.49	0.46
6:QF:44:GLY:HA2	6:QF:59:TYR:CE2	2.51	0.46
25:YA:2030:A:H4'	25:YA:2031:A:H8	1.81	0.46
50:Y4:3:GLU:HG3	50:Y4:4:GLY:H	1.79	0.46
30:YG:129:GLY:O	30:YG:130:ASN:OD1	2.34	0.46
49:Y3:18:ASP:O	49:Y3:21:ALA:N	2.49	0.46
1:XA:791:G:C2'	1:XA:792:A:H5'	2.45	0.46
17:XQ:84:LEU:O	17:XQ:86:GLU:N	2.49	0.46
25:RA:2469:A:H5'	25:RA:2470:G:OP2	2.16	0.46
25:YA:195:A:N7	25:YA:197:A:OP1	2.49	0.46
25:YA:521:G:H2'	25:YA:522:G:H8	1.81	0.46
17:QQ:100:LYS:O	17:QQ:101:ARG:HB2	2.15	0.46
5:XE:150:ARG:O	5:XE:150:ARG:HG2	2.16	0.46
25:RA:1534:G:H2'	25:RA:1534:G:N3	2.31	0.46
51:Y5:43:HIS:N	51:Y5:43:HIS:ND1	2.63	0.46
25:RA:2025:C:H2'	25:RA:2026:C:C6	2.51	0.46
30:RG:121:ASN:C	30:RG:123:ASN:H	2.19	0.46
25:YA:34:C:H5	25:YA:454:A:H1'	1.80	0.46
1:XA:562:C:H4'	1:XA:563:A:O5'	2.15	0.46
1:XA:562:C:N4	12:XL:16:GLU:OE1	2.49	0.46
8:XH:64:LYS:HB3	8:XH:79:VAL:HG21	1.97	0.46
47:R1:85:LEU:N	47:R1:85:LEU:HD22	2.31	0.45
44:RY:90:LEU:N	44:RY:90:LEU:CD2	2.73	0.45
1:QA:1103:C:H2'	1:QA:1104:G:O4'	2.16	0.45
19:QS:63:THR:HG23	19:QS:66:MET:CE	2.46	0.45
25:YA:2636:U:H1'	25:YA:2783:G:N2	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:8:ILE:C	3:QC:10:PHE:N	2.69	0.45
35:RP:115:LEU:CD1	35:RP:116:GLY:N	2.78	0.45
27:RD:105:ILE:HG23	27:RD:106:ILE:O	2.15	0.45
35:YP:115:LEU:HA	35:YP:134:ALA:CB	2.46	0.45
15:QO:82:ILE:HD11	15:QO:88:ARG:HG2	1.95	0.45
11:XK:104:GLN:O	11:XK:106:LYS:HG3	2.16	0.45
40:RU:98:LEU:HD23	40:RU:98:LEU:C	2.36	0.45
40:YU:92:ARG:C	40:YU:94:ASN:N	2.69	0.45
34:YO:86:ILE:CD1	34:YO:86:ILE:H	2.28	0.45
30:YG:14:GLU:HB3	30:YG:15:VAL:H	1.56	0.45
2:XB:87:ARG:NH1	2:XB:220:ASP:OD1	2.46	0.45
25:RA:2416:C:H2'	25:RA:2417:C:C6	2.52	0.45
25:YA:484:C:H2'	25:YA:485:C:C6	2.52	0.45
44:YY:48:ALA:CB	44:YY:61:ILE:HD13	2.45	0.45
52:Y6:17:LYS:O	52:Y6:18:ARG:CB	2.64	0.45
25:YA:1659:U:O2'	25:YA:2712(A):A:N1	2.39	0.45
27:YD:11:PRO:O	27:YD:12:SER:CB	2.65	0.45
10:QJ:4:ILE:O	10:QJ:74:ILE:HD13	2.16	0.45
20:XT:22:ARG:O	20:XT:26:ASN:ND2	2.49	0.45
20:QT:71:THR:HG22	20:QT:72:LEU:N	2.31	0.45
36:RQ:85:LYS:HD3	36:RQ:86:GLY:H	1.80	0.45
36:YQ:85:LYS:HD3	36:YQ:86:GLY:H	1.80	0.45
27:RD:211:ARG:HH11	27:RD:211:ARG:HG2	1.80	0.45
30:YG:76:SER:CB	30:YG:83:ARG:HA	2.47	0.45
2:XB:122:PHE:HD1	2:XB:139:LYS:NZ	2.09	0.45
3:QC:43:LEU:HD22	3:QC:47:LEU:CD2	2.46	0.45
27:RD:80:ALA:O	27:RD:113:VAL:HG13	2.16	0.45
8:QH:91:ARG:NH1	8:QH:91:ARG:HG2	2.25	0.45
55:Y9:1:MET:SD	55:Y9:31:LYS:O	2.74	0.45
49:Y3:7:LYS:HE2	49:Y3:32:GLN:HA	1.98	0.45
3:QC:172:ARG:O	3:QC:173:VAL:CG2	2.63	0.45
4:XD:146:ILE:HG22	4:XD:146:ILE:O	2.15	0.45
12:XL:126:LYS:C	12:XL:128:ALA:N	2.69	0.45
37:RR:1:MET:O	37:RR:2:ARG:HB2	2.15	0.45
47:Y1:49:VAL:HG12	47:Y1:51:VAL:CG2	2.45	0.45
29:YF:65:TRP:CH2	29:YF:72:ARG:HB3	2.50	0.45
51:Y5:16:ARG:O	51:Y5:20:ARG:HG3	2.16	0.45
4:XD:199:ASN:O	4:XD:201:GLN:N	2.49	0.45
29:YF:31:HIS:O	29:YF:34:TRP:HB3	2.15	0.45
12:XL:27:LEU:HD13	12:XL:28:LYS:N	2.30	0.45
19:XS:15:LEU:N	19:XS:15:LEU:CD2	2.79	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:QL:27:LEU:HD13	12:QL:28:LYS:N	2.30	0.45
36:RQ:87:LYS:O	36:RQ:87:LYS:HG2	2.15	0.45
31:YH:51:ARG:NH1	31:YH:51:ARG:HG3	2.30	0.45
3:XC:172:ARG:O	3:XC:173:VAL:HG23	2.15	0.45
3:XC:108:ASN:HB3	3:XC:111:LEU:HG	1.98	0.45
8:QH:68:ARG:HH11	8:QH:68:ARG:HG2	1.81	0.45
42:RW:28:SER:C	42:RW:30:GLU:N	2.69	0.45
13:QM:28:ALA:C	13:QM:30:ALA:N	2.70	0.45
25:YA:222:A:H3'	25:YA:421:U:H5''	1.98	0.45
1:XA:769:G:H4'	1:XA:1513:A:H4'	1.98	0.45
1:QA:1064:G:HO2'	1:QA:1065:U:P	2.38	0.45
17:XQ:3:LYS:HD3	17:XQ:61:GLU:O	2.16	0.45
25:YA:2035:G:H4'	25:YA:2036:C:OP2	2.16	0.45
25:RA:207:A:H2'	25:RA:208:C:O4'	2.17	0.45
1:QA:967:C:H2'	1:QA:968:A:N7	2.31	0.45
43:YX:8:ILE:CD1	43:YX:42:ALA:HB1	2.46	0.45
32:YI:9:LEU:O	32:YI:10:GLU:HG3	2.17	0.45
25:RA:1928:A:C2'	25:RA:1929:G:H5'	2.46	0.45
31:RH:89:ILE:HD13	31:RH:89:ILE:H	1.81	0.45
31:YH:128:PRO:HD2	31:YH:129:THR:N	2.25	0.45
14:QN:26:ARG:NE	14:QN:47:LEU:HD21	2.30	0.45
44:RY:81:LYS:CD	44:RY:97:ARG:HE	2.20	0.45
50:R4:56:VAL:HA	50:R4:60:GLN:CB	2.28	0.45
13:XM:80:ARG:O	13:XM:82:MET:O	2.34	0.45
19:XS:63:THR:HG23	19:XS:66:MET:CE	2.46	0.45
28:YE:77:ILE:O	28:YE:78:LEU:O	2.35	0.45
31:YH:109:PHE:CE1	31:YH:152:ARG:NH1	2.84	0.45
28:RE:15:PHE:CD1	28:RE:20:ALA:HB2	2.50	0.45
40:RU:73:GLY:O	40:RU:74:LEU:CB	2.63	0.45
41:YV:47:VAL:O	41:YV:48:GLY:O	2.34	0.45
36:RQ:81:VAL:HG23	36:RQ:82:ARG:N	2.32	0.45
38:YS:109:GLY:O	38:YS:110:LEU:HB2	2.16	0.45
36:RQ:104:PHE:O	36:RQ:105:GLU:CB	2.65	0.45
4:QD:93:PHE:CZ	4:QD:97:LEU:HD11	2.52	0.45
4:QD:92:VAL:O	4:QD:96:LEU:CD2	2.64	0.45
52:R6:20:ASN:O	52:R6:21:TYR:HB2	2.15	0.45
50:Y4:42:PHE:CD1	50:Y4:42:PHE:C	2.90	0.45
44:RY:47:LYS:O	44:RY:49:VAL:N	2.48	0.45
51:R5:54:GLY:O	51:R5:55:ARG:C	2.54	0.45
25:RA:747:U:C2	51:R5:2:ALA:HB3	2.51	0.45
25:RA:2712:U:O2'	25:RA:2712(A):A:OP1	2.35	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2712:U:OP1	25:RA:2714:G:H4'	2.16	0.45
2:QB:96:ARG:N	2:QB:96:ARG:HD2	2.20	0.45
11:XK:32:ILE:HD11	11:XK:72:ALA:HB2	1.95	0.45
29:YF:7:TYR:CD1	29:YF:7:TYR:N	2.84	0.45
41:YV:5:VAL:HG22	41:YV:14:VAL:CG2	2.46	0.45
40:RU:57:PHE:O	40:RU:59:ARG:N	2.50	0.45
11:XK:41:THR:CG2	11:XK:42:TRP:N	2.79	0.45
39:RT:24:PRO:HD3	39:RT:52:ILE:HD12	1.98	0.45
4:QD:173:TRP:NE1	4:QD:174:LEU:HG	2.31	0.45
33:YN:113:GLY:O	33:YN:116:LEU:HB2	2.14	0.45
1:XA:1347:G:N7	9:XI:11:LYS:NZ	2.65	0.45
9:XI:11:LYS:O	9:XI:12:GLU:HB2	2.16	0.45
1:XA:1344:C:H5'	9:XI:120:ARG:O	2.16	0.45
18:QR:43:PHE:C	18:QR:44:LEU:HD12	2.36	0.45
10:XJ:95:GLU:HA	10:XJ:95:GLU:OE2	2.16	0.45
27:YD:241:PRO:O	27:YD:242:ARG:C	2.53	0.45
37:YR:85:PRO:C	37:YR:87:TYR:H	2.18	0.45
33:YN:120:LEU:C	33:YN:120:LEU:HD13	2.37	0.45
27:YD:118:VAL:O	27:YD:129:ASN:HA	2.16	0.45
10:QJ:96:ILE:CD1	10:QJ:96:ILE:N	2.79	0.45
2:QB:24:TRP:CZ2	2:QB:26:PRO:HB3	2.51	0.45
4:QD:52:SER:N	4:QD:55:ALA:HB3	2.32	0.45
6:QF:40:VAL:HG22	6:QF:41:GLU:H	1.80	0.45
15:XO:5:LYS:O	15:XO:8:LYS:CG	2.63	0.45
18:XR:32:ARG:HH11	18:XR:65:ILE:HD13	1.80	0.45
31:RH:137:ASP:HB2	31:RH:140:LYS:HE3	1.98	0.45
25:YA:898:C:C2'	25:YA:899:A:H5'	2.45	0.45
25:RA:917:A:O2'	26:RB:98:G:H4'	2.16	0.45
33:RN:17:ASP:O	33:RN:55:VAL:O	2.34	0.45
45:YZ:149:SER:HB2	45:YZ:172:ALA:O	2.16	0.45
4:QD:133:VAL:HG12	4:QD:135:LEU:H	1.82	0.45
4:QD:100:ARG:NH2	4:QD:137:SER:HA	2.31	0.45
55:R9:25:VAL:HG11	55:R9:34:GLN:HE21	1.80	0.45
55:Y9:25:VAL:HG11	55:Y9:34:GLN:HE21	1.81	0.45
25:RA:1263:U:O2'	51:R5:11:THR:HG23	2.16	0.45
4:QD:126:ILE:HG22	4:QD:127:THR:H	1.80	0.45
22:QV:40:C:H2'	22:QV:41:C:C6	2.50	0.45
22:XV:3:C:C2'	22:XV:4:G:H5'	2.47	0.45
25:RA:2335:A:O2'	25:RA:2336:A:O5'	2.30	0.45
12:QL:113:ARG:NH2	12:QL:120:TYR:CE2	2.85	0.45
25:YA:141:A:H8	25:YA:1408:C:H1'	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:198:ASN:ND2	27:RD:198:ASN:C	2.69	0.45
25:RA:31:C:O2'	25:RA:1238:G:H5'	2.16	0.45
25:YA:2695:C:H2'	25:YA:2696:U:H6	1.81	0.45
25:YA:2774:C:H2'	25:YA:2775:A:O4'	2.16	0.45
25:RA:959:A:N3	25:RA:2457:U:O2'	2.43	0.45
25:YA:598:G:H2'	25:YA:599:G:O4'	2.15	0.45
43:YX:24:GLY:O	43:YX:82:GLN:HA	2.15	0.45
25:RA:2724:C:OP1	28:RE:118:LYS:NZ	2.46	0.45
51:R5:36:CYS:C	51:R5:38:ALA:H	2.19	0.45
25:RA:2366:A:H2'	25:RA:2367:G:O4'	2.16	0.45
1:XA:1256:A:OP1	3:XC:26:LYS:NZ	2.45	0.45
25:RA:2558:C:H2'	25:RA:2559:C:O4'	2.16	0.45
25:RA:1165:U:H2'	25:RA:1166:C:C6	2.51	0.45
25:YA:1331:A:H2'	25:YA:1333:C:C5	2.51	0.45
25:RA:1607:C:N4	25:RA:1622:G:OP2	2.46	0.45
13:XM:10:PRO:HG3	13:XM:18:ALA:O	2.16	0.45
44:RY:75:ILE:HA	44:RY:80:GLY:HA2	1.99	0.45
19:QS:10:PHE:CD1	19:QS:38:SER:HB2	2.52	0.45
27:YD:65:ILE:HD11	27:YD:67:PHE:CE1	2.51	0.45
15:QO:30:ALA:HA	15:QO:85:LEU:HD11	1.97	0.45
28:RE:21:VAL:HG23	28:RE:22:PRO:CD	2.46	0.45
40:RU:92:ARG:C	40:RU:94:ASN:N	2.69	0.45
51:R5:16:ARG:O	51:R5:20:ARG:HG3	2.16	0.45
40:YU:95:LEU:HD13	41:YV:4:ILE:HD12	1.98	0.45
52:Y6:11:LEU:H	52:Y6:25:LYS:HA	1.81	0.45
3:QC:34:LEU:C	3:QC:34:LEU:HD23	2.37	0.45
4:QD:29:PRO:HD2	4:QD:30:LYS:H	1.80	0.45
25:RA:2284:C:C5	52:R6:27:LYS:HE2	2.52	0.45
25:RA:483:A:C5'	44:RY:49:VAL:HG13	2.46	0.45
39:RT:6:LEU:O	39:RT:10:VAL:HG23	2.16	0.45
27:RD:145:VAL:HB	27:RD:155:LEU:HB2	1.99	0.45
20:XT:96:GLY:O	20:XT:97:ALA:CB	2.64	0.45
12:QL:11:VAL:HG21	17:QQ:34:LYS:HD3	1.98	0.45
30:YG:44:GLY:HA2	30:YG:88:ILE:HG12	1.97	0.45
25:YA:1019:U:O2'	25:YA:1021:A:H2	1.99	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
33:RN:129:PRO:C	33:RN:131:GLN:H	2.20	0.45
25:YA:264:C:H2'	25:YA:265:A:H5''	1.97	0.45
25:YA:2308:G:N2	25:YA:2311:A:H2	2.15	0.45
30:RG:76:SER:CB	30:RG:83:ARG:HA	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:R8:48:PHE:HD1	54:R8:48:PHE:N	2.14	0.45
11:QK:121:PRO:HD2	11:QK:126:ARG:CD	2.47	0.45
9:XI:80:GLY:C	9:XI:82:ALA:N	2.70	0.45
49:R3:43:ILE:O	49:R3:47:VAL:HG23	2.16	0.45
34:YO:112:MET:O	34:YO:115:VAL:CG2	2.64	0.45
55:Y9:1:MET:HE2	55:Y9:10:ILE:HD13	1.98	0.45
42:YW:40:ASN:C	42:YW:41:LYS:HG2	2.36	0.45
2:XB:51:LEU:O	2:XB:55:PHE:HD2	2.00	0.45
6:QF:69:GLU:O	6:QF:71:ARG:N	2.48	0.45
16:QP:13:HIS:C	16:QP:15:PRO:HD3	2.36	0.45
34:RO:61:VAL:O	34:RO:84:ALA:HB1	2.16	0.45
1:XA:538:G:O3'	12:XL:114:LYS:HD3	2.15	0.45
6:XF:100:ASN:HA	6:XF:100:ASN:HD22	1.48	0.45
4:QD:52:SER:H	4:QD:55:ALA:HB3	1.82	0.45
4:XD:101:LEU:HD21	4:XD:121:VAL:HG13	1.99	0.45
1:QA:1067:A:N1	1:QA:1108:G:O2'	2.38	0.45
12:QL:64:TYR:O	12:QL:65:GLU:HB2	2.16	0.45
1:XA:595:G:H1'	1:XA:596:C:C5	2.49	0.45
49:R3:60:GLU:HG2	49:R3:60:GLU:O	2.16	0.45
16:QP:40:ASP:O	16:QP:42:ARG:N	2.50	0.45
43:RX:35:THR:O	43:RX:36:LYS:C	2.55	0.45
27:RD:2:ALA:HB1	27:RD:20:ASP:CB	2.46	0.45
25:YA:2505:G:O6	25:YA:2576:G:H2'	2.16	0.45
1:QA:1024:G:OP1	1:QA:1024:G:H4'	2.16	0.45
38:RS:5:THR:OG1	38:RS:8:GLU:HG3	2.17	0.45
25:RA:898:C:C2'	25:RA:899:A:H5'	2.46	0.45
45:RZ:108:PRO:HB2	45:RZ:109:ALA:H	1.62	0.45
25:RA:1636:C:H2'	25:RA:1637:A:H8	1.82	0.45
23:QY:30:C:H2'	23:QY:31:G:H8	1.81	0.45
1:QA:967:C:H2'	1:QA:968:A:C8	2.52	0.45
25:YA:2032:G:H21	28:YE:146:THR:HG23	1.82	0.45
42:RW:48:ALA:O	42:RW:49:LYS:C	2.53	0.45
25:RA:551:G:H5'	25:RA:1220:A:H1'	1.97	0.45
29:YF:167:ALA:HB1	29:YF:173:VAL:HG11	1.98	0.45
16:QP:19:ILE:HB	16:QP:37:GLY:O	2.16	0.45
25:YA:302:C:H2'	25:YA:303:U:C6	2.50	0.45
28:RE:1:MET:HA	28:RE:200:GLU:OE2	2.16	0.45
1:QA:175:C:H2'	1:QA:176:C:H6	1.81	0.45
36:RQ:5:ARG:O	36:RQ:6:ARG:O	2.35	0.45
28:YE:1:MET:HA	28:YE:200:GLU:OE2	2.16	0.45
1:QA:1465:C:H2'	1:QA:1466:C:O4'	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RI:74:ASN:OD1	32:RI:74:ASN:N	2.49	0.45
31:RH:106:THR:HG22	31:RH:112:PRO:HB3	1.97	0.45
1:XA:49:U:C2	1:XA:361:G:N2	2.84	0.45
31:RH:94:TYR:N	31:RH:94:TYR:CD1	2.82	0.45
47:Y1:60:PHE:CE2	47:Y1:91:LYS:NZ	2.84	0.45
13:XM:65:LYS:NZ	13:XM:69:GLU:HG2	2.31	0.45
28:YE:51:PHE:HD1	28:YE:52:LEU:H	1.59	0.45
3:XC:8:ILE:C	3:XC:10:PHE:N	2.69	0.45
27:YD:69:ARG:C	27:YD:71:ASP:N	2.69	0.45
27:RD:31:LYS:C	27:RD:32:SER:O	2.54	0.45
31:RH:109:PHE:CE1	31:RH:152:ARG:NH1	2.84	0.45
31:RH:151:ILE:O	31:RH:152:ARG:O	2.34	0.45
28:RE:22:PRO:O	28:RE:22:PRO:CG	2.63	0.45
41:YV:4:ILE:HG22	41:YV:39:LEU:HD23	1.98	0.45
38:RS:74:ALA:O	38:RS:75:GLU:C	2.54	0.45
36:YQ:132:VAL:HG11	45:YZ:81:ARG:CZ	2.47	0.45
30:RG:14:GLU:HB3	30:RG:15:VAL:H	1.56	0.45
33:RN:22:THR:O	33:RN:60:ILE:HG22	2.16	0.45
2:XB:214:ILE:HD13	2:XB:217:ARG:HH22	1.81	0.45
12:QL:6:THR:H	12:QL:9:GLN:NE2	1.97	0.45
6:QF:9:VAL:HB	6:QF:87:ARG:HB2	1.97	0.45
25:RA:2712:U:O2'	25:RA:2712(A):A:P	2.73	0.45
5:XE:148:VAL:CG2	8:XH:107:LEU:HD13	2.45	0.45
20:XT:71:THR:HG22	20:XT:72:LEU:N	2.31	0.45
1:XA:686:U:O2'	11:XK:42:TRP:NE1	2.50	0.45
25:RA:2584:U:H2'	25:RA:2585:U:C6	2.51	0.45
1:XA:1222:G:P	19:XS:77:THR:HG21	2.57	0.45
3:QC:78:GLY:HA3	3:QC:83:ARG:HB3	1.98	0.45
28:YE:47:VAL:O	28:YE:47:VAL:HG23	2.16	0.45
4:XD:178:VAL:O	4:XD:181:MET:N	2.50	0.45
25:RA:2009:G:OP1	42:RW:41:LYS:HE2	2.17	0.45
25:YA:1794:U:H2'	25:YA:1795:C:C6	2.45	0.45
8:QH:33:GLU:O	8:QH:35:ILE:N	2.49	0.45
12:XL:113:ARG:NH2	12:XL:120:TYR:CE2	2.85	0.45
46:Y0:27:GLU:HB2	46:Y0:69:PHE:HD1	1.81	0.45
44:YY:2:ARG:O	44:YY:3:VAL:C	2.55	0.45
10:XJ:39:PRO:CB	10:XJ:70:ARG:HH12	2.27	0.45
2:QB:22:LYS:O	2:QB:24:TRP:N	2.50	0.45
7:QG:50:ILE:HG21	7:QG:61:VAL:HG21	1.97	0.45
4:XD:52:SER:H	4:XD:55:ALA:HB3	1.82	0.45
4:QD:101:LEU:HD21	4:QD:121:VAL:HG13	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:13:ARG:CB	4:QD:33:MET:HE2	2.47	0.45
15:QO:5:LYS:O	15:QO:8:LYS:CG	2.63	0.45
1:XA:403:C:O2'	4:XD:122:ARG:NH2	2.47	0.45
16:QP:58:TYR:O	16:QP:61:SER:OG	2.27	0.45
27:RD:148:GLU:HB2	27:RD:151:LYS:HD2	1.98	0.45
25:RA:412:A:N7	25:RA:2411:A:H2	2.13	0.45
6:XF:44:GLY:HA2	6:XF:59:TYR:CE2	2.51	0.45
42:RW:34:ASN:O	42:RW:35:ILE:C	2.55	0.45
45:YZ:141:VAL:HG23	45:YZ:144:LEU:HB2	1.98	0.45
25:YA:2784:C:H5"	28:YE:41:LYS:NZ	2.32	0.45
38:YS:5:THR:HG1	38:YS:7:TYR:HB3	1.80	0.45
38:YS:5:THR:OG1	38:YS:8:GLU:HG3	2.17	0.45
4:XD:100:ARG:NH2	4:XD:137:SER:HA	2.32	0.45
25:RA:923:C:H2'	25:RA:924:C:C6	2.52	0.45
37:YR:10:LEU:O	37:YR:11:ASN:C	2.55	0.45
25:YA:579:G:H2'	25:YA:580:C:C6	2.51	0.45
7:XG:95:ARG:HG2	7:XG:99:LEU:HD12	1.98	0.45
7:XG:95:ARG:NE	7:XG:99:LEU:HD11	2.30	0.45
35:RP:92:GLU:HA	35:RP:123:LEU:HD23	1.98	0.45
25:RA:1824:G:OP1	27:RD:52:ARG:HD3	2.16	0.45
25:RA:2572:A:C4	28:RE:144:ARG:NH2	2.84	0.45
31:YH:16:SER:OG	31:YH:17:VAL:N	2.50	0.45
53:Y7:24:THR:O	53:Y7:28:ARG:HG3	2.16	0.45
26:RB:13:A:N1	26:RB:69:G:O2'	2.45	0.45
1:XA:582:U:H2'	1:XA:583:A:C8	2.51	0.45
1:XA:923:A:OP1	5:XE:21:ALA:HB2	2.17	0.45
25:YA:2115:G:N2	25:YA:2165:G:N7	2.55	0.45
1:XA:335:C:O2'	1:XA:1433:A:N3	2.42	0.45
1:QA:452:A:H2'	1:QA:453:A:C8	2.52	0.45
20:XT:24:LEU:O	20:XT:24:LEU:HD13	2.16	0.45
46:R0:41:ARG:NE	46:R0:41:ARG:HA	2.31	0.45
4:XD:192:GLU:HG3	4:XD:192:GLU:H	1.57	0.45
29:YF:117:ARG:NH2	29:YF:189:THR:O	2.50	0.45
25:YA:273:G:H1	25:YA:364:C:H42	1.64	0.45
25:YA:180:G:N2	25:YA:215:G:O6	2.50	0.45
14:XN:43:CYS:HB3	14:XN:44:LEU:H	1.66	0.45
47:Y1:85:LEU:N	47:Y1:85:LEU:HD22	2.31	0.45
13:QM:23:TYR:HB3	13:QM:67:GLU:HA	1.98	0.45
1:QA:1125:U:O4	10:QJ:5:ARG:HD3	2.16	0.45
28:YE:95:ILE:HG22	28:YE:95:ILE:O	2.16	0.45
27:RD:65:ILE:HD11	27:RD:67:PHE:CE1	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:13:ARG:HH11	28:YE:13:ARG:HB3	1.82	0.45
13:XM:8:GLU:OE2	30:YG:115:ARG:CZ	2.65	0.45
33:YN:10:GLU:HA	33:YN:11:PRO:HD3	1.73	0.45
38:YS:78:LEU:HD21	38:YS:108:GLY:HA2	1.99	0.45
36:YQ:104:PHE:O	36:YQ:105:GLU:CB	2.65	0.45
36:YQ:26:TYR:O	36:YQ:27:VAL:O	2.34	0.45
52:Y6:9:LEU:CD1	52:Y6:26:ASN:ND2	2.80	0.45
25:YA:2286:A:OP1	52:Y6:28:ARG:NE	2.50	0.45
8:QH:97:VAL:CG1	8:QH:98:LYS:H	2.30	0.45
7:XG:79:ARG:HG2	7:XG:79:ARG:NH1	2.30	0.45
33:RN:96:GLU:O	33:RN:99:LEU:N	2.34	0.45
13:XM:57:ARG:HD2	13:XM:61:GLU:OE2	2.17	0.45
5:XE:7:GLU:HB3	5:XE:112:LEU:HD13	1.99	0.45
39:RT:36:GLU:CG	39:RT:41:ARG:HD3	2.46	0.45
4:QD:114:ARG:NH1	4:QD:114:ARG:CG	2.77	0.45
33:RN:128:HIS:HB2	33:RN:129:PRO:CD	2.46	0.45
33:YN:114:ARG:O	33:YN:115:ARG:CB	2.65	0.45
3:XC:43:LEU:HD22	3:XC:47:LEU:CD2	2.46	0.45
29:YF:196:LEU:O	29:YF:200:GLU:HG2	2.17	0.45
18:XR:43:PHE:C	18:XR:51:LEU:HD12	2.36	0.45
35:RP:31:ALA:C	35:RP:32:THR:CG2	2.85	0.45
40:RU:76:TYR:CD2	40:RU:76:TYR:C	2.90	0.45
2:XB:240:GLN:O	2:XB:240:GLN:HG2	2.16	0.45
9:QI:80:GLY:C	9:QI:82:ALA:N	2.70	0.45
42:RW:40:ASN:C	42:RW:41:LYS:HG2	2.37	0.45
47:Y1:54:ALA:O	47:Y1:55:GLY:O	2.35	0.45
1:XA:266:G:O2'	1:XA:267:C:OP2	2.29	0.45
2:QB:24:TRP:CD2	2:QB:26:PRO:HD3	2.52	0.45
2:XB:25:ASN:HA	2:XB:26:PRO:HD2	1.86	0.45
26:YB:104:A:H5'	45:YZ:72:ARG:HD3	1.96	0.45
12:XL:64:TYR:O	12:XL:65:GLU:HB2	2.16	0.45
3:QC:108:ASN:HB3	3:QC:111:LEU:HD12	1.99	0.45
2:QB:30:ARG:O	2:QB:31:TYR:HD2	2.00	0.45
4:QD:150:GLU:C	4:QD:152:SER:H	2.20	0.45
27:RD:166:GLN:NE2	27:RD:166:GLN:CA	2.78	0.45
7:XG:107:ALA:O	7:XG:110:GLN:HB2	2.15	0.45
40:YU:27:LEU:HD12	40:YU:31:SER:HB3	1.98	0.45
4:XD:133:VAL:HG12	4:XD:135:LEU:H	1.82	0.45
5:XE:152:ARG:HD3	8:XH:44:PHE:CE1	2.52	0.45
25:YA:580:C:H2'	25:YA:581:C:C6	2.51	0.45
25:RA:2507:C:H5''	25:RA:2573:C:N4	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:QG:95:ARG:HG2	7:QG:99:LEU:HD12	1.98	0.45
27:RD:213:ARG:HA	27:RD:213:ARG:HD2	1.60	0.45
25:RA:2630:G:O4'	25:RA:2894:G:H1'	2.16	0.45
32:YI:81:VAL:HG21	32:YI:88:ILE:HD12	1.98	0.45
30:RG:51:ARG:NH2	30:RG:52:ILE:HD11	2.32	0.45
4:XD:104:VAL:O	4:XD:107:ARG:N	2.49	0.45
25:RA:1728:G:N1	25:RA:1730:U:OP2	2.49	0.45
25:RA:138:G:N2	43:RX:44:GLU:OE2	2.34	0.45
27:YD:109:ASP:HB2	27:YD:197:GLY:CA	2.46	0.45
27:YD:198:ASN:ND2	27:YD:198:ASN:O	2.50	0.45
28:YE:33:VAL:HG12	28:YE:90:THR:H	1.81	0.45
25:RA:78:A:H2'	25:RA:79:G:C8	2.52	0.45
45:YZ:128:VAL:HG22	45:YZ:129:SER:H	1.82	0.45
25:YA:34:C:N4	25:YA:447:A:H61	2.14	0.45
25:YA:1105:U:H2'	25:YA:1106:G:H8	1.81	0.45
25:RA:1769:G:O2'	25:RA:1958:C:OP1	2.30	0.45
41:YV:30:GLY:O	41:YV:31:ALA:O	2.34	0.45
30:RG:20:ILE:HD13	30:RG:25:TYR:HB2	1.98	0.45
25:YA:2788:C:O2'	25:YA:2809:A:N3	2.43	0.45
1:QA:748:C:H1'	1:QA:749:C:H5	1.81	0.45
1:QA:1291:G:H4'	9:QI:39:GLY:HA3	1.99	0.45
36:RQ:93:TYR:CD1	36:RQ:93:TYR:N	2.84	0.45
33:RN:5:VAL:O	33:RN:5:VAL:HG13	2.16	0.45
10:QJ:21:GLN:O	10:QJ:21:GLN:HG2	2.16	0.45
25:RA:1756:G:H4'	25:RA:1758:G:O4'	2.16	0.45
1:XA:429:U:H1'	1:XA:430:A:H5''	1.97	0.45
44:YY:75:ILE:HA	44:YY:80:GLY:HA2	1.99	0.45
44:YY:97:ARG:HG2	44:YY:97:ARG:HH11	1.82	0.45
31:RH:86:GLU:O	31:RH:87:LEU:CB	2.64	0.45
28:YE:2:LYS:O	28:YE:199:ARG:HA	2.17	0.45
35:RP:21:ARG:HE	35:RP:21:ARG:HA	1.82	0.45
40:RU:79:PHE:C	40:RU:79:PHE:HD2	2.18	0.45
42:RW:14:PRO:O	42:RW:16:LYS:N	2.50	0.45
34:RO:47:ILE:HG13	34:RO:48:PRO:HD2	1.99	0.45
5:XE:12:LEU:HB3	5:XE:31:LEU:CB	2.47	0.45
3:XC:34:LEU:HD23	3:XC:34:LEU:C	2.37	0.45
34:RO:40:VAL:CG1	34:RO:41:ALA:N	2.80	0.45
20:QT:96:GLY:O	20:QT:99:LEU:HD13	2.16	0.45
5:XE:55:VAL:O	5:XE:58:ALA:HB3	2.16	0.45
5:XE:101:ILE:H	5:XE:101:ILE:HD13	1.82	0.45
5:QE:77:PRO:HG2	5:QE:142:LEU:HD22	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:XT:53:LEU:HD12	20:XT:100:ILE:HG23	1.98	0.45
20:XT:84:LEU:HD13	20:XT:84:LEU:C	2.37	0.45
27:RD:14:ARG:HG3	27:RD:15:PHE:N	2.31	0.45
35:RP:88:LEU:O	35:RP:90:ARG:N	2.50	0.45
8:XH:102:ARG:NH1	8:XH:105:ARG:CZ	2.80	0.45
2:XB:95:GLN:NE2	2:XB:96:ARG:NH1	2.65	0.45
13:XM:15:VAL:O	13:XM:19:LEU:CD2	2.64	0.45
33:RN:35:ARG:O	33:RN:35:ARG:HG3	2.15	0.45
29:YF:155:LEU:HA	29:YF:174:VAL:CG1	2.46	0.45
3:QC:134:ILE:HG23	3:QC:151:VAL:HB	1.98	0.45
27:YD:68:LYS:HD2	27:YD:70:TRP:CZ2	2.52	0.45
25:RA:769:G:H5'	25:RA:1379:A:H61	1.80	0.45
3:XC:22:TRP:HB3	3:XC:59:ARG:HB2	1.99	0.45
25:RA:1754:C:N3	25:RA:2716:U:O2'	2.49	0.45
7:XG:148:ASN:C	7:XG:150:ALA:N	2.69	0.45
25:YA:1797:C:H4'	27:YD:257:LEU:O	2.17	0.45
11:XK:48:ILE:HD11	11:XK:64:ALA:N	2.32	0.45
1:QA:1187:G:P	9:QL:113:LYS:NZ	2.89	0.45
15:XO:77:ARG:HA	15:XO:80:ALA:HB2	1.99	0.45
29:RF:123:LEU:HD12	29:RF:124:LEU:H	1.82	0.45
25:RA:177:G:H3'	25:RA:178:G:H8	1.82	0.45
6:QF:35:ALA:HA	6:QF:67:MET:HB3	1.99	0.45
48:R2:28:LYS:HB3	48:R2:57:ILE:HG12	1.98	0.45
8:QH:41:ARG:NH1	8:QH:41:ARG:CG	2.76	0.45
6:XF:68:PRO:HG3	6:XF:71:ARG:NH2	2.31	0.45
25:YA:2467:C:N4	25:YA:2468:G:O6	2.50	0.45
32:RI:83:ALA:HA	32:RI:88:ILE:HA	1.97	0.45
25:RA:372:G:H5''	47:R1:66:HIS:CD2	2.52	0.45
6:XF:61:LEU:HD23	6:XF:63:TYR:OH	2.17	0.45
1:QA:539:A:OP2	12:QL:115:LYS:HE3	2.16	0.45
25:YA:64:A:H1'	43:YX:66:LEU:HB2	1.98	0.45
25:YA:2579:C:H2'	25:YA:2580:U:O4'	2.16	0.45
4:XD:52:SER:N	4:XD:55:ALA:HB3	2.32	0.45
3:XC:92:ALA:HB2	3:XC:99:VAL:HG11	1.99	0.45
36:YQ:23:GLY:O	36:YQ:24:GLY:C	2.54	0.45
25:YA:530:G:C5	25:YA:2022:U:H5''	2.51	0.45
1:QA:1095:U:H2'	1:QA:1096:C:C6	2.52	0.45
25:YA:2114:A:N6	25:YA:2119:A:H62	2.15	0.45
1:XA:939:G:H2'	1:XA:940:C:C6	2.52	0.45
1:QA:390:C:H4'	16:QP:28:ARG:NH2	2.32	0.45
25:RA:709:U:H2'	25:RA:710:G:H8	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1292:U:P	7:QG:41:ARG:HH21	2.40	0.45
25:YA:2655:G:O2'	25:YA:2656:U:OP2	2.34	0.45
42:YW:88:ARG:CB	42:YW:92:ARG:HB3	2.47	0.45
43:YX:47:PHE:O	43:YX:48:LYS:C	2.55	0.45
30:YG:51:ARG:NH2	30:YG:52:ILE:HD11	2.32	0.45
1:XA:757:U:OP1	1:XA:822:C:O2'	2.31	0.45
1:XA:560:U:H4'	1:XA:561:U:H5''	1.97	0.45
25:YA:2087:G:C2'	25:YA:2088:G:H5'	2.47	0.45
1:XA:1004:A:O5'	1:XA:1025:U:N3	2.50	0.45
19:XS:69:HIS:O	19:XS:70:LYS:O	2.34	0.45
12:QL:61:THR:O	12:QL:63:GLY:N	2.45	0.45
25:RA:868:U:C4	25:RA:869:G:N7	2.85	0.45
1:XA:600:C:H2'	1:XA:601:C:C6	2.52	0.45
1:XA:1424:C:H2'	1:XA:1425:U:O4'	2.17	0.45
46:Y0:19:LYS:HA	46:Y0:19:LYS:HD3	1.54	0.45
42:YW:21:VAL:HG12	42:YW:21:VAL:O	2.17	0.45
25:YA:2105:C:H2'	25:YA:2106:G:H8	1.82	0.45
1:XA:814:A:O2'	1:XA:815:A:H3'	2.15	0.45
25:YA:38:A:H2'	25:YA:39:C:C6	2.51	0.45
1:QA:1316:G:H2'	1:QA:1318:A:OP2	2.16	0.45
54:R8:16:ILE:CD1	54:R8:57:ARG:HG2	2.42	0.45
28:YE:199:ARG:HH11	28:YE:199:ARG:HG3	1.82	0.45
28:RE:2:LYS:O	28:RE:199:ARG:HA	2.17	0.45
3:XC:42:LEU:HD12	3:XC:45:LYS:NZ	2.32	0.45
27:YD:92:ILE:HD12	27:YD:104:TYR:HD2	1.82	0.45
54:Y8:52:LYS:CG	54:Y8:52:LYS:O	2.64	0.45
5:QE:52:PRO:HB2	5:QE:53:LEU:HD12	1.98	0.45
2:QB:15:VAL:HG23	2:QB:209:ARG:HE	1.80	0.45
40:YU:79:PHE:CE2	40:YU:83:LEU:HD13	2.51	0.45
36:YQ:34:LEU:HB2	36:YQ:118:LEU:HD22	1.99	0.45
8:QH:86:ILE:CG1	8:QH:133:LEU:HD22	2.46	0.45
37:YR:29:LEU:CD1	37:YR:29:LEU:N	2.79	0.45
2:QB:214:ILE:HD13	2:QB:217:ARG:HH22	1.81	0.45
25:RA:2404:C:H1'	35:RP:67:MET:HE2	1.99	0.45
27:YD:25:THR:CG2	27:YD:25:THR:O	2.65	0.45
52:Y6:48:VAL:O	52:Y6:49:HIS:HB2	2.15	0.45
2:QB:33:TYR:HD1	2:QB:33:TYR:O	2.00	0.45
34:YO:22:ILE:HG12	34:YO:41:ALA:HA	1.98	0.45
25:RA:1693:U:H1'	27:RD:14:ARG:HH22	1.80	0.45
31:YH:7:LEU:HD12	31:YH:7:LEU:C	2.37	0.45
42:RW:65:LEU:CD1	42:RW:68:ARG:NH1	2.75	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:RV:59:ALA:HB2	41:RV:96:ILE:HD13	1.97	0.45
36:YQ:30:GLY:CA	36:YQ:107:ALA:HB2	2.39	0.45
1:XA:1130:A:N6	1:XA:1131:G:O6	2.50	0.45
1:QA:1320:C:N4	19:QS:36:ARG:HG3	2.32	0.45
39:YT:24:PRO:HD3	39:YT:52:ILE:HD12	1.98	0.45
25:YA:2377:A:H4'	38:YS:111:GLU:O	2.17	0.45
10:QJ:51:ARG:HG2	10:QJ:51:ARG:HH11	1.81	0.45
2:QB:240:GLN:HG2	2:QB:240:GLN:O	2.16	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
25:YA:1508:A:O2'	25:YA:1509:C:O4'	2.32	0.45
48:Y2:28:LYS:HB3	48:Y2:57:ILE:HG12	1.98	0.45
5:QE:80:ILE:HG13	5:QE:82:VAL:HG23	1.99	0.45
44:RY:2:ARG:O	44:RY:3:VAL:C	2.55	0.45
17:XQ:48:GLU:O	17:XQ:50:LYS:N	2.50	0.45
4:QD:199:ASN:O	4:QD:201:GLN:N	2.49	0.45
1:QA:503:C:H2'	1:QA:504:C:C6	2.51	0.45
9:XI:47:LEU:HD22	9:XI:47:LEU:H	1.81	0.45
18:QR:63:GLN:HA	18:QR:63:GLN:OE1	2.17	0.45
3:QC:92:ALA:HB2	3:QC:99:VAL:HG11	1.99	0.45
7:QG:108:ALA:C	7:QG:110:GLN:H	2.19	0.45
25:YA:2023:G:H5'	25:YA:2617:C:H4'	1.98	0.45
33:YN:20:GLY:HA2	33:YN:61:ARG:HD2	1.99	0.45
29:RF:119:ARG:CG	29:RF:119:ARG:HH11	2.29	0.45
25:YA:1101:U:H2'	25:YA:1102:C:C6	2.52	0.45
25:YA:1210:A:H5''	25:YA:1212:G:O4'	2.17	0.45
40:RU:53:ARG:C	40:RU:55:ARG:H	2.19	0.45
20:QT:10:LEU:C	20:QT:12:ALA:H	2.20	0.45
25:YA:2439:A:H5'	25:YA:2439:A:C8	2.51	0.45
1:QA:516:U:O2'	1:QA:519:C:N3	2.46	0.45
25:YA:451:C:H4'	29:YF:52:LYS:HZ2	1.82	0.45
25:RA:686:G:N2	25:RA:788:A:H61	2.15	0.45
25:YA:26:G:H1'	25:YA:515:A:N6	2.31	0.45
25:RA:2168:G:N3	25:RA:2168:G:H2'	2.31	0.45
7:QG:95:ARG:HG3	7:QG:95:ARG:HH11	1.82	0.45
25:RA:2777:G:OP2	25:RA:2781:A:O2'	2.18	0.45
32:YI:88:ILE:HG12	32:YI:122:GLU:H	1.82	0.45
4:QD:104:VAL:O	4:QD:107:ARG:N	2.49	0.45
25:RA:1257:C:H4'	29:RF:83:PHE:CE2	2.52	0.45
27:RD:109:ASP:HB2	27:RD:197:GLY:CA	2.46	0.45
25:RA:451:C:H4'	29:RF:52:LYS:HZ2	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1672:C:H5''	25:RA:2554:U:OP1	2.17	0.45
1:QA:1049:U:HO2'	14:QN:2:ALA:N	2.14	0.45
25:RA:1217:C:OP1	40:RU:15:LYS:NZ	2.45	0.45
49:R3:28:LEU:HA	49:R3:33:GLN:OE1	2.16	0.45
51:R5:15:ARG:HA	51:R5:18:ALA:HB3	1.99	0.45
25:YA:71:A:H5''	25:YA:72:U:H3'	1.98	0.45
1:XA:1338:G:C6	1:XA:1339:A:C6	3.05	0.45
25:RA:519:U:H2'	25:RA:520:G:H8	1.79	0.45
25:RA:1225:C:O2'	41:RV:85:LYS:HA	2.17	0.45
4:XD:187:ARG:HH11	4:XD:187:ARG:HG2	1.82	0.45
20:QT:24:LEU:HD13	20:QT:24:LEU:O	2.16	0.45
11:QK:83:ILE:HG12	11:QK:109:VAL:HG23	1.98	0.45
25:RA:515:A:H1'	25:RA:581:C:H1'	1.98	0.45
25:YA:871:U:H4'	36:YQ:69:PHE:CE2	2.52	0.45
14:QN:23:ARG:C	14:QN:24:CYS:O	2.54	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	2.36	0.45
25:YA:153:C:P	47:Y1:88:LYS:HE2	2.57	0.45
13:QM:66:LEU:HB2	13:QM:67:GLU:H	1.61	0.45
28:YE:4:ILE:HG12	28:YE:91:VAL:HG11	1.99	0.45
50:Y4:68:ARG:O	50:Y4:69:LYS:HB2	2.17	0.45
10:XJ:6:ILE:O	10:XJ:71:LEU:HD12	2.17	0.45
3:QC:42:LEU:HD12	3:QC:45:LYS:HZ3	1.82	0.45
10:QJ:63:PHE:HB3	14:QN:57:ARG:O	2.17	0.45
15:XO:30:ALA:HA	15:XO:85:LEU:HD11	1.97	0.45
2:XB:170:GLU:CA	2:XB:172:ILE:HD12	2.46	0.45
35:RP:144:GLU:N	35:RP:144:GLU:OE1	2.48	0.45
35:RP:81:GLN:CD	35:RP:106:LEU:O	2.55	0.45
27:RD:36:PRO:HB3	27:RD:62:TYR:O	2.16	0.45
25:YA:1250:G:OP2	35:YP:21:ARG:HD3	2.16	0.45
35:YP:21:ARG:HA	35:YP:21:ARG:HE	1.82	0.45
13:QM:3:ARG:HD2	13:QM:9:ILE:CG1	2.45	0.45
30:RG:36:LYS:O	30:RG:37:VAL:HG23	2.16	0.45
40:RU:97:ASP:HA	40:RU:100:VAL:CG2	2.47	0.45
33:YN:7:LYS:HD3	33:YN:9:VAL:H	1.80	0.45
36:YQ:65:PHE:O	36:YQ:66:ILE:CG1	2.48	0.45
5:XE:12:LEU:HD21	5:XE:14:ARG:HB3	1.98	0.45
52:Y6:15:GLU:OE2	52:Y6:44:ARG:NH1	2.49	0.45
33:RN:57:ALA:HA	33:RN:60:ILE:CD1	2.43	0.45
52:R6:17:LYS:O	52:R6:18:ARG:CB	2.64	0.45
52:R6:11:LEU:H	52:R6:25:LYS:HA	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RP:62:LEU:CD2	35:RP:62:LEU:H	2.19	0.45
34:RO:2:ILE:HD11	34:RO:82:ASN:ND2	2.16	0.45
34:RO:22:ILE:HG12	34:RO:41:ALA:HA	1.98	0.45
30:RG:102:PHE:HA	30:RG:105:LYS:HE3	1.98	0.45
35:YP:88:LEU:HD23	35:YP:88:LEU:C	2.37	0.45
39:YT:57:PHE:O	39:YT:58:ASN:C	2.53	0.45
11:XK:124:LYS:O	11:XK:126:ARG:N	2.40	0.45
35:YP:45:LEU:N	35:YP:45:LEU:CD1	2.79	0.45
1:XA:1346:A:N6	1:XA:1375:A:OP2	2.47	0.45
34:YO:97:ARG:H	34:YO:117:LEU:CD2	2.24	0.45
40:YU:76:TYR:CD2	40:YU:76:TYR:C	2.90	0.45
9:QI:83:ARG:C	9:QI:86:VAL:HG12	2.36	0.45
1:XA:1305:G:HO2'	1:XA:1306:A:H8	1.61	0.45
13:QM:108:ARG:O	13:QM:111:LYS:N	2.48	0.45
25:YA:2723:C:O3'	37:YR:1:MET:CE	2.65	0.45
17:XQ:33:GLY:O	17:XQ:34:LYS:C	2.56	0.45
4:QD:120:LEU:CD2	4:QD:125:HIS:HB2	2.45	0.45
27:RD:118:VAL:O	27:RD:129:ASN:HA	2.16	0.45
26:RB:80:U:O2'	26:RB:81:G:H5''	2.16	0.45
1:QA:741:G:H2'	1:QA:742:G:O4'	2.17	0.45
13:XM:108:ARG:O	13:XM:111:LYS:N	2.47	0.45
18:XR:63:GLN:OE1	18:XR:63:GLN:HA	2.17	0.45
25:RA:1113:U:H2'	25:RA:1114:G:C8	2.51	0.45
25:RA:1291:C:H5'	25:RA:1536:A:H5'	1.99	0.45
47:R1:73:LEU:C	47:R1:75:GLU:N	2.70	0.45
7:XG:45:ASP:O	7:XG:49:ILE:HG12	2.17	0.45
25:RA:1328:G:H2'	25:RA:1330:C:C5	2.52	0.45
7:XG:95:ARG:HG3	7:XG:95:ARG:HH11	1.82	0.45
25:RA:1796:U:H2'	25:RA:1797:C:H6	1.80	0.45
25:YA:363(B):G:H2'	25:YA:363(C):G:C8	2.51	0.45
1:XA:58:C:O2'	1:XA:388:G:N7	2.30	0.45
13:XM:28:ALA:C	13:XM:30:ALA:N	2.70	0.45
25:YA:508:G:HO2'	25:YA:509:C:P	2.40	0.45
44:RY:36:ALA:HB1	44:RY:67:LEU:O	2.16	0.45
37:RR:17:ARG:O	37:RR:20:LEU:HB3	2.17	0.45
22:QV:15:G:H2'	22:QV:59:A:N1	2.31	0.45
16:QP:50:LYS:O	16:QP:50:LYS:HD3	2.16	0.45
33:YN:5:VAL:HG13	33:YN:5:VAL:O	2.16	0.45
25:YA:436:C:H2'	25:YA:438:G:H8	1.81	0.45
44:RY:84:ARG:HD3	44:RY:86:ARG:HH11	1.82	0.45
10:QJ:38:ILE:CD1	10:QJ:71:LEU:HB3	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:XS:45:VAL:O	19:XS:62:ILE:O	2.35	0.45
25:YA:2635:C:OP1	28:YE:78:LEU:HD12	2.16	0.45
2:XB:77:ALA:HB2	2:XB:211:ILE:HG21	1.99	0.45
2:XB:68:ILE:HB	2:XB:70:PHE:HE1	1.82	0.45
10:XJ:63:PHE:HB3	14:XN:57:ARG:O	2.17	0.45
35:RP:96:THR:HG22	35:RP:126:VAL:CB	2.47	0.45
35:YP:81:GLN:CD	35:YP:106:LEU:O	2.55	0.45
28:RE:77:ILE:O	28:RE:78:LEU:O	2.34	0.45
15:QO:82:ILE:CG2	15:QO:83:GLU:N	2.79	0.45
41:RV:4:ILE:HG22	41:RV:39:LEU:HD23	1.98	0.45
42:YW:14:PRO:O	42:YW:16:LYS:N	2.50	0.45
34:YO:53:LYS:CD	34:YO:53:LYS:N	2.69	0.45
33:YN:22:THR:O	33:YN:60:ILE:HG22	2.16	0.45
52:Y6:7:ILE:HG23	52:Y6:8:LYS:N	2.32	0.45
4:QD:94:LEU:O	4:QD:98:GLU:N	2.50	0.45
16:XP:22:THR:CA	16:XP:33:ILE:HG12	2.41	0.45
52:Y6:18:ARG:O	52:Y6:19:ARG:O	2.33	0.45
25:RA:2712:U:O2'	25:RA:2712(A):A:H8	1.88	0.45
35:RP:88:LEU:HD23	35:RP:88:LEU:C	2.37	0.45
41:RV:5:VAL:HG13	41:RV:14:VAL:HG21	1.98	0.45
1:QA:323:U:H5'	20:QT:23:ARG:HB2	1.98	0.45
13:QM:15:VAL:O	13:QM:19:LEU:CD2	2.64	0.45
4:QD:166:LYS:HG2	27:YD:134:ARG:CZ	2.45	0.45
39:YT:23:ARG:CB	39:YT:24:PRO:HD2	2.40	0.45
17:XQ:59:ILE:N	17:XQ:59:ILE:CD1	2.78	0.45
7:QG:111:ARG:HD2	7:QG:123:GLU:HB2	1.99	0.45
29:RF:196:LEU:O	29:RF:200:GLU:HG2	2.17	0.45
8:XH:97:VAL:CG1	8:XH:98:LYS:H	2.30	0.45
34:YO:104:ARG:NH2	39:YT:34:VAL:HG11	2.32	0.45
1:QA:1113:C:H2'	1:QA:1114:C:C6	2.52	0.45
1:QA:1226:C:N4	13:QM:104:ARG:HD2	2.32	0.45
15:XO:25:THR:HG22	15:XO:70:LEU:HD22	1.99	0.45
13:XM:56:LEU:HD13	13:XM:56:LEU:O	2.17	0.45
25:RA:49:A:H61	25:RA:177:G:H2'	1.81	0.45
54:R8:36:LYS:HB3	54:R8:40:GLU:HG2	1.99	0.45
47:R1:49:VAL:HG12	47:R1:51:VAL:HG23	1.99	0.45
33:RN:118:LYS:C	33:RN:120:LEU:H	2.20	0.45
12:XL:117:ARG:NH2	12:XL:124:LYS:HD3	2.32	0.45
44:YY:25:GLY:HA3	44:YY:39:VAL:CG1	2.47	0.45
4:XD:165:MET:HE3	4:XD:168:ARG:HD2	1.98	0.45
2:XB:164:VAL:HB	2:XB:186:ALA:HB1	1.95	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:22:LYS:O	2:XB:24:TRP:N	2.50	0.45
36:YQ:58:PHE:CD1	36:YQ:58:PHE:O	2.70	0.45
4:XD:150:GLU:C	4:XD:152:SER:H	2.20	0.45
30:RG:129:GLY:O	30:RG:130:ASN:OD1	2.34	0.45
27:YD:226:MET:H	27:YD:226:MET:HG2	1.53	0.45
37:YR:12:ARG:HG3	37:YR:12:ARG:NH1	2.32	0.45
20:XT:10:LEU:C	20:XT:12:ALA:H	2.21	0.45
25:YA:582:G:OP1	40:YU:14:HIS:ND1	2.41	0.45
25:RA:1567:A:H4'	27:RD:58:HIS:CE1	2.51	0.45
1:QA:1129:C:H5'	1:QA:1130:A:OP1	2.16	0.45
41:RV:61:VAL:HA	41:RV:94:LEU:HD23	1.97	0.45
43:RX:47:PHE:O	43:RX:48:LYS:C	2.55	0.45
1:XA:1179:A:O3'	9:XI:103:THR:HG23	2.17	0.45
25:YA:1607:C:H4'	25:YA:1608:A:O5'	2.17	0.45
32:YI:79:ILE:N	32:YI:141:LYS:O	2.50	0.45
25:YA:795:C:H2'	25:YA:796:C:C6	2.52	0.45
25:YA:1535:U:N3	25:YA:1537:C:H1'	2.32	0.45
36:YQ:5:ARG:O	36:YQ:6:ARG:O	2.35	0.45
25:YA:195:A:OP1	35:YP:46:LYS:HE2	2.17	0.45
6:XF:22:GLU:OE1	6:XF:82:ARG:NH2	2.46	0.45
25:RA:2531:A:H4'	31:RH:157:TYR:CE2	2.52	0.45
36:YQ:93:TYR:N	36:YQ:93:TYR:CD1	2.85	0.45
13:QM:110:ARG:HH11	13:QM:110:ARG:HG3	1.82	0.45
25:RA:376:C:H2'	25:RA:377:C:C6	2.51	0.45
30:YG:121:ASN:C	30:YG:123:ASN:H	2.20	0.45
37:YR:17:ARG:O	37:YR:20:LEU:HB3	2.17	0.45
1:XA:1199:U:H4'	10:XJ:54:PHE:CE1	2.50	0.45
47:R1:60:PHE:HZ	47:R1:90:ILE:HG21	1.82	0.45
1:QA:430:A:O5'	4:QD:7:PRO:HA	2.17	0.45
2:XB:98:LEU:O	2:XB:101:MET:HG3	2.17	0.45
27:RD:44:ASN:HB2	27:RD:49:ILE:HA	1.93	0.45
28:RE:2:LYS:HG2	28:RE:95:ILE:HG22	1.99	0.45
11:QK:32:ILE:HD11	11:QK:72:ALA:HB2	1.96	0.45
35:RP:115:LEU:HA	35:RP:134:ALA:CB	2.47	0.45
35:RP:115:LEU:CB	35:RP:131:SER:HB2	2.47	0.45
31:RH:149:ARG:HA	31:RH:162:ILE:HG21	1.99	0.45
35:YP:112:LEU:CD1	35:YP:114:ILE:HG23	2.47	0.45
36:YQ:133:ARG:CG	36:YQ:134:ARG:N	2.78	0.45
29:RF:184:TYR:CE2	29:RF:188:ARG:HD2	2.52	0.45
52:Y6:7:ILE:O	52:Y6:8:LYS:HG2	2.17	0.45
7:XG:26:PHE:HZ	7:XG:120:ILE:HG23	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:R6:11:LEU:HD11	52:R6:51:GLU:HG3	1.98	0.45
52:R6:9:LEU:CD1	52:R6:26:ASN:ND2	2.79	0.45
7:QG:26:PHE:HZ	7:QG:120:ILE:HG23	1.82	0.45
27:RD:79:VAL:HG21	27:RD:111:LEU:HD21	1.98	0.45
13:QM:57:ARG:HD2	13:QM:61:GLU:OE2	2.17	0.45
6:XF:23:LYS:HG2	6:XF:27:GLN:OE1	2.17	0.45
27:YD:145:VAL:HG12	27:YD:146:GLU:N	2.32	0.45
13:QM:101:GLN:HB2	13:QM:101:GLN:HE21	1.66	0.45
25:YA:1020:A:N6	25:YA:1141:U:O2'	2.50	0.45
21:XU:6:ARG:C	21:XU:8:THR:H	2.20	0.45
41:RV:5:VAL:HG22	41:RV:14:VAL:CG2	2.46	0.45
36:RQ:90:VAL:C	36:RQ:92:GLY:N	2.70	0.45
20:XT:36:LEU:C	20:XT:38:LYS:N	2.71	0.45
30:YG:83:ARG:HG3	30:YG:86:MET:CE	2.46	0.45
25:RA:324:A:N6	25:RA:338:G:O2'	2.47	0.45
7:XG:111:ARG:HD2	7:XG:123:GLU:HB2	1.99	0.45
27:RD:68:LYS:HD2	27:RD:70:TRP:CZ2	2.52	0.45
9:XI:7:THR:O	9:XI:83:ARG:CD	2.65	0.45
36:RQ:119:ARG:CG	36:RQ:119:ARG:HH11	2.25	0.45
7:XG:16:LEU:HD13	9:XI:45:ALA:HB2	1.99	0.45
13:QM:39:ILE:HD12	13:QM:56:LEU:HD23	1.99	0.45
54:Y8:36:LYS:HB3	54:Y8:40:GLU:HG2	1.99	0.45
45:RZ:58:VAL:O	45:RZ:60:GLU:N	2.47	0.45
28:YE:18:ASP:O	28:YE:19:ARG:C	2.56	0.45
4:XD:68:TYR:O	4:XD:69:GLY:C	2.55	0.45
10:QJ:62:HIS:CD2	10:QJ:62:HIS:N	2.85	0.45
10:QJ:29:ARG:HH11	10:QJ:29:ARG:HG2	1.81	0.45
36:RQ:10:ARG:O	36:RQ:11:LYS:CB	2.64	0.45
36:RQ:11:LYS:HE2	36:RQ:87:LYS:HA	1.98	0.45
11:XK:75:TYR:N	11:XK:75:TYR:CD1	2.85	0.45
1:XA:1239:A:H62	1:XA:1299:A:N6	2.14	0.45
18:QR:82:THR:CG2	18:QR:83:GLU:N	2.79	0.45
34:RO:78:ARG:HH21	39:RT:103:ARG:HH22	1.64	0.45
27:YD:45:ASN:CG	27:YD:46:GLN:N	2.68	0.45
25:RA:1510:A:O2'	25:RA:1511:A:N7	2.50	0.45
1:XA:1060:C:C5	3:XC:2:GLY:HA2	2.52	0.45
25:YA:1992:G:H5'	25:YA:1994:C:H41	1.82	0.45
41:YV:61:VAL:O	41:YV:61:VAL:HG22	2.16	0.45
35:YP:92:GLU:HA	35:YP:123:LEU:HD23	1.99	0.45
1:QA:97:U:H2'	1:QA:99:C:C6	2.52	0.45
25:YA:2693:A:H2'	25:YA:2694:G:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1797:C:H4'	27:RD:257:LEU:O	2.17	0.45
6:XF:101:ALA:HA	18:XR:28:GLU:CG	2.46	0.45
16:QP:39:TYR:CZ	16:QP:41:PRO:HB3	2.52	0.45
38:YS:3:ARG:O	38:YS:4:LEU:O	2.35	0.45
25:YA:1771:C:O2'	25:YA:1786:A:H8	2.00	0.45
27:RD:198:ASN:ND2	27:RD:198:ASN:O	2.50	0.45
25:RA:108:U:H2'	25:RA:109:G:H8	1.82	0.45
1:XA:944:G:N1	1:XA:1338:G:OP2	2.46	0.45
25:YA:686:G:N2	25:YA:788:A:H61	2.13	0.45
41:RV:69:LYS:HG3	41:RV:87:HIS:O	2.17	0.45
1:XA:240:C:H2'	1:XA:241:C:C6	2.51	0.45
25:RA:1470:G:N2	25:RA:1522:G:OP2	2.50	0.45
1:XA:164:U:H2'	1:XA:165:C:C6	2.52	0.45
41:YV:69:LYS:HG3	41:YV:87:HIS:O	2.17	0.45
25:YA:2346:A:H5''	25:YA:2383:G:H1'	1.99	0.45
42:RW:21:VAL:HG12	42:RW:21:VAL:O	2.17	0.45
26:RB:20:C:H2'	26:RB:21:G:O4'	2.17	0.45
8:QH:64:LYS:HB3	8:QH:79:VAL:HG21	1.98	0.45
1:XA:748:C:H1'	1:XA:749:C:H5	1.81	0.45
25:RA:2037:G:H2'	25:RA:2038:G:C8	2.51	0.45
19:QS:69:HIS:O	19:QS:70:LYS:O	2.34	0.45
45:YZ:100:VAL:HA	45:YZ:101:PRO:HD3	1.87	0.45
53:Y7:2:LYS:HG2	53:Y7:3:ARG:N	2.31	0.45
10:XJ:54:PHE:CE2	10:XJ:55:LYS:HD2	2.52	0.44
47:R1:48:LYS:HA	47:R1:60:PHE:O	2.17	0.44
25:RA:242:G:C5'	54:R8:3:LYS:HE3	2.46	0.44
15:XO:83:GLU:C	15:XO:85:LEU:N	2.70	0.44
15:XO:82:ILE:CG2	15:XO:83:GLU:N	2.79	0.44
2:XB:188:ALA:CB	2:XB:200:ILE:HG23	2.47	0.44
54:R8:9:GLY:O	54:R8:13:ARG:HG2	2.16	0.44
30:RG:67:LYS:CE	50:R4:6:HIS:NE2	2.74	0.44
40:RU:86:ALA:CB	40:RU:88:ILE:HD11	2.48	0.44
38:YS:78:LEU:HD21	38:YS:108:GLY:CA	2.47	0.44
38:YS:83:LYS:CE	38:YS:109:GLY:HA2	2.47	0.44
36:YQ:66:ILE:O	36:YQ:104:PHE:N	2.49	0.44
28:RE:101:ARG:HD2	28:RE:171:GLU:HA	1.98	0.44
38:YS:89:ARG:O	38:YS:90:GLY:C	2.55	0.44
54:R8:15:LYS:HD3	54:R8:15:LYS:C	2.37	0.44
25:RA:2415:G:O3'	35:RP:66:GLY:HA3	2.17	0.44
34:RO:19:ILE:H	34:RO:19:ILE:HD13	1.82	0.44
27:RD:143:HIS:HD2	27:RD:144:ALA:HB2	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:QT:84:LEU:HD13	20:QT:84:LEU:C	2.36	0.44
20:QT:89:ARG:HH12	20:QT:106:ALA:HB1	1.82	0.44
27:RD:145:VAL:HG12	27:RD:146:GLU:N	2.32	0.44
34:YO:19:ILE:HD13	34:YO:19:ILE:H	1.83	0.44
20:XT:44:ALA:O	20:XT:91:LEU:HB3	2.16	0.44
31:RH:7:LEU:C	31:RH:7:LEU:HD12	2.37	0.44
34:RO:104:ARG:NH2	39:RT:34:VAL:HG11	2.32	0.44
2:QB:95:GLN:NE2	2:QB:96:ARG:NH1	2.65	0.44
33:RN:7:LYS:HD3	33:RN:9:VAL:H	1.80	0.44
35:YP:75:ILE:HG12	35:YP:77:ARG:NH1	2.32	0.44
35:YP:75:ILE:HG12	35:YP:77:ARG:HH12	1.82	0.44
28:RE:36:ARG:CB	28:RE:36:ARG:HH11	2.28	0.44
3:XC:87:LEU:C	3:XC:89:GLU:H	2.19	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
1:QA:375:U:C4'	16:QP:17:TYR:HE2	2.24	0.44
39:YT:36:GLU:CG	39:YT:41:ARG:HD3	2.46	0.44
10:XJ:51:ARG:HG2	10:XJ:51:ARG:HH11	1.82	0.44
16:XP:72:ARG:O	16:XP:72:ARG:HD3	2.17	0.44
5:QE:36:ASP:C	5:QE:37:ARG:HG2	2.38	0.44
25:YA:528:A:H2	25:YA:2043:C:C5'	2.30	0.44
25:RA:2567:G:H2'	25:RA:2568:C:C6	2.51	0.44
1:XA:253:U:H2'	1:XA:254:G:C8	2.52	0.44
4:QD:3:ARG:O	4:QD:4:TYR:C	2.55	0.44
31:RH:51:ARG:HG3	31:RH:51:ARG:NH1	2.30	0.44
2:XB:30:ARG:HH21	2:XB:194:PRO:HG2	1.81	0.44
2:XB:30:ARG:O	2:XB:31:TYR:HD2	2.00	0.44
9:XI:13:ALA:HB2	9:XI:68:GLY:CA	2.47	0.44
2:QB:30:ARG:HH21	2:QB:194:PRO:HG2	1.82	0.44
27:YD:166:GLN:CA	27:YD:166:GLN:NE2	2.78	0.44
27:RD:166:GLN:NE2	27:RD:166:GLN:HA	2.32	0.44
8:QH:82:HIS:CD2	8:QH:82:HIS:C	2.91	0.44
1:QA:791:G:H2'	1:QA:792:A:H5'	1.99	0.44
25:YA:870:A:H5''	36:YQ:6:ARG:O	2.16	0.44
53:R7:24:THR:O	53:R7:28:ARG:HG3	2.16	0.44
1:QA:681:C:H2'	1:QA:682:G:H8	1.82	0.44
29:YF:144:LYS:C	29:YF:146:ALA:H	2.21	0.44
32:YI:94:ALA:HB2	32:YI:116:LEU:HD13	1.99	0.44
25:RA:1405:U:H2'	25:RA:1406:U:C6	2.52	0.44
1:XA:1412:C:H2'	1:XA:1413:A:C8	2.52	0.44
1:QA:614:A:OP1	4:QD:85:LYS:NZ	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1400:G:H2'	25:YA:1401:G:C8	2.52	0.44
27:YD:52:ARG:HB2	27:YD:53:PHE:CD2	2.52	0.44
13:XM:110:ARG:HG3	13:XM:110:ARG:HH11	1.82	0.44
42:RW:67:ASP:OD2	42:RW:67:ASP:N	2.50	0.44
44:RY:73:ARG:HE	44:RY:73:ARG:HB3	1.51	0.44
26:YB:20:C:H2'	26:YB:21:G:O4'	2.17	0.44
1:XA:109:A:C6	1:XA:326:G:C6	3.05	0.44
10:XJ:54:PHE:CD2	10:XJ:55:LYS:HD2	2.53	0.44
2:QB:98:LEU:O	2:QB:101:MET:HG3	2.17	0.44
25:RA:241:A:H4'	25:RA:242:G:OP1	2.17	0.44
19:QS:41:VAL:HG13	19:QS:44:MET:CB	2.38	0.44
28:RE:4:ILE:HG12	28:RE:91:VAL:HG11	1.99	0.44
13:XM:66:LEU:C	13:XM:70:LEU:HB2	2.38	0.44
10:XJ:61:GLU:CG	14:YN:58:LYS:HE2	2.47	0.44
27:RD:92:ILE:HD12	27:RD:104:TYR:HD2	1.81	0.44
2:QB:189:ASP:OD2	2:QB:205:ASP:OD1	2.35	0.44
38:RS:78:LEU:HD21	38:RS:108:GLY:CA	2.47	0.44
2:XB:229:VAL:O	2:XB:229:VAL:HG12	2.17	0.44
30:YG:16:ARG:CZ	30:YG:31:VAL:HG11	2.47	0.44
3:QC:22:TRP:HB3	3:QC:59:ARG:HB2	1.99	0.44
30:RG:16:ARG:CZ	30:RG:31:VAL:HG11	2.47	0.44
4:QD:25:ARG:CZ	4:QD:30:LYS:HE3	2.46	0.44
51:Y5:56:LYS:O	51:Y5:58:LEU:N	2.50	0.44
10:QJ:33:GLN:HB2	10:QJ:75:ILE:HD11	1.99	0.44
4:XD:94:LEU:O	4:XD:98:GLU:N	2.49	0.44
35:RP:75:ILE:HG12	35:RP:77:ARG:HH12	1.82	0.44
51:R5:56:LYS:O	51:R5:58:LEU:N	2.50	0.44
5:XE:52:PRO:HB2	5:XE:53:LEU:HD12	1.97	0.44
5:QE:7:GLU:HB3	5:QE:112:LEU:HD13	1.99	0.44
29:RF:7:TYR:CD1	29:RF:7:TYR:N	2.85	0.44
20:XT:56:MET:HG3	20:XT:88:VAL:HG21	1.98	0.44
27:YD:177:LEU:O	27:YD:179:SER:N	2.51	0.44
30:RG:44:GLY:HA2	30:RG:88:ILE:HD11	1.99	0.44
20:QT:28:ALA:O	20:QT:30:LYS:N	2.50	0.44
31:RH:53:GLU:OE1	31:RH:53:GLU:HA	2.16	0.44
26:YB:42:C:C6	30:YG:69:ALA:HB2	2.52	0.44
48:R2:41:ILE:O	48:R2:41:ILE:HD12	2.16	0.44
33:YN:112:LEU:O	33:YN:116:LEU:HG	2.16	0.44
48:Y2:41:ILE:HD12	48:Y2:41:ILE:O	2.16	0.44
25:RA:567:A:OP2	35:RP:29:LYS:NZ	2.51	0.44
9:XI:5:TYR:CD2	9:XI:6:GLY:N	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RG:6:ALA:HB3	30:RG:104:GLU:OE2	2.16	0.44
4:XD:206:PHE:CD2	4:XD:207:TYR:CE1	3.05	0.44
34:YO:104:ARG:NH1	39:YT:36:GLU:CD	2.71	0.44
9:XI:118:LYS:O	9:XI:119:ALA:CB	2.65	0.44
16:XP:72:ARG:CD	16:XP:73:LEU:HD23	2.47	0.44
12:XL:120:TYR:CD1	12:XL:120:TYR:N	2.86	0.44
50:R4:15:ILE:CG2	50:R4:20:ASN:ND2	2.81	0.44
50:Y4:15:ILE:CG2	50:Y4:20:ASN:ND2	2.81	0.44
27:RD:241:PRO:O	27:RD:242:ARG:C	2.55	0.44
4:QD:13:ARG:CB	4:QD:33:MET:HE3	2.47	0.44
27:RD:176:ARG:HH11	27:RD:176:ARG:CG	2.30	0.44
8:XH:110:ALA:HB3	8:XH:121:ASP:HB3	1.98	0.44
29:RF:132:VAL:HG23	29:RF:133:ASN:H	1.82	0.44
1:QA:1127:G:H21	1:QA:1147:C:N4	2.15	0.44
31:YH:137:ASP:HB2	31:YH:140:LYS:HE3	1.98	0.44
17:QQ:3:LYS:HD3	17:QQ:61:GLU:O	2.17	0.44
27:YD:166:GLN:NE2	27:YD:166:GLN:HA	2.32	0.44
34:YO:120:GLU:OE1	39:YT:67:SER:OG	2.24	0.44
30:YG:129:GLY:HA2	30:YG:169:ALA:HB2	1.99	0.44
25:RA:1155:A:O3'	40:RU:55:ARG:NH1	2.50	0.44
38:RS:5:THR:HG1	38:RS:7:TYR:HB3	1.82	0.44
37:RR:10:LEU:O	37:RR:11:ASN:C	2.55	0.44
12:QL:120:TYR:CD1	12:QL:120:TYR:N	2.86	0.44
25:YA:414:C:H2'	25:YA:415:A:C8	2.52	0.44
25:RA:1927:A:H2'	25:RA:1928:A:C8	2.53	0.44
22:XV:13:C:O2'	25:YA:1924:C:H4'	2.18	0.44
25:RA:2659:G:N2	25:RA:2662:A:OP2	2.50	0.44
15:QO:54:ARG:O	15:QO:55:GLY:C	2.55	0.44
25:RA:234:C:H2'	25:RA:235:U:C6	2.52	0.44
54:R8:17:THR:O	54:R8:20:GLY:N	2.46	0.44
1:XA:411:A:C6	1:XA:429:U:C4	3.05	0.44
47:R1:94:LEU:O	47:R1:95:LEU:HB2	2.18	0.44
47:Y1:60:PHE:HE2	47:Y1:91:LYS:NZ	2.16	0.44
44:RY:97:ARG:HG2	44:RY:97:ARG:HH11	1.82	0.44
44:RY:95:LYS:HB2	44:RY:99:CYS:O	2.18	0.44
13:QM:66:LEU:C	13:QM:70:LEU:HB2	2.38	0.44
28:YE:50:GLY:CA	28:YE:74:PRO:HG3	2.46	0.44
2:XB:189:ASP:OD2	2:XB:205:ASP:OD1	2.35	0.44
5:QE:12:LEU:HB3	5:QE:31:LEU:CB	2.47	0.44
40:YU:57:PHE:O	40:YU:59:ARG:N	2.50	0.44
5:XE:10:MET:HB2	5:XE:32:VAL:HG22	1.94	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:XM:53:VAL:HG12	13:XM:57:ARG:HH12	1.82	0.44
50:Y4:33:VAL:CG1	50:Y4:34:GLU:N	2.80	0.44
10:XJ:33:GLN:HB2	10:XJ:75:ILE:HD11	1.99	0.44
7:QG:15:ASP:HB3	7:QG:20:ASP:N	2.15	0.44
20:QT:44:ALA:HB1	20:QT:91:LEU:HB2	2.00	0.44
5:QE:101:ILE:HD13	5:QE:101:ILE:H	1.81	0.44
34:YO:40:VAL:CG1	34:YO:41:ALA:N	2.80	0.44
17:QQ:33:GLY:O	17:QQ:34:LYS:C	2.55	0.44
30:YG:63:ILE:HG12	30:YG:64:THR:N	2.33	0.44
33:RN:36:GLY:O	33:RN:42:TRP:CE3	2.69	0.44
7:XG:38:LEU:O	7:XG:42:ILE:HG13	2.17	0.44
39:RT:49:VAL:CG1	39:RT:49:VAL:O	2.64	0.44
54:Y8:47:LYS:HD2	54:Y8:48:PHE:N	2.33	0.44
29:RF:155:LEU:HA	29:RF:174:VAL:CG1	2.46	0.44
35:RP:45:LEU:HD12	35:RP:45:LEU:N	2.32	0.44
34:YO:97:ARG:HA	34:YO:117:LEU:HD22	1.99	0.44
27:YD:80:ALA:O	27:YD:113:VAL:HG13	2.16	0.44
4:XD:76:ARG:O	4:XD:79:PHE:HB3	2.17	0.44
4:QD:178:VAL:O	4:QD:181:MET:N	2.50	0.44
25:YA:2009:G:H1'	37:YR:107:ASP:O	2.18	0.44
15:QO:29:VAL:HB	15:QO:81:LEU:HD21	1.99	0.44
15:XO:29:VAL:HB	15:XO:81:LEU:HD21	1.99	0.44
6:QF:76:ALA:HB1	6:QF:80:ARG:HH21	1.82	0.44
32:RI:41:GLU:HA	32:RI:44:LEU:HB2	1.99	0.44
5:XE:82:VAL:HG12	5:XE:83:GLU:H	1.77	0.44
47:R1:54:ALA:O	47:R1:55:GLY:O	2.35	0.44
16:QP:15:PRO:O	16:QP:16:HIS:ND1	2.50	0.44
33:RN:120:LEU:HD13	33:RN:120:LEU:C	2.37	0.44
47:R1:10:LYS:HD2	47:R1:66:HIS:HE1	1.82	0.44
33:RN:67:LEU:HA	33:RN:87:LEU:HD13	2.00	0.44
47:Y1:10:LYS:HD2	47:Y1:66:HIS:HE1	1.82	0.44
3:XC:140:ARG:HH11	3:XC:140:ARG:CG	2.30	0.44
3:QC:140:ARG:CG	3:QC:140:ARG:HH11	2.30	0.44
4:QD:122:ARG:HA	4:QD:134:ASP:HB2	2.00	0.44
25:RA:2271:G:H2'	25:RA:2272:U:C6	2.52	0.44
11:XK:13:GLN:HG3	11:XK:75:TYR:CA	2.48	0.44
42:RW:74:ALA:O	42:RW:75:TYR:CB	2.65	0.44
18:XR:82:THR:HG22	18:XR:83:GLU:H	1.79	0.44
42:YW:28:SER:O	42:YW:30:GLU:N	2.51	0.44
49:Y3:60:GLU:HG2	49:Y3:60:GLU:O	2.16	0.44
25:RA:389:G:N1	35:RP:70:GLN:HB3	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:QG:45:ASP:O	7:QG:49:ILE:HG12	2.17	0.44
25:RA:328:U:H4'	44:RY:68:HIS:CE1	2.52	0.44
39:YT:135:ALA:C	39:YT:137:LYS:N	2.71	0.44
42:RW:88:ARG:HG2	42:RW:88:ARG:HH11	1.82	0.44
33:YN:109:LYS:H	33:YN:109:LYS:CD	2.26	0.44
25:YA:28:A:N6	25:YA:512:G:H1'	2.32	0.44
1:QA:1131:G:H2'	1:QA:1132:C:H6	1.82	0.44
53:R7:32:LYS:O	53:R7:33:ARG:C	2.55	0.44
12:QL:120:TYR:O	12:QL:121:GLY:O	2.36	0.44
25:RA:1258:C:O4'	29:RF:84:VAL:HG11	2.18	0.44
26:RB:33:G:H5''	26:RB:33:G:H8	1.82	0.44
25:RA:30:G:H2'	25:RA:31:C:C6	2.52	0.44
4:QD:72:GLU:O	4:QD:73:ARG:C	2.52	0.44
25:YA:1301:A:O2'	25:YA:1302:A:H3'	2.17	0.44
25:RA:26:G:H1'	25:RA:515:A:H61	1.81	0.44
25:RA:335:C:H4'	44:RY:73:ARG:CZ	2.47	0.44
3:QC:69:HIS:N	3:QC:69:HIS:ND1	2.66	0.44
25:RA:2747:G:H21	25:RA:2757:A:H62	1.64	0.44
8:XH:1:MET:CE	8:XH:1:MET:H3	2.31	0.44
29:YF:149:ASP:OD2	29:YF:151:SER:HB3	2.17	0.44
26:RB:78:A:H2'	26:RB:79:C:O4'	2.17	0.44
25:RA:1228:G:OP2	40:RU:16:LYS:NZ	2.34	0.44
1:XA:1333:A:H2'	1:XA:1334:G:O4'	2.17	0.44
25:YA:2715:C:H2'	25:YA:2716:U:H6	1.82	0.44
25:RA:271:G:H2'	25:RA:272:G:H8	1.82	0.44
15:XO:54:ARG:O	15:XO:55:GLY:C	2.55	0.44
40:YU:53:ARG:C	40:YU:55:ARG:H	2.20	0.44
1:XA:627:G:H2'	1:XA:628:G:H8	1.82	0.44
5:XE:147:ASP:N	5:XE:147:ASP:OD2	2.50	0.44
1:QA:1225:A:N3	1:QA:1225:A:H2'	2.31	0.44
25:RA:229:A:OP1	25:RA:229:A:H4'	2.15	0.44
5:QE:147:ASP:OD2	5:QE:147:ASP:N	2.50	0.44
1:QA:1384:C:H2'	1:QA:1385:G:H8	1.82	0.44
1:XA:292:G:N7	1:XA:293:G:H1'	2.32	0.44
25:RA:1436:G:H1'	25:RA:1477:A:O2'	2.17	0.44
1:XA:818:G:H3'	1:XA:819:A:H5''	1.99	0.44
1:QA:1496:C:H2'	1:QA:1497:G:O4'	2.17	0.44
1:XA:392:G:P	16:XP:12:LYS:HG3	2.56	0.44
47:Y1:48:LYS:HA	47:Y1:60:PHE:O	2.17	0.44
44:RY:88:LYS:HB3	44:RY:90:LEU:CD2	2.48	0.44
27:RD:48:ARG:HG3	27:RD:48:ARG:NH1	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:XJ:38:ILE:CG1	10:XJ:71:LEU:HB3	2.48	0.44
3:QC:42:LEU:HD12	3:QC:45:LYS:NZ	2.32	0.44
35:RP:101:VAL:HA	35:RP:106:LEU:HB2	1.99	0.44
27:RD:30:GLU:HG3	27:RD:63:ARG:NE	2.32	0.44
5:QE:31:LEU:HD23	5:QE:45:PHE:CD1	2.53	0.44
25:YA:2495:G:H5''	36:YQ:81:VAL:CG1	2.47	0.44
25:RA:1138:G:H21	33:RN:106:MET:CE	2.29	0.44
20:QT:48:LYS:HB3	20:QT:51:GLU:CG	2.48	0.44
54:Y8:15:LYS:HD3	54:Y8:15:LYS:C	2.37	0.44
27:RD:155:LEU:HD12	27:RD:155:LEU:N	2.32	0.44
13:QM:16:ASP:O	13:QM:19:LEU:HD23	2.17	0.44
13:XM:121:LYS:NZ	23:XY:40:G:O2'	2.51	0.44
35:YP:45:LEU:N	35:YP:45:LEU:HD12	2.32	0.44
38:YS:56:LEU:O	38:YS:57:LYS:O	2.36	0.44
3:XC:43:LEU:HD11	3:XC:66:VAL:HG11	1.98	0.44
16:XP:50:LYS:O	16:XP:50:LYS:HD3	2.17	0.44
29:YF:201:VAL:HG13	29:YF:202:PHE:N	2.33	0.44
25:YA:1153:C:OP1	40:YU:76:TYR:OH	2.34	0.44
40:RU:66:ASN:CB	40:RU:76:TYR:HB2	2.44	0.44
20:XT:89:ARG:HH12	20:XT:106:ALA:HB1	1.82	0.44
1:XA:345:C:O3'	39:YT:41:ARG:NH2	2.50	0.44
9:QI:5:TYR:CD2	9:QI:6:GLY:N	2.85	0.44
13:QM:56:LEU:O	13:QM:56:LEU:HD13	2.17	0.44
1:QA:1113:C:H2'	1:QA:1114:C:H6	1.81	0.44
2:QB:51:LEU:O	2:QB:55:PHE:HD2	2.00	0.44
25:RA:27:G:O2'	25:RA:28:A:H8	2.00	0.44
37:RR:3:HIS:C	37:RR:5:LYS:H	2.16	0.44
20:QT:83:ARG:C	20:QT:86:ARG:HB3	2.38	0.44
17:QQ:48:GLU:O	17:QQ:50:LYS:N	2.50	0.44
25:RA:373:U:H2'	25:RA:374:A:H8	1.82	0.44
6:QF:3:ARG:HG2	6:QF:93:SER:OG	2.17	0.44
25:RA:1161:C:O2'	41:RV:8:GLY:HA2	2.17	0.44
1:XA:253:U:H2'	1:XA:254:G:H8	1.83	0.44
25:YA:2630:G:O4'	25:YA:2894:G:H1'	2.18	0.44
50:R4:15:ILE:N	50:R4:15:ILE:CD1	2.78	0.44
12:QL:117:ARG:NH2	12:QL:124:LYS:HD3	2.32	0.44
30:YG:19:LEU:HA	30:YG:22:ARG:HB2	1.99	0.44
35:YP:6:LEU:HD22	35:YP:6:LEU:N	2.31	0.44
33:RN:20:GLY:HA2	33:RN:61:ARG:HD2	1.99	0.44
43:RX:87:GLN:HB2	43:RX:87:GLN:HE21	1.55	0.44
9:QI:4:TYR:CZ	9:QI:88:TYR:HB2	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:XC:108:ASN:HB3	3:XC:111:LEU:HD12	1.99	0.44
1:QA:189:U:C2	17:QQ:72:ARG:NH1	2.86	0.44
25:YA:389:G:H22	35:YP:72:PRO:CD	2.29	0.44
25:YA:389:G:H22	35:YP:72:PRO:HD3	1.81	0.44
30:RG:129:GLY:HA2	30:RG:169:ALA:HB2	1.99	0.44
25:YA:888:C:H3'	25:YA:889:C:C4'	2.46	0.44
7:QG:40:ALA:O	7:QG:41:ARG:C	2.55	0.44
41:RV:61:VAL:O	41:RV:61:VAL:HG22	2.16	0.44
38:RS:3:ARG:O	38:RS:4:LEU:O	2.35	0.44
25:RA:38:A:N3	29:RF:48:THR:OG1	2.48	0.44
25:RA:2862:G:H2'	25:RA:2863:C:C6	2.52	0.44
19:QS:2:PRO:HB2	50:R4:68:ARG:HH22	1.81	0.44
26:YB:44:G:H1'	26:YB:47:C:N4	2.32	0.44
25:YA:2243:U:H2'	25:YA:2244:U:C6	2.51	0.44
25:RA:792:G:N3	25:RA:2072:G:O2'	2.40	0.44
25:YA:2182:G:H2'	25:YA:2183:C:C6	2.52	0.44
29:RF:117:ARG:NH2	29:RF:189:THR:O	2.50	0.44
1:QA:397:A:H5'	1:QA:398:C:OP1	2.17	0.44
35:RP:83:VAL:HG11	35:RP:112:LEU:HD21	1.97	0.44
35:YP:115:LEU:CB	35:YP:131:SER:HB2	2.47	0.44
13:QM:90:LEU:HD12	13:QM:91:ARG:N	2.33	0.44
11:XK:53:SER:C	11:XK:55:LYS:H	2.21	0.44
2:QB:77:ALA:HB2	2:QB:211:ILE:HG21	1.99	0.44
25:RA:675:A:H4'	29:RF:67:GLN:OE1	2.17	0.44
26:RB:57:A:H4'	30:RG:30:GLU:HG2	1.98	0.44
33:RN:57:ALA:O	33:RN:124:ALA:HA	2.18	0.44
27:YD:12:SER:C	27:YD:14:ARG:N	2.70	0.44
1:QA:1306:A:C6	1:QA:1307:U:C2	3.05	0.44
25:RA:956:G:H2'	25:RA:957:A:H2'	1.99	0.44
25:YA:910:A:N1	25:YA:2277:G:H1'	2.32	0.44
13:XM:16:ASP:O	13:XM:19:LEU:HD23	2.17	0.44
11:XK:121:PRO:HD2	11:XK:126:ARG:CD	2.46	0.44
29:RF:174:VAL:O	29:RF:174:VAL:CG1	2.65	0.44
54:R8:47:LYS:HD2	54:R8:48:PHE:N	2.33	0.44
10:XJ:16:LEU:HD13	10:XJ:16:LEU:C	2.38	0.44
43:RX:70:LEU:HD23	43:RX:70:LEU:H	1.77	0.44
4:QD:206:PHE:CD2	4:QD:207:TYR:CE1	3.06	0.44
4:QD:76:ARG:O	4:QD:79:PHE:HB3	2.17	0.44
35:YP:31:ALA:C	35:YP:32:THR:CG2	2.85	0.44
33:YN:63:THR:HG23	33:YN:66:LYS:HE3	2.00	0.44
9:QI:7:THR:O	9:QI:83:ARG:CD	2.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1844:C:OP1	27:YD:257:LEU:HD23	2.18	0.44
11:QK:48:ILE:HD11	11:QK:64:ALA:N	2.32	0.44
42:RW:29:LEU:HD11	42:RW:55:ALA:HB2	1.98	0.44
10:XJ:62:HIS:N	10:XJ:62:HIS:CD2	2.85	0.44
4:QD:68:TYR:O	4:QD:69:GLY:C	2.55	0.44
2:XB:24:TRP:CD2	2:XB:26:PRO:HD3	2.52	0.44
28:YE:172:VAL:HG13	28:YE:182:LEU:HD11	1.98	0.44
25:YA:443:A:H3'	29:YF:45:ARG:NH1	2.33	0.44
9:XI:4:TYR:CZ	9:XI:88:TYR:HB2	2.52	0.44
1:XA:1024:G:H4'	1:XA:1024:G:OP1	2.18	0.44
45:RZ:110:GLY:N	45:RZ:111:VAL:HG12	2.33	0.44
9:QI:128:ARG:HH21	22:QV:35:A:P	2.41	0.44
39:RT:135:ALA:C	39:RT:137:LYS:N	2.71	0.44
46:Y0:36:ILE:HD11	46:Y0:39:ARG:HG2	2.00	0.44
36:YQ:60:ARG:HH21	36:YQ:60:ARG:HB2	1.82	0.44
17:QQ:13:ASP:O	17:QQ:15:MET:N	2.51	0.44
25:YA:658:C:H2'	25:YA:659:C:C6	2.52	0.44
25:RA:2122:U:H2'	25:RA:2123:G:H8	1.82	0.44
5:XE:62:ALA:C	5:XE:64:ARG:H	2.21	0.44
28:RE:143:ASN:N	28:RE:143:ASN:ND2	2.65	0.44
11:XK:83:ILE:HG12	11:XK:109:VAL:HG23	1.99	0.44
32:YI:90:GLY:O	32:YI:121:LYS:HE2	2.17	0.44
26:YB:78:A:H2'	26:YB:79:C:O4'	2.18	0.44
1:XA:1062:U:H2'	1:XA:1063:C:C6	2.52	0.44
39:YT:80:SER:HA	39:YT:81:PRO:HD3	1.73	0.44
1:QA:636:U:H2'	1:QA:637:G:H8	1.83	0.44
25:YA:155:C:H5'	25:YA:161:U:OP2	2.18	0.44
1:XA:1171:G:H2'	1:XA:1172:C:C6	2.52	0.44
1:QA:555:C:H2'	1:QA:556:C:C6	2.52	0.44
8:QH:88:LYS:HB3	8:QH:89:PRO:HD2	2.00	0.44
25:RA:2688:U:H5	25:RA:2720:U:OP2	2.01	0.44
28:RE:11:MET:O	28:RE:12:THR:HB	2.18	0.44
1:XA:963:G:H21	10:XJ:55:LYS:HE2	1.81	0.44
1:XA:973:G:C1'	10:XJ:55:LYS:HG2	2.47	0.44
4:XD:9:CYS:SG	4:XD:32:ALA:HB2	2.58	0.44
31:RH:84:SER:OG	31:RH:85:LYS:N	2.51	0.44
19:XS:8:GLY:O	19:XS:9:VAL:CG2	2.57	0.44
31:YH:153:LYS:HG3	31:YH:162:ILE:H	1.78	0.44
10:QJ:61:GLU:CG	14:QN:58:LYS:HE2	2.47	0.44
11:QK:77:MET:HE3	11:QK:80:VAL:HG12	1.98	0.44
2:XB:54:THR:HG21	2:XB:201:ILE:HD11	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:30:GLU:CD	27:RD:63:ARG:HE	2.21	0.44
35:YP:107:LYS:HB2	35:YP:110:TYR:HD2	1.83	0.44
11:XK:106:LYS:O	11:XK:107:SER:CB	2.65	0.44
2:QB:229:VAL:O	2:QB:229:VAL:HG12	2.18	0.44
8:XH:28:ALA:O	8:XH:29:SER:HB2	2.18	0.44
38:YS:110:LEU:HA	38:YS:112:PHE:CZ	2.53	0.44
29:YF:184:TYR:CE2	29:YF:188:ARG:HD2	2.52	0.44
2:QB:192:SER:OG	2:QB:193:ASP:N	2.50	0.44
52:R6:34:LEU:O	52:R6:36:LEU:HD22	2.17	0.44
50:Y4:39:CYS:HB3	50:Y4:41:PRO:HD2	2.00	0.44
7:QG:62:PHE:O	7:QG:64:GLN:N	2.51	0.44
41:RV:35:LEU:N	41:RV:35:LEU:HD22	2.23	0.44
6:XF:27:GLN:HG2	6:XF:27:GLN:H	1.65	0.44
27:RD:12:SER:C	27:RD:14:ARG:N	2.70	0.44
31:YH:6:ARG:CG	31:YH:7:LEU:N	2.81	0.44
27:YD:145:VAL:HB	27:YD:155:LEU:HB2	1.99	0.44
27:YD:155:LEU:N	27:YD:155:LEU:HD12	2.32	0.44
1:QA:484:G:H4'	1:QA:485:G:O5'	2.18	0.44
53:R7:48:LYS:CG	53:R7:49:ARG:H	2.23	0.44
25:RA:464:U:H4'	53:R7:5:TRP:CZ3	2.52	0.44
50:Y4:23:GLU:O	50:Y4:24:THR:OG1	2.34	0.44
1:XA:345:C:OP2	39:YT:41:ARG:NH1	2.49	0.44
5:XE:80:ILE:HG13	5:XE:82:VAL:HG23	1.99	0.44
1:QA:392:G:OP1	16:QP:13:HIS:N	2.39	0.44
3:XC:188:LEU:HD12	3:XC:195:VAL:CG1	2.48	0.44
47:R1:8:SER:CB	47:R1:66:HIS:CE1	3.01	0.44
44:YY:36:ALA:HB1	44:YY:67:LEU:O	2.16	0.44
4:XD:52:SER:HB3	4:XD:55:ALA:HB3	2.00	0.44
25:YA:2335:A:HO2'	25:YA:2336:A:C5'	2.30	0.44
1:XA:1106:G:H2'	1:XA:1107:C:C6	2.53	0.44
4:XD:132:ARG:HG2	4:XD:132:ARG:HH11	1.83	0.44
34:RO:91:LEU:N	34:RO:91:LEU:CD2	2.80	0.44
1:QA:1329:A:H5''	13:QM:29:ARG:HG3	1.98	0.44
43:YX:35:THR:O	43:YX:36:LYS:C	2.55	0.44
25:RA:1086:A:H3'	25:RA:1086:A:N3	2.33	0.44
32:RI:29:TYR:O	32:RI:33:ARG:HB2	2.18	0.44
1:QA:652:U:H1'	1:QA:653:A:C2	2.51	0.44
29:YF:24:LEU:N	29:YF:24:LEU:HD12	2.33	0.44
22:QV:9:G:O2'	22:QV:10:G:N7	2.42	0.44
1:QA:756:C:H2'	1:QA:757:U:O4'	2.17	0.44
16:QP:83:GLU:HG3	16:QP:84:ALA:N	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:R4:68:ARG:HH11	50:R4:69:LYS:HG2	1.82	0.44
25:RA:1889:A:O2'	25:RA:2087:G:H5'	2.17	0.44
41:YV:72:VAL:HG13	41:YV:85:LYS:HB3	2.00	0.44
4:XD:3:ARG:O	4:XD:4:TYR:C	2.55	0.44
25:RA:1870:C:H2'	25:RA:1871:A:O4'	2.17	0.44
48:R2:4:SER:OG	48:R2:5:GLU:OE2	2.26	0.44
1:XA:93:U:H2'	1:XA:95:G:O4'	2.18	0.44
25:RA:1366:A:H2'	25:RA:1367:A:O4'	2.17	0.44
1:XA:431:A:H2'	1:XA:432:A:O4'	2.18	0.44
1:QA:765:G:N2	1:QA:813:U:OP2	2.42	0.44
34:RO:77:ILE:O	34:RO:77:ILE:HG23	2.17	0.44
12:QL:91:LYS:HB2	12:QL:91:LYS:HE2	1.76	0.44
1:XA:1268:A:H4'	21:XU:19:GLY:C	2.38	0.44
25:RA:921:G:H4'	25:RA:2269:A:C5	2.52	0.44
10:XJ:53:PRO:C	14:XN:41:ARG:NH2	2.71	0.44
14:XN:47:LEU:O	14:XN:48:ALA:C	2.56	0.44
28:YE:2:LYS:HG2	28:YE:95:ILE:HG22	1.99	0.44
27:YD:44:ASN:CB	27:YD:49:ILE:HG22	2.46	0.44
19:XS:3:ARG:CG	19:XS:4:SER:H	2.20	0.44
3:XC:68:VAL:HG12	3:XC:70:VAL:HG23	1.98	0.44
35:RP:81:GLN:HG3	35:RP:82:GLY:N	2.33	0.44
10:QJ:54:PHE:CD2	10:QJ:55:LYS:HD2	2.53	0.44
50:R4:33:VAL:CG1	50:R4:34:GLU:H	2.22	0.44
50:R4:39:CYS:HB3	50:R4:41:PRO:HD2	2.00	0.44
26:RB:43:C:O2	30:RG:93:THR:HB	2.18	0.44
42:YW:14:PRO:HB3	42:YW:18:ARG:HE	1.83	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
40:YU:86:ALA:CB	40:YU:88:ILE:HD11	2.48	0.44
38:RS:78:LEU:HD21	38:RS:108:GLY:HA2	1.98	0.44
38:YS:110:LEU:HA	38:YS:112:PHE:CE1	2.53	0.44
34:YO:47:ILE:HG13	34:YO:48:PRO:HD2	1.99	0.44
36:YQ:27:VAL:HG13	36:YQ:28:ALA:N	2.32	0.44
25:YA:1006:C:H5'	33:YN:28:THR:HG23	2.00	0.44
25:YA:2372:G:HO2'	52:Y6:46:HIS:CE1	2.28	0.44
33:RN:96:GLU:CG	33:RN:97:ARG:N	2.72	0.44
8:XH:23:SER:HB3	8:XH:62:TYR:HA	2.00	0.44
52:R6:11:LEU:HD12	52:R6:51:GLU:HG3	2.00	0.44
7:QG:140:ASP:HA	7:QG:143:ARG:HH11	1.79	0.44
2:XB:192:SER:OG	2:XB:193:ASP:N	2.50	0.44
25:YA:483:A:H3'	25:YA:484:C:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:R6:15:GLU:HB3	52:R6:16:CYS:H	1.46	0.44
52:Y6:34:LEU:O	52:Y6:36:LEU:HD22	2.17	0.44
20:QT:50:GLU:O	20:QT:52:ALA:N	2.51	0.44
2:QB:29:ALA:O	2:QB:32:ILE:HG22	2.17	0.44
20:XT:98:PRO:C	20:XT:100:ILE:H	2.19	0.44
27:RD:12:SER:O	27:RD:14:ARG:N	2.51	0.44
42:YW:67:ASP:N	42:YW:67:ASP:OD2	2.50	0.44
35:YP:88:LEU:O	35:YP:90:ARG:N	2.50	0.44
1:QA:1305:G:O2'	1:QA:1306:A:O4'	2.35	0.44
20:QT:36:LEU:C	20:QT:38:LYS:N	2.71	0.44
35:YP:13:ASN:C	35:YP:15:ARG:H	2.21	0.44
27:RD:95:LEU:HD12	27:RD:95:LEU:O	2.17	0.44
25:RA:1093:G:OP1	31:RH:170:ARG:HD2	2.17	0.44
10:QJ:100:THR:O	10:QJ:101:VAL:HB	2.16	0.44
10:XJ:100:THR:O	10:XJ:101:VAL:HB	2.17	0.44
20:XT:83:ARG:C	20:XT:86:ARG:HB3	2.38	0.44
25:RA:2227:A:H5''	27:RD:263:ARG:NH1	2.32	0.44
16:XP:15:PRO:O	16:XP:16:HIS:ND1	2.51	0.44
10:QJ:70:ARG:HH11	10:QJ:70:ARG:HG3	1.83	0.44
27:RD:237:GLU:HB3	27:RD:238:GLY:H	1.49	0.44
8:XH:109:ILE:HD11	8:XH:120:THR:HG22	2.00	0.44
9:QI:13:ALA:HB2	9:QI:68:GLY:CA	2.47	0.44
26:RB:48:A:H4'	38:RS:95:HIS:HD2	1.82	0.44
27:RD:45:ASN:CG	27:RD:46:GLN:N	2.68	0.44
12:QL:44:THR:HA	12:QL:45:PRO:HD3	1.70	0.44
32:RI:29:TYR:HD2	32:RI:30:LEU:HD23	1.82	0.44
25:RA:1771:C:O2'	25:RA:1786:A:H8	2.00	0.44
27:RD:52:ARG:HB2	27:RD:53:PHE:CD2	2.53	0.44
37:YR:41:ALA:C	37:YR:43:GLU:H	2.21	0.44
25:YA:1930:G:H2'	25:YA:1968:G:N1	2.33	0.44
28:YE:120:TRP:CE3	28:YE:155:LYS:HD3	2.53	0.44
30:YG:51:ARG:HB3	30:YG:51:ARG:NH1	2.33	0.44
25:YA:234:C:H2'	25:YA:235:U:H6	1.82	0.44
4:QD:60:GLU:HG2	4:QD:202:LEU:HD12	2.00	0.44
25:RA:1930:G:H2'	25:RA:1968:G:H1	1.83	0.44
1:QA:229:U:O2'	16:QP:23:ASP:OD2	2.35	0.44
41:RV:72:VAL:HG13	41:RV:85:LYS:HB3	2.00	0.44
1:QA:868:C:H2'	1:QA:869:G:O4'	2.17	0.44
25:RA:944:G:H5''	25:RA:945:A:O5'	2.17	0.44
14:XN:24:CYS:HB3	14:XN:28:GLY:H	1.83	0.44
25:YA:1586:A:H3'	25:YA:1587:A:H8	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:XC:69:HIS:ND1	3:XC:69:HIS:N	2.66	0.44
32:RI:9:LEU:O	32:RI:10:GLU:HG3	2.18	0.44
1:QA:148:G:H1	1:QA:174:C:H42	1.66	0.44
25:YA:600:G:N2	25:YA:605:C:O3'	2.51	0.44
25:YA:2545:G:H2'	25:YA:2546:U:O4'	2.18	0.44
1:XA:352:C:O2'	1:XA:354:G:OP1	2.22	0.44
39:RT:114:LEU:HA	39:RT:114:LEU:HD23	1.74	0.44
15:QO:10:LYS:O	15:QO:14:GLU:HB2	2.18	0.44
27:YD:44:ASN:HB2	27:YD:49:ILE:HA	1.93	0.44
25:RA:2637:U:H5''	28:RE:82:ARG:HH21	1.82	0.44
28:RE:199:ARG:HG3	28:RE:199:ARG:HH11	1.82	0.44
13:XM:80:ARG:NH1	19:XS:65:ASN:O	2.51	0.44
19:XS:68:GLY:CA	50:Y4:68:ARG:HB2	2.36	0.44
31:YH:109:PHE:C	31:YH:111:HIS:H	2.21	0.44
3:XC:14:ILE:C	3:XC:16:ARG:H	2.21	0.44
27:YD:30:GLU:HG3	27:YD:63:ARG:NE	2.32	0.44
28:RE:13:ARG:HB3	28:RE:13:ARG:HH11	1.82	0.44
11:QK:53:SER:C	11:QK:55:LYS:H	2.20	0.44
30:RG:67:LYS:N	30:RG:67:LYS:HD2	2.33	0.44
42:RW:14:PRO:HB3	42:RW:18:ARG:HE	1.83	0.44
36:YQ:81:VAL:HG23	36:YQ:82:ARG:N	2.32	0.44
5:XE:31:LEU:HD23	5:XE:45:PHE:CD1	2.53	0.44
30:YG:16:ARG:NH2	30:YG:31:VAL:CG1	2.75	0.44
36:RQ:34:LEU:HB2	36:RQ:118:LEU:HD22	1.99	0.44
8:QH:28:ALA:O	8:QH:29:SER:HB2	2.18	0.44
8:XH:6:ILE:HB	8:XH:85:ARG:HH11	1.75	0.44
50:Y4:39:CYS:O	50:Y4:40:HIS:CB	2.66	0.44
27:RD:25:THR:CG2	27:RD:25:THR:O	2.65	0.44
37:RR:33:ARG:HA	37:RR:114:VAL:O	2.18	0.44
37:RR:79:LEU:HD23	37:RR:79:LEU:O	2.16	0.44
13:QM:53:VAL:HG12	13:QM:57:ARG:HH12	1.82	0.44
27:YD:143:HIS:HD2	27:YD:144:ALA:HB2	1.82	0.44
5:XE:48:ALA:HB2	5:XE:57:LYS:HD3	2.00	0.44
20:XT:48:LYS:HB3	20:XT:51:GLU:CG	2.48	0.44
25:RA:704:G:O2'	25:RA:726:G:N2	2.50	0.44
27:RD:10:THR:O	27:RD:11:PRO:C	2.56	0.44
2:QB:115:LEU:HD21	2:QB:153:ARG:HD3	1.99	0.44
30:YG:67:LYS:CE	50:Y4:6:HIS:NE2	2.74	0.44
27:YD:17:THR:HG21	27:YD:204:ILE:HA	1.99	0.44
41:RV:66:ARG:NH1	41:RV:88:ARG:CD	2.74	0.44
1:QA:701:C:H1'	1:QA:703:G:C2	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2311:A:N9	30:YG:82:LEU:HD11	2.33	0.44
33:RN:114:ARG:O	33:RN:115:ARG:CB	2.65	0.44
1:XA:336:C:H2'	1:XA:337:C:H6	1.83	0.44
40:RU:52:ARG:NH1	40:RU:52:ARG:CG	2.76	0.44
4:XD:180:GLY:O	4:XD:181:MET:C	2.54	0.44
25:YA:2567:G:H2'	25:YA:2568:C:H6	1.81	0.44
2:QB:47:THR:HG22	2:QB:51:LEU:CG	2.48	0.44
25:RA:222:A:HO2'	25:RA:223:A:P	2.41	0.44
16:QP:72:ARG:CD	16:QP:73:LEU:HD23	2.48	0.44
6:XF:35:ALA:HA	6:XF:67:MET:HB3	1.99	0.44
47:Y1:49:VAL:HG12	47:Y1:51:VAL:HG23	1.99	0.44
29:YF:65:TRP:CZ2	29:YF:72:ARG:NH2	2.86	0.44
33:YN:67:LEU:HA	33:YN:87:LEU:HD13	2.00	0.44
9:QI:47:LEU:H	9:QI:47:LEU:HD22	1.81	0.44
25:RA:1937:A:C8	25:RA:1939:U:H2'	2.52	0.44
7:XG:69:VAL:CG1	7:XG:69:VAL:O	2.62	0.44
11:QK:13:GLN:HG3	11:QK:75:TYR:CA	2.48	0.44
31:RH:119:GLU:CD	31:RH:120:GLY:H	2.22	0.44
43:RX:31:HIS:HA	43:RX:32:PRO:HD3	1.88	0.44
8:QH:16:ALA:HB2	8:QH:24:THR:CG2	2.45	0.44
25:YA:1026:U:H1'	25:YA:1027:A:O5'	2.18	0.44
25:RA:860:U:H5	25:RA:917:A:N1	2.16	0.44
43:RX:14:SER:HB2	43:RX:15:GLU:OE1	2.18	0.44
51:R5:52:TYR:CD1	51:R5:52:TYR:N	2.85	0.44
25:YA:2469:A:H5'	25:YA:2470:G:OP2	2.17	0.44
42:YW:88:ARG:HG2	42:YW:88:ARG:HH11	1.82	0.44
1:XA:1301:U:H2'	1:XA:1301:U:O2	2.16	0.44
37:RR:12:ARG:HG3	37:RR:12:ARG:NH1	2.32	0.44
25:YA:1448:G:O2'	25:YA:1529:A:N1	2.36	0.44
39:YT:99:LEU:CD1	39:YT:99:LEU:O	2.65	0.44
25:RA:2629:A:O2'	25:RA:2630:G:H5''	2.18	0.44
27:YD:213:ARG:HA	27:YD:213:ARG:HD2	1.60	0.44
49:R3:50:VAL:HB	49:R3:53:LEU:HD12	2.00	0.44
25:RA:194:G:H2'	25:RA:195:A:O4'	2.17	0.44
25:YA:2032:G:OP2	25:YA:2454:G:O2'	2.29	0.44
18:QR:20:ALA:O	18:QR:21:LYS:HG3	2.18	0.44
1:QA:625:G:H2'	1:QA:626:U:H6	1.83	0.44
25:YA:729:G:N7	27:YD:209:ALA:HB3	2.33	0.44
34:YO:77:ILE:HG23	34:YO:77:ILE:O	2.17	0.44
25:RA:2106:G:H1	25:RA:2183:C:H42	1.66	0.44
44:YY:88:LYS:HB3	44:YY:90:LEU:CD2	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:R8:58:ILE:O	54:R8:61:LEU:CG	2.66	0.44
10:QJ:38:ILE:CG1	10:QJ:71:LEU:HB3	2.48	0.44
27:RD:44:ASN:ND2	27:RD:44:ASN:H	1.97	0.44
11:QK:106:LYS:O	11:QK:107:SER:CB	2.65	0.44
11:QK:34:ASP:OD1	11:QK:38:ASN:HB2	2.18	0.44
27:YD:102:LYS:O	27:YD:103:ARG:CG	2.66	0.44
31:RH:109:PHE:C	31:RH:111:HIS:H	2.21	0.44
28:RE:52:LEU:HB2	28:RE:75:VAL:CG2	2.40	0.44
2:XB:178:ARG:NH2	8:XH:68:ARG:HH22	2.16	0.44
35:YP:19:VAL:HG22	35:YP:21:ARG:H	1.83	0.44
1:QA:972:C:OP2	10:QJ:57:LYS:HE2	2.18	0.44
40:RU:79:PHE:CE2	40:RU:83:LEU:CD1	3.01	0.44
38:YS:83:LYS:O	38:YS:109:GLY:CA	2.46	0.44
34:RO:86:ILE:CD1	34:RO:86:ILE:H	2.28	0.44
27:RD:227:ASN:CB	27:RD:228:PRO:CD	2.93	0.44
2:QB:178:ARG:NH2	8:QH:74:PRO:CB	2.76	0.44
39:RT:105:LEU:C	39:RT:107:ASP:OD1	2.56	0.44
25:RA:2372:G:H4'	52:R6:46:HIS:CD2	2.52	0.44
2:XB:33:TYR:O	2:XB:33:TYR:HD1	2.00	0.44
51:R5:3:LYS:O	51:R5:4:HIS:C	2.56	0.44
20:XT:28:ALA:O	20:XT:30:LYS:N	2.50	0.44
34:RO:104:ARG:NH1	39:RT:36:GLU:CD	2.71	0.44
27:YD:272:ALA:HB1	27:YD:273:ARG:H	1.58	0.44
27:RD:206:LEU:HA	27:RD:206:LEU:HD23	1.49	0.44
1:XA:701:C:H1'	1:XA:703:G:C5	2.53	0.44
19:QS:51:VAL:HG12	19:QS:52:TYR:N	2.33	0.44
33:YN:129:PRO:C	33:YN:131:GLN:H	2.20	0.44
38:YS:14:VAL:CG1	38:YS:15:ARG:N	2.81	0.44
25:YA:464:U:H4'	53:Y7:5:TRP:CZ3	2.53	0.44
29:YF:174:VAL:CG1	29:YF:174:VAL:O	2.65	0.44
25:RA:2377:A:H2'	25:RA:2378:A:C8	2.53	0.44
9:XI:29:ASN:OD1	9:XI:65:VAL:N	2.48	0.44
25:RA:2298:A:C2	25:RA:2299:G:H1'	2.52	0.44
1:XA:1343:G:H1'	9:XI:121:ARG:NH1	2.32	0.44
17:QQ:92:ARG:HG3	17:QQ:92:ARG:NH1	2.30	0.44
25:RA:2023:G:H4'	25:RA:2617:C:O3'	2.18	0.44
25:RA:2008:C:H2'	25:RA:2009:G:C8	2.51	0.44
10:XJ:51:ARG:NH1	10:XJ:51:ARG:HG2	2.33	0.44
42:RW:70:TYR:HD2	42:RW:70:TYR:N	2.06	0.44
2:QB:132:LYS:HA	2:QB:135:GLN:CB	2.43	0.44
32:YI:144:VAL:HG22	32:YI:145:VAL:H	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:RX:3:THR:HA	43:RX:6:ASP:OD2	2.18	0.44
29:RF:65:TRP:CZ2	29:RF:72:ARG:NH2	2.86	0.44
34:RO:63:VAL:O	34:RO:63:VAL:HG23	2.18	0.44
25:RA:1078:U:O2'	25:RA:1079:C:OP2	2.25	0.44
25:RA:1161:C:O2'	41:RV:23:GLU:HG2	2.18	0.44
6:XF:3:ARG:HG2	6:XF:93:SER:OG	2.17	0.44
44:YY:15:VAL:HB	44:YY:20:TYR:O	2.17	0.44
10:QJ:10:GLY:O	10:QJ:68:HIS:N	2.51	0.44
44:RY:15:VAL:HB	44:RY:20:TYR:O	2.17	0.44
29:YF:42:ALA:O	29:YF:45:ARG:HB2	2.18	0.44
18:XR:82:THR:CG2	18:XR:83:GLU:N	2.79	0.44
8:QH:118:VAL:O	8:QH:119:LEU:HD23	2.18	0.44
1:XA:836:G:C6	1:XA:851:G:C6	3.06	0.44
1:QA:1172:C:H2'	1:QA:1173:G:H8	1.80	0.44
46:R0:53:MET:CB	46:R0:59:LEU:HD23	2.48	0.44
25:YA:2699:C:H2'	25:YA:2700:C:O4'	2.18	0.44
36:YQ:21:THR:HB	36:YQ:22:LYS:H	1.42	0.44
1:QA:1129:C:O2	1:QA:1132:C:N4	2.50	0.44
1:XA:302:G:C6	1:XA:303:A:C5	3.06	0.44
39:RT:29:ARG:HA	39:RT:45:PHE:O	2.17	0.44
37:RR:41:ALA:C	37:RR:43:GLU:H	2.21	0.44
39:RT:99:LEU:O	39:RT:99:LEU:CD1	2.65	0.44
1:QA:1326:C:H2'	1:QA:1327:C:C6	2.52	0.44
1:QA:359:U:H2'	1:QA:360:A:C8	2.52	0.44
25:RA:2086:U:H2'	25:RA:2087:G:C8	2.53	0.44
5:XE:62:ALA:O	5:XE:64:ARG:N	2.51	0.44
5:XE:20:GLN:O	5:XE:21:ALA:C	2.56	0.44
45:RZ:151:HIS:HA	45:RZ:170:THR:HA	1.99	0.44
1:XA:236:G:H5''	17:XQ:42:TYR:OH	2.18	0.44
45:RZ:157:LEU:HD23	45:RZ:161:VAL:HG12	1.98	0.44
1:XA:606:G:H1	1:XA:631:G:H5''	1.82	0.44
25:YA:150:C:H2'	25:YA:151:C:C6	2.53	0.44
7:XG:75:VAL:HG13	7:XG:145:ALA:HA	2.00	0.44
31:YH:37:VAL:HG11	31:YH:68:THR:HG23	1.98	0.44
31:RH:125:VAL:CG1	31:RH:126:PRO:CG	2.94	0.43
47:Y1:82:LEU:HD12	47:Y1:82:LEU:O	2.10	0.43
28:RE:3:GLY:CA	28:RE:81:ILE:HG21	2.48	0.43
50:Y4:68:ARG:HH11	50:Y4:69:LYS:HG2	1.82	0.43
25:YA:2667:C:H1'	31:YH:109:PHE:HD2	1.83	0.43
2:XB:77:ALA:HB1	2:XB:165:VAL:HG11	2.00	0.43
27:RD:102:LYS:O	27:RD:103:ARG:CG	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2811:G:H8	25:RA:2811:G:OP2	2.00	0.43
50:R4:39:CYS:O	50:R4:40:HIS:CB	2.66	0.43
38:RS:110:LEU:HA	38:RS:112:PHE:CE1	2.53	0.43
2:QB:17:PHE:CG	2:QB:44:LEU:HD11	2.53	0.43
29:RF:63:LYS:CE	29:RF:67:GLN:HB2	2.48	0.43
8:QH:23:SER:HB3	8:QH:62:TYR:HA	2.00	0.43
2:QB:87:ARG:NH1	2:QB:223:ILE:HD12	2.33	0.43
4:XD:93:PHE:CZ	4:XD:97:LEU:HD11	2.52	0.43
44:RY:48:ALA:CB	44:RY:61:ILE:HD13	2.45	0.43
52:Y6:19:ARG:HA	52:Y6:19:ARG:HD2	1.77	0.43
27:RD:155:LEU:HD23	27:RD:177:LEU:HD21	2.00	0.43
5:XE:94:ALA:HB2	5:XE:119:LEU:HG	2.00	0.43
27:RD:11:PRO:O	27:RD:12:SER:CB	2.65	0.43
20:XT:36:LEU:HD13	20:XT:36:LEU:HA	1.82	0.43
27:RD:17:THR:HG22	27:RD:204:ILE:HA	1.98	0.43
1:QA:1222:G:OP1	19:QS:77:THR:HG21	2.18	0.43
28:YE:48:GLN:HB3	28:YE:48:GLN:HE21	1.55	0.43
9:XI:10:ARG:NE	9:XI:105:ASP:CB	2.81	0.43
25:YA:396:G:O3'	47:Y1:44:PRO:HA	2.17	0.43
3:XC:59:ARG:HH12	3:XC:97:LYS:CD	2.31	0.43
1:XA:345:C:H4'	1:XA:346:G:O5'	2.18	0.43
1:QA:376:G:H5''	16:QP:5:ARG:HD2	1.99	0.43
9:QI:43:ALA:O	9:QI:45:ALA:N	2.51	0.43
2:QB:47:THR:O	2:QB:51:LEU:N	2.32	0.43
2:XB:47:THR:HG22	2:XB:51:LEU:CG	2.48	0.43
43:YX:3:THR:HA	43:YX:6:ASP:OD2	2.18	0.43
1:XA:1446:A:C5	39:YT:118:ARG:NH1	2.86	0.43
6:XF:72:VAL:HG23	6:XF:90:VAL:HG11	1.98	0.43
54:R8:40:GLU:O	54:R8:43:GLN:N	2.50	0.43
12:XL:120:TYR:O	12:XL:121:GLY:O	2.36	0.43
14:YN:17:LYS:HG3	14:YN:18:VAL:N	2.33	0.43
31:YH:137:ASP:OD1	31:YH:138:LYS:N	2.51	0.43
33:RN:30:ILE:HG22	33:RN:34:LEU:CD2	2.48	0.43
34:YO:91:LEU:CD2	34:YO:91:LEU:N	2.80	0.43
13:QM:36:LYS:C	13:QM:36:LYS:CD	2.86	0.43
25:RA:2645:G:C3'	25:RA:2646:C:H5'	2.47	0.43
35:YP:70:GLN:OE1	35:YP:70:GLN:N	2.51	0.43
5:QE:67:VAL:HG22	5:QE:68:GLU:N	2.33	0.43
25:RA:389:G:H22	35:RP:72:PRO:HD3	1.83	0.43
1:QA:437:U:H2'	1:QA:438:G:O4'	2.18	0.43
29:RF:24:LEU:N	29:RF:24:LEU:HD12	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:189:U:H3	17:XQ:63:ARG:CB	2.30	0.43
25:YA:2845:G:O2'	25:YA:2846:G:H5'	2.18	0.43
39:YT:29:ARG:HA	39:YT:45:PHE:O	2.17	0.43
46:Y0:36:ILE:HG12	46:Y0:37:LEU:N	2.32	0.43
25:YA:1677:A:H2'	25:YA:1678:G:O4'	2.18	0.43
1:XA:110:C:H2'	1:XA:111:G:O4'	2.18	0.43
1:QA:1336:C:O2'	1:QA:1337:G:O5'	2.36	0.43
25:RA:2031:A:O2'	25:RA:2454:G:N2	2.49	0.43
1:QA:946:A:H61	1:QA:1234:C:N4	2.16	0.43
17:XQ:13:ASP:O	17:XQ:15:MET:N	2.51	0.43
25:YA:795:C:H2'	25:YA:796:C:H6	1.83	0.43
44:RY:11:ASP:HB2	44:RY:27:VAL:CG1	2.46	0.43
38:YS:38:GLN:CG	38:YS:47:THR:HG21	2.48	0.43
25:RA:1930:G:H2'	25:RA:1968:G:N1	2.33	0.43
1:XA:1256:A:P	3:XC:26:LYS:HZ3	2.39	0.43
25:YA:742:G:H2'	25:YA:743:G:H8	1.82	0.43
25:RA:852:G:H2'	25:RA:853:G:C8	2.53	0.43
29:RF:167:ALA:HB1	29:RF:173:VAL:HG11	1.98	0.43
1:XA:123:C:OP1	1:XA:311:C:O2'	2.28	0.43
32:RI:130:TYR:HB3	32:RI:136:VAL:HG13	2.00	0.43
25:RA:2340:G:H2'	25:RA:2341:G:H8	1.83	0.43
25:YA:1858:G:O2'	25:YA:1884:A:N6	2.51	0.43
22:QV:23:C:H2'	22:QV:24:U:C6	2.53	0.43
29:RF:144:LYS:C	29:RF:146:ALA:H	2.20	0.43
1:XA:972:C:O3'	10:XJ:57:LYS:HG2	2.17	0.43
1:XA:430:A:OP1	4:XD:9:CYS:HB2	2.17	0.43
47:R1:80:LEU:O	47:R1:81:LYS:CD	2.65	0.43
1:QA:430:A:H4'	4:QD:7:PRO:HG3	1.99	0.43
44:RY:88:LYS:HZ2	44:RY:88:LYS:HA	1.83	0.43
44:YY:75:ILE:HG12	44:YY:76:CYS:H	1.79	0.43
44:YY:95:LYS:HB2	44:YY:99:CYS:O	2.17	0.43
13:QM:69:GLU:O	13:QM:70:LEU:C	2.56	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:CD1	2.67	0.43
19:QS:45:VAL:O	19:QS:62:ILE:O	2.35	0.43
10:QJ:6:ILE:O	10:QJ:71:LEU:HD12	2.18	0.43
54:Y8:58:ILE:O	54:Y8:61:LEU:CG	2.66	0.43
19:XS:10:PHE:CD1	19:XS:38:SER:HB2	2.52	0.43
19:XS:63:THR:HG23	19:XS:66:MET:HE3	2.00	0.43
50:Y4:59:PHE:CE1	50:Y4:70:GLY:N	2.87	0.43
3:QC:106:VAL:HG11	3:QC:109:PRO:HA	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:XC:106:VAL:HG11	3:XC:109:PRO:HA	2.00	0.43
27:YD:35:LYS:HB3	27:YD:36:PRO:HA	2.00	0.43
35:RP:101:VAL:HG13	35:RP:102:ARG:N	2.33	0.43
10:QJ:54:PHE:CE2	10:QJ:55:LYS:HD2	2.52	0.43
30:RG:131:TYR:HE2	30:RG:133:LEU:HD22	1.83	0.43
37:YR:74:LYS:O	37:YR:76:VAL:N	2.45	0.43
52:Y6:11:LEU:HD12	52:Y6:51:GLU:HG3	2.00	0.43
25:YA:2422:A:N7	54:Y8:31:HIS:HE1	2.16	0.43
38:YS:86:ALA:O	38:YS:87:PHE:CB	2.65	0.43
37:YR:33:ARG:HA	37:YR:114:VAL:O	2.18	0.43
2:QB:87:ARG:HH11	2:QB:223:ILE:HD11	1.83	0.43
16:XP:20:VAL:HG22	16:XP:21:VAL:H	1.83	0.43
35:RP:75:ILE:HG12	35:RP:77:ARG:NH1	2.32	0.43
39:RT:111:ARG:C	39:RT:113:LYS:N	2.64	0.43
20:QT:101:GLY:C	20:QT:103:GLY:H	2.22	0.43
27:YD:10:THR:O	27:YD:11:PRO:C	2.56	0.43
27:YD:11:PRO:O	27:YD:12:SER:OG	2.30	0.43
1:QA:564:C:OP1	12:QL:15:ARG:NE	2.50	0.43
12:QL:10:LEU:HB3	17:QQ:32:TYR:CZ	2.53	0.43
30:YG:44:GLY:HA2	30:YG:88:ILE:HD11	1.99	0.43
25:YA:1022:G:H22	25:YA:1142(A):A:H2	1.61	0.43
2:QB:136:VAL:O	2:QB:140:HIS:N	2.44	0.43
40:RU:64:ARG:CG	40:RU:64:ARG:NH2	2.70	0.43
1:XA:1122:U:O4	1:XA:1123:A:N6	2.51	0.43
11:XK:124:LYS:HB3	11:XK:125:PHE:H	1.67	0.43
34:RO:97:ARG:HA	34:RO:117:LEU:HD22	2.00	0.43
41:YV:66:ARG:NH1	41:YV:88:ARG:CD	2.74	0.43
38:YS:57:LYS:O	38:YS:58:LEU:HB3	2.18	0.43
25:RA:2377:A:C2	38:RS:18:ILE:HD11	2.52	0.43
29:RF:201:VAL:HG13	29:RF:202:PHE:N	2.33	0.43
27:YD:95:LEU:HD12	27:YD:95:LEU:O	2.17	0.43
7:QG:150:ALA:HA	11:QK:59:TYR:CD2	2.53	0.43
7:XG:150:ALA:HA	11:XK:59:TYR:HD2	1.81	0.43
7:QG:16:LEU:HD13	9:QI:45:ALA:HB2	1.99	0.43
1:QA:1186:G:O3'	9:QI:113:LYS:NZ	2.45	0.43
13:XM:39:ILE:HD12	13:XM:56:LEU:HD23	1.99	0.43
54:Y8:40:GLU:O	54:Y8:43:GLN:N	2.50	0.43
4:QD:146:ILE:H	4:QD:146:ILE:CD1	2.30	0.43
1:QA:1347:G:O2'	1:QA:1348:U:P	2.76	0.43
9:QI:10:ARG:NE	9:QI:105:ASP:CB	2.81	0.43
1:QA:456:C:H2'	1:QA:457:C:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
43:RX:65:ARG:N	43:RX:65:ARG:CD	2.79	0.43
13:XM:36:LYS:CD	13:XM:36:LYS:C	2.85	0.43
1:XA:1297:C:O2'	7:XG:114:ARG:NH2	2.51	0.43
31:YH:136:ILE:N	31:YH:136:ILE:HD12	2.31	0.43
43:YX:14:SER:HB2	43:YX:15:GLU:OE1	2.18	0.43
1:XA:96:G:C6	1:XA:97:U:C2	3.06	0.43
25:RA:994:C:OP1	40:RU:53:ARG:NH2	2.51	0.43
43:RX:7:VAL:O	43:RX:30:VAL:CG1	2.67	0.43
25:YA:612:G:O2'	25:YA:616:A:N1	2.37	0.43
25:RA:2126:A:H1'	25:RA:2127:G:OP2	2.18	0.43
5:QE:62:ALA:C	5:QE:64:ARG:H	2.21	0.43
25:YA:1532:C:H2'	25:YA:1533:C:O4'	2.18	0.43
16:QP:23:ASP:O	16:QP:26:ARG:HB2	2.18	0.43
1:QA:1370:G:O3'	9:QI:12:GLU:HG3	2.18	0.43
1:XA:1004:A:H1'	1:XA:1036:G:N1	2.33	0.43
25:YA:2105:C:H2'	25:YA:2106:G:C8	2.53	0.43
25:YA:436:C:H2'	25:YA:438:G:C8	2.53	0.43
1:XA:625:G:H2'	1:XA:626:U:C6	2.53	0.43
25:YA:1717:G:H1	25:YA:1742:C:H42	1.66	0.43
22:QV:3:C:C2'	22:QV:4:G:H5'	2.48	0.43
11:XK:70:LYS:HA	11:XK:73:MET:HE2	1.99	0.43
25:RA:2441:C:OP2	25:RA:2586:C:O2'	2.30	0.43
11:XK:96:ARG:O	11:XK:97:ALA:C	2.54	0.43
25:YA:1239:G:H2'	25:YA:1240:U:O4'	2.17	0.43
25:YA:1790:C:H5''	25:YA:1791:A:OP1	2.17	0.43
25:RA:1278:A:O3'	37:RR:34:ILE:HG23	2.18	0.43
18:XR:20:ALA:O	18:XR:21:LYS:HG3	2.18	0.43
1:XA:715:A:H2'	1:XA:716:A:C8	2.53	0.43
25:YA:2648:C:H2'	25:YA:2649:U:C6	2.53	0.43
37:RR:81:ASP:OD2	37:RR:81:ASP:N	2.50	0.43
39:YT:114:LEU:HD23	39:YT:114:LEU:HA	1.74	0.43
50:Y4:2:LYS:HD2	50:Y4:2:LYS:HA	1.61	0.43
1:QA:191(D):U:H2'	1:QA:191(E):G:C8	2.53	0.43
1:XA:28:G:O2'	1:XA:296:U:OP1	2.33	0.43
25:RA:1090:U:H3	25:RA:1102:C:H1'	1.83	0.43
8:XH:88:LYS:HB3	8:XH:89:PRO:HD2	2.00	0.43
47:Y1:60:PHE:HZ	47:Y1:90:ILE:HG21	1.82	0.43
44:RY:95:LYS:HA	44:RY:101:LYS:N	2.33	0.43
54:Y8:58:ILE:O	54:Y8:61:LEU:CD1	2.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:3:GLY:HA3	28:YE:81:ILE:CD1	2.48	0.43
29:RF:101:LEU:HD12	29:RF:102:PRO:N	2.33	0.43
31:YH:149:ARG:HA	31:YH:162:ILE:HG21	1.99	0.43
25:RA:586:A:N1	25:RA:809:G:O2'	2.31	0.43
35:RP:81:GLN:HE21	35:RP:81:GLN:HB2	1.59	0.43
27:RD:69:ARG:NH2	27:RD:130:ALA:HB2	2.19	0.43
35:YP:101:VAL:HA	35:YP:106:LEU:HB2	1.99	0.43
28:RE:51:PHE:CD1	28:RE:52:LEU:N	2.76	0.43
50:R4:42:PHE:CD1	50:R4:42:PHE:C	2.90	0.43
25:YA:2012:G:H4'	42:YW:96:ILE:HD11	1.99	0.43
2:QB:100:GLY:N	2:QB:176:GLU:OE2	2.51	0.43
2:QB:90:MET:HA	2:QB:91:PRO:HD3	1.82	0.43
30:YG:31:VAL:HG13	30:YG:31:VAL:O	2.18	0.43
38:RS:86:ALA:O	38:RS:87:PHE:CB	2.65	0.43
33:YN:103:VAL:O	33:YN:104:LYS:C	2.56	0.43
36:RQ:27:VAL:HG13	36:RQ:28:ALA:N	2.32	0.43
4:QD:90:GLY:HA3	4:QD:204:ILE:HD11	2.01	0.43
39:YT:105:LEU:C	39:YT:107:ASP:OD1	2.56	0.43
39:YT:107:ASP:OD2	39:YT:109:GLU:HB2	2.19	0.43
4:QD:25:ARG:C	4:QD:27:TYR:H	2.21	0.43
52:R6:20:ASN:O	52:R6:21:TYR:CG	2.72	0.43
52:R6:7:ILE:HG23	52:R6:8:LYS:N	2.32	0.43
41:RV:25:LEU:H	41:RV:92:THR:CG2	2.28	0.43
42:YW:111:HIS:CG	42:YW:112:GLY:H	2.37	0.43
30:YG:136:ARG:O	30:YG:154:GLY:CA	2.62	0.43
11:QK:105:VAL:HG23	11:QK:105:VAL:O	2.18	0.43
1:XA:1130:A:O2'	9:XI:3:GLN:NE2	2.49	0.43
7:QG:38:LEU:O	7:QG:42:ILE:HG13	2.17	0.43
31:YH:53:GLU:CD	31:YH:54:ARG:H	2.21	0.43
28:RE:36:ARG:HB3	28:RE:36:ARG:NH1	2.30	0.43
19:QS:36:ARG:NH1	19:QS:52:TYR:O	2.51	0.43
39:YT:49:VAL:CG1	39:YT:49:VAL:O	2.64	0.43
41:YV:66:ARG:NH1	41:YV:88:ARG:NH1	2.61	0.43
53:R7:5:TRP:CD1	53:R7:7:PRO:HG3	2.53	0.43
38:RS:14:VAL:CG1	38:RS:15:ARG:N	2.81	0.43
1:XA:1347:G:H22	1:XA:1374:A:P	2.39	0.43
5:XE:36:ASP:C	5:XE:37:ARG:HG2	2.38	0.43
9:QI:95:LYS:HD3	9:QI:95:LYS:C	2.39	0.43
15:QO:25:THR:HG22	15:QO:70:LEU:HD22	1.99	0.43
1:XA:1446:A:N3	1:XA:1446:A:H5'	2.33	0.43
42:YW:29:LEU:HD11	42:YW:55:ALA:HB2	1.98	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R1:53:VAL:CG1	47:R1:54:ALA:N	2.81	0.43
33:YN:87:LEU:CD2	33:YN:87:LEU:C	2.87	0.43
30:RG:19:LEU:HA	30:RG:22:ARG:HB2	1.99	0.43
44:RY:25:GLY:HA3	44:RY:39:VAL:CG1	2.47	0.43
7:XG:60:LYS:O	7:XG:61:VAL:C	2.57	0.43
1:QA:664:G:H2'	1:QA:666:G:OP1	2.17	0.43
41:YV:1:MET:HE1	41:YV:43:GLU:HG2	2.00	0.43
1:QA:939:G:H5''	7:QG:102:ARG:CZ	2.48	0.43
28:YE:69:LYS:C	28:YE:71:GLY:N	2.71	0.43
25:RA:1113:U:H2'	25:RA:1114:G:H8	1.83	0.43
25:YA:1078:U:HO2'	25:YA:1088:A:H2	1.60	0.43
11:QK:75:TYR:N	11:QK:75:TYR:CD1	2.86	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
42:YW:50:VAL:O	42:YW:53:SER:N	2.50	0.43
43:RX:14:SER:O	43:RX:15:GLU:C	2.57	0.43
25:YA:1820:U:H4'	25:YA:1821:A:OP2	2.19	0.43
1:XA:377:G:P	16:XP:5:ARG:HH11	2.40	0.43
11:QK:20:TYR:C	11:QK:21:ILE:HD12	2.38	0.43
1:QA:976:G:N2	1:QA:1362(A):C:OP2	2.42	0.43
1:XA:792:A:O2'	1:XA:794:A:N7	2.44	0.43
25:RA:686:G:O6	53:R7:12:ARG:HG3	2.18	0.43
22:QV:69:C:H2'	22:QV:70:G:H8	1.82	0.43
25:RA:1844:C:OP1	27:RD:257:LEU:HD23	2.19	0.43
5:XE:64:ARG:HH11	5:XE:64:ARG:HG3	1.81	0.43
38:RS:38:GLN:CG	38:RS:47:THR:HG21	2.48	0.43
25:RA:271:G:H2'	25:RA:272:G:C8	2.53	0.43
29:RF:149:ASP:OD2	29:RF:151:SER:HB3	2.17	0.43
25:RA:559:G:H22	40:RU:49:HIS:CE1	2.36	0.43
25:RA:952:G:P	36:RQ:16:ARG:HH12	2.41	0.43
32:RI:82:ARG:HD3	32:RI:146:ALA:HB3	1.99	0.43
25:RA:1047:G:H2'	25:RA:1110:G:N1	2.32	0.43
28:RE:31:CYS:HB3	28:RE:49:LEU:HG	2.01	0.43
1:QA:991:U:O4	1:QA:1212:U:O2'	2.23	0.43
1:XA:524:G:H2'	1:XA:525:C:C6	2.53	0.43
25:RA:2653:U:O2'	31:RH:110:SER:HB2	2.18	0.43
25:YA:1520:U:H2'	25:YA:1521:G:O4'	2.18	0.43
25:RA:629:G:H5'	25:RA:650:C:O2'	2.18	0.43
1:QA:115:G:H4'	1:QA:116:A:O5'	2.17	0.43
1:XA:753:A:H4'	1:XA:754:C:O5'	2.18	0.43
25:RA:1810:A:H2'	25:RA:1811:G:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:Y1:94:LEU:O	47:Y1:95:LEU:HB2	2.17	0.43
44:RY:81:LYS:HZ2	44:RY:98:VAL:HB	1.83	0.43
50:R4:49:PHE:HD1	50:R4:49:PHE:N	2.17	0.43
27:YD:43:ARG:CZ	27:YD:49:ILE:HG21	2.49	0.43
19:XS:3:ARG:HB3	50:Y4:67:TYR:CD2	2.53	0.43
50:Y4:48:ARG:NH1	50:Y4:51:ASP:HA	2.34	0.43
15:XO:83:GLU:HA	15:XO:83:GLU:OE1	2.19	0.43
2:XB:163:PHE:HD2	2:XB:163:PHE:HA	1.69	0.43
2:XB:162:ILE:O	2:XB:185:ILE:HG13	2.18	0.43
35:RP:107:LYS:HB2	35:RP:110:TYR:HD2	1.83	0.43
35:YP:96:THR:HG22	35:YP:126:VAL:CB	2.47	0.43
28:RE:52:LEU:O	28:RE:74:PRO:HA	2.18	0.43
30:RG:139:LEU:HA	30:RG:144:ILE:HG21	2.00	0.43
40:YU:79:PHE:C	40:YU:79:PHE:HD2	2.18	0.43
38:YS:110:LEU:HD23	38:YS:112:PHE:CE2	2.54	0.43
7:XG:78:ARG:CG	7:XG:78:ARG:HH11	2.31	0.43
7:XG:62:PHE:O	7:XG:64:GLN:N	2.51	0.43
37:YR:48:VAL:O	37:YR:49:ASP:C	2.57	0.43
26:YB:40:U:HO2'	26:YB:43:C:H5	1.66	0.43
39:RT:105:LEU:O	39:RT:105:LEU:HG	2.19	0.43
7:QG:15:ASP:OD1	7:QG:23:VAL:HG11	2.19	0.43
52:Y6:20:ASN:O	52:Y6:21:TYR:CG	2.71	0.43
25:YA:2712:U:O2'	25:YA:2712(A):A:OP1	2.37	0.43
20:XT:50:GLU:O	20:XT:52:ALA:N	2.51	0.43
41:RV:15:GLU:O	41:RV:96:ILE:HB	2.19	0.43
2:XB:95:GLN:HE21	2:XB:147:LYS:CE	2.28	0.43
1:QA:1221:G:OP1	19:QS:36:ARG:HD3	2.18	0.43
33:YN:131:GLN:HB3	33:YN:131:GLN:HE21	1.57	0.43
25:YA:2377:A:C2	38:YS:18:ILE:HD11	2.54	0.43
25:YA:1309:G:P	53:Y7:9:ARG:HD3	2.58	0.43
30:RG:83:ARG:HG3	30:RG:86:MET:CE	2.46	0.43
1:XA:1152:A:H2'	1:XA:1153:C:H6	1.83	0.43
10:QJ:51:ARG:HG2	10:QJ:51:ARG:NH1	2.33	0.43
1:XA:191:G:N9	20:XT:105:SER:HB3	2.33	0.43
3:XC:22:TRP:CB	3:XC:59:ARG:HB2	2.49	0.43
6:QF:91:VAL:CG1	18:QR:72:ARG:NH1	2.82	0.43
7:XG:148:ASN:O	7:XG:150:ALA:N	2.51	0.43
6:XF:91:VAL:CG1	18:XR:72:ARG:NH1	2.82	0.43
25:YA:1478:G:H2'	25:YA:1479:G:H8	1.83	0.43
12:XL:22:SER:C	12:XL:24:VAL:H	2.21	0.43
6:XF:76:ALA:HB1	6:XF:80:ARG:HH21	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2350:C:C5	54:R8:42:ARG:NH1	2.87	0.43
34:YO:61:VAL:O	34:YO:61:VAL:HG13	2.18	0.43
7:QG:155:ARG:H	7:QG:155:ARG:HD3	1.83	0.43
11:XK:108:ILE:HG21	18:XR:88:LYS:OXT	2.19	0.43
25:YA:2611:U:H6	25:YA:2611:U:OP2	2.01	0.43
28:RE:16:ARG:O	28:RE:18:ASP:O	2.36	0.43
12:QL:27:LEU:HD13	12:QL:28:LYS:H	1.83	0.43
31:RH:92:ILE:CD1	31:RH:160:LYS:HD3	2.48	0.43
42:YW:34:ASN:O	42:YW:35:ILE:C	2.55	0.43
33:YN:17:ASP:O	33:YN:55:VAL:O	2.34	0.43
25:YA:1820:U:O2	27:YD:202:LYS:HB3	2.18	0.43
25:RA:2543:G:H2'	25:RA:2544:G:H8	1.83	0.43
5:XE:67:VAL:HG22	5:XE:68:GLU:N	2.33	0.43
25:RA:185:U:H4'	25:RA:218:A:H4'	1.99	0.43
53:Y7:17:GLY:O	53:Y7:20:ALA:HB3	2.18	0.43
10:QJ:90:LEU:N	10:QJ:91:PRO:CD	2.81	0.43
53:Y7:19:ARG:NH1	53:Y7:19:ARG:HG2	2.34	0.43
25:RA:2329:G:H2'	25:RA:2330:G:C8	2.54	0.43
31:YH:35:VAL:CG2	31:YH:75:ALA:HB2	2.48	0.43
12:QL:119:LYS:HB2	12:QL:120:TYR:HD1	1.83	0.43
25:RA:1257:C:H5'	29:RF:75:HIS:CE1	2.52	0.43
25:RA:2123:G:H2'	25:RA:2124:G:C8	2.54	0.43
25:YA:2572:A:C4	28:YE:144:ARG:NH2	2.86	0.43
25:RA:1220:A:H5'	25:RA:1221:C:OP2	2.17	0.43
1:XA:922:G:H4'	5:XE:20:GLN:HA	1.99	0.43
3:XC:69:HIS:HA	3:XC:104:GLN:HB2	2.00	0.43
28:YE:11:MET:O	28:YE:12:THR:HB	2.18	0.43
1:QA:685:G:H5'	11:QK:39:PRO:O	2.18	0.43
25:YA:952:G:P	36:YQ:16:ARG:HH12	2.41	0.43
25:RA:34:C:H41	25:RA:447:A:H61	1.66	0.43
4:XD:95:GLY:O	4:XD:99:SER:N	2.51	0.43
25:YA:2471:C:H5'	25:YA:2472:G:OP2	2.19	0.43
25:YA:1368:G:C2	25:YA:1369:G:C8	3.07	0.43
25:RA:270(S):G:H1'	47:R1:78:LYS:HD2	2.00	0.43
47:R1:92:LYS:O	47:R1:93:GLU:C	2.56	0.43
47:Y1:92:LYS:O	47:Y1:93:GLU:C	2.56	0.43
25:RA:593:G:H2'	25:RA:594:U:H6	1.83	0.43
28:YE:3:GLY:CA	28:YE:81:ILE:HG21	2.49	0.43
27:YD:44:ASN:HB3	27:YD:49:ILE:CG2	2.47	0.43
13:XM:87:TYR:HA	13:XM:90:LEU:HG	2.01	0.43
19:XS:64:GLU:HB2	50:Y4:55:ARG:NH1	2.29	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:QO:83:GLU:C	15:QO:85:LEU:N	2.71	0.43
30:YG:114:ILE:O	30:YG:116:ASP:N	2.51	0.43
1:QA:1199:U:H4'	10:QJ:54:PHE:CE2	2.53	0.43
40:YU:99:ALA:HA	40:YU:106:PHE:HB2	2.01	0.43
34:YO:51:ALA:O	34:YO:53:LYS:HE3	2.19	0.43
34:RO:51:ALA:O	34:RO:53:LYS:HE3	2.19	0.43
7:QG:78:ARG:HH11	7:QG:78:ARG:CG	2.31	0.43
16:QP:21:VAL:HG23	16:QP:34:GLU:N	2.34	0.43
41:YV:35:LEU:N	41:YV:35:LEU:HD22	2.23	0.43
7:QG:23:VAL:O	7:QG:27:ILE:HD12	2.19	0.43
48:Y2:59:ARG:O	48:Y2:62:THR:HG23	2.18	0.43
51:Y5:40:LYS:HZ1	51:Y5:48:GLU:CB	2.20	0.43
2:QB:142:LEU:HD23	2:QB:142:LEU:O	2.19	0.43
13:QM:19:LEU:HD22	13:QM:19:LEU:N	2.33	0.43
30:YG:67:LYS:N	30:YG:67:LYS:HD2	2.33	0.43
4:QD:166:LYS:CG	27:YD:134:ARG:HH12	2.29	0.43
25:YA:270(R):G:H2'	25:YA:270(S):G:C8	2.53	0.43
19:XS:36:ARG:NH1	19:XS:52:TYR:O	2.51	0.43
32:RI:52:ARG:HA	32:RI:55:ALA:HB3	2.00	0.43
38:RS:56:LEU:O	38:RS:57:LYS:O	2.36	0.43
44:RY:6:HIS:N	44:RY:6:HIS:ND1	2.66	0.43
1:QA:797:C:OP1	11:QK:124:LYS:HE2	2.17	0.43
1:XA:338:A:C6	1:XA:339:C:C4	3.07	0.43
43:YX:70:LEU:H	43:YX:70:LEU:HD23	1.78	0.43
25:RA:428:A:H8	25:RA:428:A:OP2	2.02	0.43
6:QF:88:VAL:HG12	6:QF:89:MET:N	2.34	0.43
29:YF:192:LEU:HD21	29:YF:194:MET:HE3	2.00	0.43
2:XB:132:LYS:HA	2:XB:135:GLN:CB	2.43	0.43
6:XF:73:ASN:O	6:XF:76:ALA:HB3	2.19	0.43
6:QF:61:LEU:HD23	6:QF:63:TYR:OH	2.17	0.43
34:YO:63:VAL:HG23	34:YO:63:VAL:O	2.17	0.43
12:QL:22:SER:C	12:QL:24:VAL:H	2.22	0.43
4:QD:132:ARG:HH11	4:QD:132:ARG:HG2	1.83	0.43
10:XJ:70:ARG:HG3	10:XJ:70:ARG:HH11	1.83	0.43
4:QD:163:GLU:OE2	4:QD:163:GLU:HA	2.19	0.43
7:QG:60:LYS:O	7:QG:61:VAL:C	2.57	0.43
26:YB:12:C:H2'	46:Y0:73:GLY:HA3	2.00	0.43
12:XL:27:LEU:HD13	12:XL:28:LYS:H	1.84	0.43
18:XR:63:GLN:O	18:XR:66:LEU:HB3	2.19	0.43
31:YH:92:ILE:CD1	31:YH:160:LYS:HD3	2.48	0.43
28:RE:69:LYS:C	28:RE:71:GLY:N	2.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:QI:100:GLY:C	9:QI:102:LEU:N	2.72	0.43
25:YA:142:G:H2'	25:YA:143:C:C6	2.53	0.43
7:XG:122:HIS:HA	7:XG:125:MET:HB2	2.00	0.43
5:QE:62:ALA:O	5:QE:64:ARG:N	2.51	0.43
25:RA:1578:U:C2'	25:RA:1579:A:H5'	2.48	0.43
25:RA:2722:G:H4'	37:RR:4:LEU:HB2	1.99	0.43
3:QC:67:THR:O	3:QC:69:HIS:CE1	2.72	0.43
25:YA:841:A:H2'	25:YA:842:G:C8	2.54	0.43
25:RA:724:U:H2'	25:RA:725:G:O4'	2.18	0.43
45:RZ:153:SER:HB2	45:RZ:167:PRO:HB3	2.00	0.43
51:Y5:15:ARG:HA	51:Y5:18:ALA:HB3	1.99	0.43
39:RT:89:VAL:O	39:RT:90:GLN:HB2	2.19	0.43
4:QD:95:GLY:O	4:QD:99:SER:N	2.51	0.43
30:RG:59:GLU:O	30:RG:62:LEU:HB3	2.18	0.43
25:RA:1357:U:H2'	25:RA:1358:G:O4'	2.19	0.43
9:XI:41:VAL:HG12	9:XI:41:VAL:O	2.18	0.43
3:XC:27:LYS:NZ	3:XC:27:LYS:HB3	2.34	0.43
6:XF:48:LEU:HA	6:XF:48:LEU:HD23	1.85	0.43
9:QI:41:VAL:O	9:QI:41:VAL:HG12	2.18	0.43
1:XA:640:A:O2'	8:XH:115:SER:HB3	2.18	0.43
28:YE:143:ASN:ND2	28:YE:143:ASN:N	2.65	0.43
2:QB:109:SER:C	2:QB:111:ARG:H	2.21	0.43
13:XM:69:GLU:O	13:XM:70:LEU:C	2.56	0.43
50:Y4:48:ARG:C	50:Y4:49:PHE:HD1	2.22	0.43
28:YE:51:PHE:O	28:YE:74:PRO:CB	2.67	0.43
3:QC:14:ILE:C	3:QC:16:ARG:H	2.21	0.43
27:YD:30:GLU:CD	27:YD:63:ARG:HE	2.21	0.43
28:RE:51:PHE:O	28:RE:74:PRO:CB	2.67	0.43
30:YG:145:THR:O	30:YG:146:TYR:HB3	2.19	0.43
40:RU:88:ILE:HG22	40:RU:90:VAL:CG2	2.44	0.43
40:RU:95:LEU:HD13	41:RV:4:ILE:HD12	1.98	0.43
38:RS:110:LEU:HD23	38:RS:112:PHE:CE2	2.54	0.43
3:QC:59:ARG:HH12	3:QC:97:LYS:CD	2.31	0.43
4:QD:25:ARG:NH1	4:QD:30:LYS:CE	2.75	0.43
33:RN:103:VAL:O	33:RN:104:LYS:C	2.57	0.43
33:RN:96:GLU:O	33:RN:97:ARG:C	2.57	0.43
25:YA:483:A:H4'	44:YY:49:VAL:CA	2.37	0.43
39:RT:107:ASP:OD2	39:RT:109:GLU:HB2	2.18	0.43
28:YE:25:VAL:HG21	39:YT:8:LYS:HG3	2.00	0.43
27:RD:177:LEU:O	27:RD:179:SER:N	2.51	0.43
2:QB:32:ILE:HD13	2:QB:190:THR:CG2	2.49	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
2:XB:29:ALA:O	2:XB:32:ILE:HG22	2.17	0.43
2:XB:32:ILE:HD13	2:XB:190:THR:CG2	2.48	0.43
25:YA:2585:U:H5	56:Z8:76:PPU:O2'	2.00	0.43
27:YD:181:GLU:HA	27:YD:272:ALA:CB	2.38	0.43
2:XB:115:LEU:HD21	2:XB:153:ARG:HD3	2.00	0.43
1:XA:1321:C:H3'	1:XA:1322:C:H5''	1.99	0.43
25:RA:2749:A:H4'	31:RH:62:LYS:HB3	1.99	0.43
7:QG:111:ARG:HH11	7:QG:111:ARG:CB	2.23	0.43
38:RS:57:LYS:O	38:RS:58:LEU:HB3	2.18	0.43
28:RE:120:TRP:CE3	28:RE:155:LYS:HD3	2.53	0.43
1:XA:1346:A:N6	7:XG:10:ARG:HD2	2.33	0.43
25:YA:2729:G:H2'	25:YA:2730:C:C6	2.53	0.43
47:Y1:44:PRO:O	47:Y1:46:LEU:N	2.51	0.43
20:XT:101:GLY:C	20:XT:103:GLY:H	2.22	0.43
15:XO:17:ARG:HD3	15:XO:26:GLU:HG3	2.01	0.43
15:XO:25:THR:O	15:XO:29:VAL:HG23	2.18	0.43
1:XA:564:C:H5'	17:XQ:32:TYR:CE2	2.54	0.43
15:XO:71:GLN:HB2	15:XO:78:TYR:CE1	2.54	0.43
54:R8:40:GLU:O	54:R8:41:ILE:C	2.56	0.43
38:YS:42:ASP:C	38:YS:44:LYS:N	2.72	0.43
1:XA:266:G:H5''	1:XA:267:C:C5	2.53	0.43
1:QA:1205:U:O2'	3:QC:195:VAL:HG23	2.18	0.43
28:YE:16:ARG:O	28:YE:18:ASP:O	2.36	0.43
11:XK:20:TYR:C	11:XK:21:ILE:HD12	2.38	0.43
12:XL:27:LEU:C	12:XL:29:GLY:H	2.20	0.43
12:QL:27:LEU:C	12:QL:29:GLY:H	2.20	0.43
33:RN:61:ARG:HA	33:RN:61:ARG:NE	2.33	0.43
25:RA:249:C:H4'	25:RA:250:G:O5'	2.18	0.43
55:R9:7:VAL:HG21	55:R9:36:GLN:HB2	2.00	0.43
29:RF:62:ARG:NH1	29:RF:62:ARG:CB	2.82	0.43
18:QR:29:PHE:HD2	18:QR:29:PHE:N	2.17	0.43
28:YE:155:LYS:O	28:YE:156:MET:HG3	2.19	0.43
25:YA:323:G:H2'	29:YF:169:ASN:OD1	2.18	0.43
25:YA:2150:U:H2'	25:YA:2151:G:C8	2.54	0.43
25:RA:500:G:N2	25:RA:502:A:H3'	2.33	0.43
4:XD:60:GLU:HG2	4:XD:202:LEU:HD12	2.00	0.43
47:R1:44:PRO:O	47:R1:46:LEU:N	2.51	0.43
25:YA:236:C:H2'	25:YA:237:C:C6	2.54	0.43
25:RA:2193:G:H2'	25:RA:2194:G:O4'	2.18	0.43
3:QC:27:LYS:NZ	3:QC:27:LYS:HB3	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:59:ARG:NE	4:XD:59:ARG:HA	2.34	0.43
39:YT:64:ARG:HG2	39:YT:64:ARG:HH11	1.84	0.43
26:RB:11:C:H3'	26:RB:12:C:H6	1.83	0.43
25:YA:722:A:H3'	25:YA:723:G:H8	1.83	0.43
25:RA:2875:C:H4'	39:RT:5:ALA:HB2	2.01	0.43
1:XA:963:G:H21	10:XJ:55:LYS:CD	2.32	0.43
44:YY:84:ARG:HD3	44:YY:86:ARG:HH11	1.83	0.43
25:YA:583:G:H5''	40:YU:10:ARG:NH1	2.29	0.43
26:RB:40:U:H3	26:RB:43:C:H5''	1.84	0.43
2:QB:200:ILE:N	2:QB:200:ILE:HD12	2.34	0.43
38:RS:105:ALA:C	38:RS:110:LEU:HD21	2.38	0.43
37:YR:54:LEU:O	37:YR:62:ALA:HB1	2.19	0.43
37:YR:51:LEU:HD13	37:YR:66:VAL:HG22	2.01	0.43
28:RE:203:LYS:C	28:RE:203:LYS:HD2	2.39	0.43
38:YS:30:ARG:NH2	38:YS:92:TYR:HD1	2.17	0.43
4:QD:90:GLY:O	4:QD:93:PHE:HB3	2.19	0.43
33:RN:63:THR:HG23	33:RN:66:LYS:HE3	2.00	0.43
50:Y4:43:TYR:O	50:Y4:46:GLN:HA	2.19	0.43
30:YG:131:TYR:HE2	30:YG:133:LEU:HD22	1.83	0.43
37:RR:54:LEU:O	37:RR:62:ALA:HB1	2.19	0.43
4:XD:90:GLY:O	4:XD:93:PHE:HB3	2.19	0.43
16:XP:21:VAL:HG23	16:XP:34:GLU:N	2.34	0.43
20:QT:44:ALA:C	20:QT:91:LEU:HB3	2.39	0.43
5:QE:94:ALA:HB2	5:QE:119:LEU:HG	2.00	0.43
2:QB:33:TYR:CD1	2:QB:33:TYR:C	2.92	0.43
31:RH:6:ARG:CG	31:RH:7:LEU:N	2.81	0.43
48:Y2:62:THR:O	48:Y2:65:ASN:HB2	2.18	0.43
5:XE:72:GLN:C	5:XE:74:GLY:H	2.22	0.43
1:QA:1405:G:P	58:QA:1670:PAR:HO34	2.41	0.43
28:RE:48:GLN:HB3	28:RE:48:GLN:HE21	1.55	0.43
1:XA:1222:G:H5''	19:XS:78:ARG:NH1	2.33	0.43
25:RA:336:C:H5''	44:RY:6:HIS:CD2	2.53	0.43
44:YY:6:HIS:ND1	44:YY:6:HIS:N	2.66	0.43
10:QJ:16:LEU:C	10:QJ:16:LEU:HD13	2.38	0.43
25:RA:1331:A:H2'	25:RA:1333:C:H5	1.84	0.43
9:XI:43:ALA:O	9:XI:45:ALA:N	2.51	0.43
11:QK:62:GLN:O	11:QK:64:ALA:N	2.52	0.43
15:QO:77:ARG:HA	15:QO:80:ALA:HB2	1.99	0.43
16:QP:72:ARG:O	16:QP:72:ARG:HD3	2.18	0.43
1:QA:1344:C:H5'	9:QI:120:ARG:O	2.19	0.43
25:RA:2439:A:P	25:RA:2439:A:H3'	2.59	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YN:118:LYS:C	33:YN:120:LEU:H	2.20	0.43
19:XS:29:ARG:HH11	19:XS:29:ARG:HG2	1.84	0.43
4:XD:163:GLU:HA	4:XD:163:GLU:OE2	2.19	0.43
50:Y4:15:ILE:CD1	50:Y4:15:ILE:N	2.78	0.43
42:RW:19:LEU:O	42:RW:22:ASP:HB2	2.19	0.43
46:R0:82:ARG:HA	46:R0:83:PRO:HD2	1.87	0.43
4:XD:122:ARG:HA	4:XD:134:ASP:HB2	2.00	0.43
33:YN:26:LEU:HG	33:YN:30:ILE:CD1	2.49	0.43
33:YN:30:ILE:HG22	33:YN:34:LEU:CD2	2.48	0.43
15:QO:64:ARG:CD	15:QO:68:ARG:NH2	2.82	0.43
25:YA:1102:C:H2'	25:YA:1103:A:H5''	2.00	0.43
25:YA:994:C:O2	41:YV:10:LYS:HE2	2.19	0.43
35:RP:70:GLN:OE1	35:RP:70:GLN:N	2.51	0.43
53:Y7:32:LYS:O	53:Y7:33:ARG:C	2.56	0.43
7:QG:122:HIS:HA	7:QG:125:MET:HB2	2.00	0.43
1:QA:520:A:OP2	12:QL:51:ALA:HB1	2.19	0.43
10:XJ:90:LEU:N	10:XJ:91:PRO:CD	2.82	0.43
1:XA:313:A:H2'	1:XA:314:C:C6	2.54	0.43
2:QB:92:TYR:HD1	2:QB:92:TYR:C	2.21	0.43
16:XP:39:TYR:CZ	16:XP:41:PRO:HB3	2.52	0.43
1:QA:946:A:H2'	1:QA:947:G:C8	2.53	0.43
50:R4:68:ARG:O	50:R4:69:LYS:HB2	2.17	0.43
50:R4:59:PHE:CE1	50:R4:70:GLY:N	2.86	0.43
25:YA:195:A:H2'	25:YA:198:C:N4	2.33	0.43
8:QH:64:LYS:CB	8:QH:79:VAL:HG21	2.49	0.43
3:QC:69:HIS:HA	3:QC:104:GLN:HB2	2.01	0.43
25:RA:116:C:H2'	25:RA:117:G:O4'	2.19	0.43
25:RA:488:G:O2'	25:RA:491:G:N7	2.47	0.43
25:YA:1842:G:H2'	25:YA:1843:C:C6	2.53	0.43
45:RZ:141:VAL:HA	45:RZ:144:LEU:HD23	2.00	0.43
3:XC:129:ALA:C	3:XC:131:ARG:N	2.72	0.43
39:YT:89:VAL:O	39:YT:90:GLN:HB2	2.19	0.43
25:YA:984:A:H5''	25:YA:985:C:H5	1.83	0.43
40:YU:43:GLY:HA3	41:YV:73:SER:OG	2.19	0.43
25:RA:2102:U:H2'	25:RA:2103:C:C6	2.54	0.43
33:YN:90:MET:O	33:YN:91:LEU:C	2.57	0.43
1:QA:1004:A:H1'	1:QA:1036:G:N2	2.33	0.43
45:YZ:30:ASN:OD1	45:YZ:33:LEU:N	2.49	0.43
35:RP:135:LEU:HD13	35:RP:139:LYS:HE3	2.01	0.43
25:RA:2695:C:H2'	25:RA:2696:U:C6	2.54	0.43
25:YA:2210:G:N3	25:YA:2210:G:H2'	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1032(A):G:H2'	1:QA:1032(B):G:C8	2.53	0.43
25:YA:241:A:H5'	25:YA:243:U:O4'	2.19	0.43
28:YE:179:GLU:CB	28:YE:181:LEU:HD23	2.23	0.43
27:RD:44:ASN:HB3	27:RD:49:ILE:CG2	2.47	0.43
27:RD:44:ASN:CB	27:RD:49:ILE:HG22	2.46	0.43
13:XM:90:LEU:HD12	13:XM:91:ARG:N	2.33	0.43
19:XS:68:GLY:CA	50:Y4:68:ARG:CB	2.97	0.43
2:XB:100:GLY:N	2:XB:176:GLU:OE2	2.51	0.43
15:QO:83:GLU:OE1	15:QO:83:GLU:HA	2.18	0.43
28:YE:13:ARG:HH11	28:YE:13:ARG:HB2	1.81	0.43
33:RN:1:MET:O	33:RN:1:MET:HG3	2.19	0.43
2:QB:77:ALA:HB1	2:QB:165:VAL:HG11	2.00	0.43
36:YQ:81:VAL:CG2	46:Y0:7:LEU:HD21	2.39	0.43
25:YA:675:A:H4'	29:YF:67:GLN:OE1	2.19	0.43
25:YA:2285:C:H5	52:Y6:27:LYS:HE2	1.83	0.43
8:QH:20:TYR:CD1	8:QH:65:TYR:HD2	2.35	0.43
2:XB:87:ARG:NH1	2:XB:223:ILE:HD12	2.33	0.43
25:YA:2414:G:H21	35:YP:67:MET:CE	2.31	0.43
37:RR:48:VAL:O	37:RR:49:ASP:C	2.57	0.43
7:XG:23:VAL:O	7:XG:27:ILE:HD12	2.19	0.43
2:XB:33:TYR:CD1	2:XB:33:TYR:C	2.92	0.43
20:XT:44:ALA:HB1	20:XT:91:LEU:HB2	2.00	0.43
51:Y5:40:LYS:HE2	51:Y5:47:PRO:CG	2.49	0.43
2:QB:95:GLN:HE21	2:QB:147:LYS:CE	2.28	0.43
19:QS:21:GLU:HG3	19:QS:22:LEU:CD1	2.49	0.43
33:RN:7:LYS:N	33:RN:7:LYS:HD2	2.29	0.43
14:YN:12:ARG:C	14:YN:14:PRO:CD	2.81	0.43
14:QN:12:ARG:C	14:QN:14:PRO:CD	2.81	0.43
9:XI:26:VAL:CG1	9:XI:63:ILE:HD13	2.48	0.43
5:XE:126:ARG:NH1	5:XE:126:ARG:CG	2.79	0.43
1:XA:1161:C:H2'	1:XA:1162:C:H6	1.83	0.43
18:QR:43:PHE:HA	18:QR:51:LEU:HD12	2.01	0.43
18:QR:53:ARG:C	18:QR:55:ARG:H	2.22	0.43
25:YA:1728:G:H8	25:YA:1732:A:N6	2.16	0.43
1:QA:377:G:P	16:QP:5:ARG:NH1	2.91	0.43
25:RA:827:U:H1'	25:RA:2246:G:O2'	2.18	0.43
6:QF:73:ASN:O	6:QF:76:ALA:HB3	2.19	0.43
25:YA:2131:G:N2	25:YA:2158:A:N7	2.66	0.43
27:RD:76:PRO:O	27:RD:98:VAL:CG2	2.65	0.43
34:RO:61:VAL:O	34:RO:61:VAL:HG13	2.18	0.43
6:XF:85:VAL:HG12	6:XF:85:VAL:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:427:U:OP1	4:XD:13:ARG:NH2	2.52	0.43
1:XA:532:A:H2	1:XA:1206:G:N2	2.12	0.43
19:QS:29:ARG:HG2	19:QS:29:ARG:HH11	1.83	0.43
32:RI:12:LEU:HG	32:RI:19:VAL:HG11	2.00	0.43
10:XJ:30:SER:OG	10:XJ:81:THR:HG22	2.19	0.43
26:RB:16:G:H2'	26:RB:17:C:H6	1.84	0.43
47:Y1:29:GLY:O	47:Y1:31:GLY:N	2.49	0.43
39:YT:19:LEU:HA	39:YT:20:PRO:HD3	1.88	0.43
31:YH:120:GLY:O	31:YH:136:ILE:HD12	2.19	0.43
25:RA:1348:G:C2'	25:RA:1349:A:H5''	2.48	0.43
42:RW:28:SER:O	42:RW:30:GLU:N	2.50	0.43
8:XH:118:VAL:O	8:XH:119:LEU:HD23	2.18	0.43
25:YA:2469:A:O2'	36:YQ:56:ARG:HG2	2.18	0.43
32:RI:79:ILE:HB	32:RI:142:VAL:HA	2.00	0.43
1:XA:520:A:O2'	12:XL:73:GLU:HG2	2.19	0.43
1:XA:187:C:H2'	1:XA:188:U:O4'	2.19	0.43
1:XA:264:U:O2'	17:XQ:64:PRO:HD2	2.19	0.43
25:YA:559:G:N2	40:YU:49:HIS:CE1	2.86	0.43
25:RA:1265:A:OP1	25:RA:1265:A:H8	2.01	0.43
49:Y3:50:VAL:HB	49:Y3:53:LEU:HD12	2.00	0.43
45:YZ:112:ARG:O	45:YZ:114:GLY:N	2.51	0.43
2:QB:231:GLU:HA	2:QB:232:PRO:HD3	1.83	0.43
31:RH:35:VAL:CG2	31:RH:75:ALA:HB2	2.48	0.43
1:QA:836:G:C6	1:QA:851:G:C6	3.07	0.43
25:YA:1930:G:H2'	25:YA:1968:G:C6	2.54	0.43
6:QF:22:GLU:OE1	6:QF:82:ARG:NH2	2.46	0.43
8:XH:64:LYS:CB	8:XH:79:VAL:HG21	2.48	0.43
7:XG:88:PRO:HB3	7:XG:145:ALA:HA	2.01	0.43
39:YT:89:VAL:O	39:YT:90:GLN:CB	2.67	0.43
25:YA:1751:C:H2'	25:YA:1752:C:H6	1.83	0.43
1:QA:1216:G:H5''	14:QN:5:ALA:CB	2.49	0.43
2:XB:127:ILE:HG23	2:XB:128:GLU:N	2.34	0.43
1:QA:20:U:H2'	1:QA:21:G:O4'	2.19	0.43
25:YA:2275:C:O2	36:YQ:83:MET:HG3	2.19	0.43
7:QG:88:PRO:HB3	7:QG:145:ALA:HA	2.01	0.43
1:QA:960:U:O2	1:QA:960:U:H2'	2.18	0.43
25:RA:1651:G:H2'	25:RA:1652:A:O4'	2.18	0.43
25:RA:560:C:H2'	25:RA:561:G:O4'	2.18	0.43
25:YA:1161:C:O2'	41:YV:8:GLY:HA2	2.19	0.43
31:YH:125:VAL:CG1	31:YH:126:PRO:CG	2.94	0.43
44:RY:95:LYS:HB2	44:RY:95:LYS:HZ1	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:12:LEU:C	3:QC:14:ILE:H	2.22	0.43
35:RP:18:ARG:O	35:RP:19:VAL:CB	2.52	0.43
35:RP:19:VAL:HG22	35:RP:21:ARG:H	1.83	0.43
3:XC:12:LEU:C	3:XC:14:ILE:H	2.21	0.43
35:RP:120:ALA:HB1	35:RP:138:LEU:CB	2.49	0.43
2:QB:188:ALA:CB	2:QB:200:ILE:HG23	2.47	0.43
2:QB:54:THR:HG21	2:QB:201:ILE:HD11	2.00	0.43
2:QB:68:ILE:HB	2:QB:70:PHE:HE1	1.82	0.43
29:RF:183:VAL:O	29:RF:184:TYR:C	2.57	0.43
33:YN:57:ALA:O	33:YN:124:ALA:HA	2.18	0.43
7:XG:79:ARG:NH1	7:XG:82:GLY:HA2	2.34	0.43
30:RG:31:VAL:O	30:RG:31:VAL:HG13	2.18	0.43
8:XH:86:ILE:CB	8:XH:133:LEU:HD22	2.49	0.43
51:Y5:56:LYS:O	51:Y5:57:VAL:C	2.57	0.43
2:XB:197:VAL:CG1	2:XB:198:ASP:N	2.82	0.43
44:YY:47:LYS:O	44:YY:49:VAL:N	2.48	0.43
39:RT:6:LEU:HD12	39:RT:9:LEU:HD12	2.01	0.43
51:Y5:3:LYS:O	51:Y5:4:HIS:C	2.56	0.43
11:XK:34:ASP:OD1	11:XK:38:ASN:HB2	2.18	0.43
1:XA:1366:C:H2'	1:XA:1367:C:H6	1.84	0.43
25:RA:2277:G:C5'	36:RQ:85:LYS:HG3	2.49	0.43
33:RN:42:TRP:HA	33:RN:48:MET:HE1	1.99	0.43
27:YD:17:THR:HG22	27:YD:204:ILE:HA	1.98	0.43
1:XA:1070:U:P	5:XE:25:ARG:NH1	2.91	0.43
1:XA:1222:G:OP1	19:XS:77:THR:HG21	2.19	0.43
19:XS:51:VAL:HG12	19:XS:52:TYR:N	2.33	0.43
28:YE:23:VAL:HG12	28:YE:184:VAL:O	2.19	0.43
38:RS:52:SER:HB2	38:RS:55:ALA:CB	2.49	0.43
53:Y7:5:TRP:CD1	53:Y7:7:PRO:HG3	2.53	0.43
16:XP:75:ARG:C	16:XP:77:ALA:N	2.72	0.43
10:XJ:10:GLY:O	10:XJ:68:HIS:N	2.51	0.43
35:RP:13:ASN:C	35:RP:15:ARG:H	2.21	0.43
30:RG:4:ASP:O	30:RG:5:VAL:HB	2.19	0.43
7:QG:148:ASN:O	7:QG:150:ALA:N	2.51	0.43
11:QK:44:SER:O	11:QK:48:ILE:HG12	2.18	0.43
37:RR:2:ARG:HG2	37:RR:5:LYS:HZ1	1.82	0.43
25:RA:298:G:O2'	25:RA:322:A:N1	2.43	0.43
6:QF:85:VAL:O	6:QF:85:VAL:HG12	2.18	0.43
25:YA:2629:A:O2'	25:YA:2630:G:H5''	2.19	0.43
30:YG:56:ALA:HB2	30:YG:153:ARG:NE	2.28	0.43
6:XF:3:ARG:HB3	6:XF:93:SER:CB	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1799:G:H4'	25:RA:1800:C:O5'	2.18	0.43
28:RE:18:ASP:O	28:RE:19:ARG:C	2.55	0.43
4:QD:52:SER:O	4:QD:55:ALA:N	2.52	0.43
3:QC:101:LEU:C	3:QC:101:LEU:HD23	2.38	0.43
1:XA:1225:A:H5''	1:XA:1226:C:OP2	2.18	0.43
29:YF:45:ARG:HH11	29:YF:45:ARG:HG2	1.82	0.43
2:XB:130:ARG:NH2	2:XB:138:LEU:HD21	2.34	0.43
11:XK:75:TYR:N	11:XK:75:TYR:HD1	2.16	0.43
42:RW:111:HIS:CG	42:RW:112:GLY:H	2.37	0.43
11:QK:75:TYR:N	11:QK:75:TYR:HD1	2.17	0.43
36:YQ:57:HIS:ND1	36:YQ:58:PHE:N	2.67	0.43
34:YO:78:ARG:HH21	39:YT:103:ARG:HH22	1.64	0.43
45:RZ:5:LEU:HD21	45:RZ:44:PHE:HA	2.01	0.43
37:RR:10:LEU:O	37:RR:12:ARG:N	2.52	0.43
25:RA:1882:C:H5'	25:RA:1883:G:OP2	2.18	0.43
7:XG:89:MET:HE3	7:XG:156:TRP:H	1.83	0.43
12:QL:120:TYR:O	12:QL:121:GLY:C	2.57	0.43
25:RA:2224:G:H4'	25:RA:2226:C:C2	2.53	0.43
25:YA:140:A:C8	25:YA:1408:C:O2'	2.70	0.43
13:XM:54:VAL:O	13:XM:58:GLU:OE2	2.37	0.43
1:XA:1405:G:O4'	1:XA:1519:A:H4'	2.19	0.43
22:XV:51:C:H2'	22:XV:52:G:O4'	2.19	0.43
25:RA:2556:C:H2'	25:RA:2557:G:O4'	2.17	0.43
1:QA:818:G:C3'	1:QA:819:A:H5''	2.49	0.43
46:Y0:41:ARG:HA	46:Y0:41:ARG:NE	2.34	0.43
1:QA:481:G:O2'	1:QA:482:A:P	2.77	0.43
31:YH:125:VAL:HG12	31:YH:126:PRO:CD	2.49	0.43
19:QS:8:GLY:O	19:QS:9:VAL:CG2	2.57	0.43
28:YE:52:LEU:O	28:YE:74:PRO:HA	2.19	0.43
27:RD:71:ASP:CB	27:RD:103:ARG:HH22	2.32	0.43
35:YP:101:VAL:HG13	35:YP:102:ARG:N	2.33	0.43
11:XK:105:VAL:O	11:XK:105:VAL:HG23	2.19	0.43
35:RP:52:GLU:OE2	35:RP:58:THR:N	2.52	0.43
13:XM:3:ARG:HD2	13:XM:9:ILE:CG1	2.45	0.43
30:YG:139:LEU:HA	30:YG:144:ILE:HG21	2.00	0.43
5:QE:48:ALA:HB2	5:QE:57:LYS:HD3	2.00	0.43
38:YS:105:ALA:C	38:YS:110:LEU:HD21	2.38	0.43
2:XB:17:PHE:CG	2:XB:44:LEU:HD11	2.53	0.43
7:QG:79:ARG:HH12	7:QG:82:GLY:HA2	1.84	0.43
38:RS:29:PHE:HD2	38:RS:92:TYR:HH	1.66	0.43
52:R6:50:ARG:HH11	52:R6:50:ARG:HG2	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:YR:94:TYR:N	37:YR:94:TYR:CD2	2.87	0.43
42:YW:65:LEU:CD1	42:YW:68:ARG:NH1	2.75	0.43
12:XL:6:THR:H	12:XL:9:GLN:NE2	1.97	0.43
1:QA:1305:G:C5'	21:QU:4:GLY:HA3	2.47	0.43
31:RH:53:GLU:CD	31:RH:54:ARG:H	2.21	0.43
9:QI:26:VAL:CG1	9:QI:63:ILE:HD13	2.49	0.43
1:XA:1369:C:H2'	1:XA:1370:G:C8	2.54	0.43
34:RO:31:LYS:O	34:RO:32:TYR:HD2	2.02	0.43
48:R2:6:VAL:O	48:R2:7:ARG:C	2.57	0.43
9:QI:118:LYS:HZ2	9:QI:118:LYS:HB2	1.84	0.43
1:QA:1227:A:OP2	13:QM:111:LYS:HE3	2.18	0.43
54:R8:28:GLY:O	54:R8:29:LYS:O	2.37	0.43
1:XA:501:C:H2'	1:XA:502:G:H8	1.82	0.43
33:RN:87:LEU:C	33:RN:87:LEU:CD2	2.86	0.43
4:XD:36:ARG:HA	4:XD:37:PRO:HD2	1.82	0.43
3:QC:188:LEU:HD12	3:QC:195:VAL:CG1	2.48	0.43
47:Y1:8:SER:CB	47:Y1:66:HIS:CE1	3.01	0.43
10:QJ:30:SER:OG	10:QJ:81:THR:HG22	2.19	0.43
3:XC:101:LEU:C	3:XC:101:LEU:HD23	2.39	0.43
1:XA:1298:C:H4'	1:XA:1299:A:N9	2.34	0.43
6:XF:45:LEU:CD1	6:XF:59:TYR:HD1	2.30	0.43
40:RU:27:LEU:O	40:RU:30:LYS:N	2.41	0.43
25:YA:1889:A:N1	25:YA:2234:G:H1'	2.34	0.43
53:R7:19:ARG:NH1	53:R7:19:ARG:HG2	2.33	0.43
53:R7:17:GLY:O	53:R7:20:ALA:HB3	2.19	0.43
45:YZ:102:LEU:HG	45:YZ:123:ASP:HA	2.01	0.43
25:RA:1050:A:H8	25:RA:2751:G:O2'	2.02	0.43
30:RG:51:ARG:HB3	30:RG:51:ARG:NH1	2.33	0.43
31:RH:16:SER:OG	31:RH:17:VAL:N	2.50	0.43
25:YA:217:G:H2'	25:YA:218:A:O4'	2.19	0.43
30:YG:25:TYR:CZ	30:YG:32:PRO:HD3	2.54	0.43
30:RG:25:TYR:CZ	30:RG:32:PRO:HD3	2.54	0.43
41:RV:72:VAL:HG13	41:RV:72:VAL:O	2.19	0.43
3:XC:67:THR:O	3:XC:69:HIS:CE1	2.72	0.43
15:XO:10:LYS:O	15:XO:14:GLU:HB2	2.18	0.43
2:QB:127:ILE:HG23	2:QB:128:GLU:N	2.34	0.43
25:RA:2481:G:O2'	25:RA:2482:G:P	2.77	0.43
25:YA:2507:C:H2'	25:YA:2508:G:O4'	2.18	0.43
1:XA:781:A:H4'	1:XA:1522:U:O2'	2.19	0.43
5:QE:105:VAL:HB	5:QE:106:PRO:CD	2.49	0.43
1:QA:1006:C:H2'	1:QA:1007:C:C6	2.54	0.43

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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	0.43
1:QA:1178:G:H5''	9:QI:93:ARG:HH21	1.84	0.43
30:YG:59:GLU:O	30:YG:62:LEU:HB3	2.18	0.43
45:RZ:52:SER:OG	45:RZ:52:SER:O	2.33	0.43
39:RT:64:ARG:HH11	39:RT:64:ARG:HG2	1.84	0.43
37:YR:81:ASP:N	37:YR:81:ASP:OD2	2.51	0.43
33:RN:90:MET:O	33:RN:91:LEU:C	2.57	0.43
25:YA:634:C:H2'	25:YA:635:C:C6	2.54	0.43
1:XA:721:G:C6	1:XA:733:A:C2	3.07	0.43
25:YA:2492:U:H2'	25:YA:2493:U:C6	2.54	0.43
4:QD:22:LYS:CD	4:QD:26:CYS:SG	3.05	0.42
44:YY:97:ARG:HH21	44:YY:98:VAL:CG2	2.32	0.42
25:YA:1251:C:P	40:YU:10:ARG:HG3	2.59	0.42
19:XS:39:THR:CG2	19:XS:40:ILE:H	2.23	0.42
27:YD:31:LYS:C	27:YD:32:SER:O	2.54	0.42
35:YP:107:LYS:O	35:YP:108:LYS:C	2.58	0.42
8:XH:20:TYR:CD1	8:XH:65:TYR:HD2	2.35	0.42
2:QB:211:ILE:O	2:QB:215:LEU:HB2	2.19	0.42
41:YV:38:LEU:CD2	41:YV:39:LEU:N	2.82	0.42
38:RS:110:LEU:HA	38:RS:112:PHE:CZ	2.53	0.42
29:YF:63:LYS:CE	29:YF:67:GLN:HB2	2.49	0.42
5:XE:31:LEU:HD22	5:XE:31:LEU:HA	1.86	0.42
30:YG:16:ARG:NE	30:YG:31:VAL:HG11	2.34	0.42
7:XG:79:ARG:HH12	7:XG:82:GLY:HA2	1.84	0.42
30:YG:34:LEU:HD11	30:YG:99:MET:CE	2.49	0.42
16:QP:20:VAL:CG2	16:QP:21:VAL:N	2.81	0.42
16:QP:55:ARG:O	16:QP:56:ALA:C	2.57	0.42
28:RE:25:VAL:HG21	39:RT:8:LYS:HG3	2.00	0.42
6:QF:27:GLN:H	6:QF:27:GLN:HG2	1.65	0.42
2:QB:33:TYR:HD1	2:QB:33:TYR:C	2.23	0.42
29:RF:20:LEU:HD12	29:RF:21:ALA:N	2.26	0.42
20:XT:96:GLY:O	20:XT:99:LEU:CD1	2.67	0.42
51:R5:3:LYS:CE	51:R5:3:LYS:HA	2.36	0.42
2:QB:95:GLN:HB3	2:QB:148:TYR:HD1	1.84	0.42
21:QU:6:ARG:C	21:QU:8:THR:H	2.20	0.42
10:XJ:74:ILE:CD1	10:XJ:74:ILE:H	2.21	0.42
2:XB:142:LEU:HD23	2:XB:142:LEU:O	2.18	0.42
28:RE:23:VAL:HG12	28:RE:184:VAL:O	2.19	0.42
16:QP:75:ARG:C	16:QP:77:ALA:N	2.72	0.42
3:QC:76:VAL:CG2	3:QC:103:VAL:HG11	2.49	0.42
9:XI:95:LYS:HD3	9:XI:95:LYS:C	2.39	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:R4:22:ILE:CG2	50:R4:23:GLU:N	2.81	0.42
17:QQ:22:LEU:HD13	17:QQ:41:LYS:HG2	2.01	0.42
47:R1:13:ILE:CG1	47:R1:42:GLN:HB2	2.49	0.42
33:YN:62:VAL:HG12	33:YN:66:LYS:HB2	2.01	0.42
25:RA:1754:C:H2'	25:RA:1755:A:O4'	2.19	0.42
8:QH:91:ARG:HH11	8:QH:91:ARG:CG	2.23	0.42
1:QA:1347:G:N2	1:QA:1373:G:H2'	2.34	0.42
29:RF:176:LEU:HD11	29:RF:180:GLY:O	2.19	0.42
47:Y1:53:VAL:CG1	47:Y1:54:ALA:N	2.81	0.42
29:RF:64:ILE:HG23	29:RF:65:TRP:CD1	2.54	0.42
1:XA:537:G:H5''	12:XL:113:ARG:HH12	1.84	0.42
11:QK:108:ILE:HG21	18:QR:88:LYS:OXT	2.19	0.42
19:QS:29:ARG:HD3	19:QS:30:LEU:H	1.83	0.42
17:XQ:77:VAL:O	17:XQ:78:GLU:HB2	2.18	0.42
18:QR:73:ALA:HB3	18:QR:79:LEU:CD1	2.47	0.42
17:QQ:77:VAL:O	17:QQ:78:GLU:HB2	2.18	0.42
15:QO:8:LYS:NZ	15:QO:31:LEU:HD11	2.34	0.42
5:QE:20:GLN:O	5:QE:21:ALA:C	2.57	0.42
14:QN:17:LYS:HG3	14:QN:18:VAL:N	2.33	0.42
1:XA:1297:C:O2'	1:XA:1298:C:P	2.77	0.42
25:RA:1210:A:H4'	25:RA:1211:U:O5'	2.17	0.42
9:XI:88:TYR:O	9:XI:89:ASN:HB2	2.19	0.42
47:Y1:73:LEU:C	47:Y1:75:GLU:N	2.70	0.42
16:QP:40:ASP:C	16:QP:42:ARG:N	2.73	0.42
1:XA:67:C:O2'	1:XA:171:A:N3	2.42	0.42
45:RZ:5:LEU:HB3	45:RZ:6:LYS:H	1.55	0.42
1:QA:1081:G:P	5:QE:16:THR:OG1	2.77	0.42
1:QA:920:U:H2'	1:QA:921:U:H6	1.83	0.42
45:RZ:111:VAL:HG13	45:RZ:112:ARG:N	2.34	0.42
25:RA:795:C:H2'	25:RA:796:C:C6	2.54	0.42
8:XH:82:HIS:CD2	8:XH:82:HIS:C	2.91	0.42
36:YQ:25:ASP:H	36:YQ:102:VAL:HG23	1.84	0.42
4:XD:10:ARG:NH1	4:XD:10:ARG:HG3	2.33	0.42
42:RW:88:ARG:CB	42:RW:92:ARG:HB3	2.47	0.42
37:YR:10:LEU:O	37:YR:12:ARG:N	2.52	0.42
9:XI:22:GLY:O	9:XI:23:ASN:C	2.57	0.42
1:QA:1059:C:H2'	1:QA:1060:C:H6	1.84	0.42
1:QA:1402:C:H2'	1:QA:1403:C:O4'	2.19	0.42
45:YZ:74:VAL:HG13	45:YZ:86:VAL:HG22	2.00	0.42
25:RA:861:A:H2'	25:RA:862:G:O4'	2.19	0.42
25:YA:2836:U:H2'	25:YA:2837:G:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:92:G:H2'	25:YA:93:C:C6	2.54	0.42
25:YA:1322:A:OP1	42:YW:11:ARG:HG3	2.19	0.42
34:RO:17:ARG:HH11	34:RO:17:ARG:HG2	1.84	0.42
25:YA:1087:G:C5	25:YA:1089:G:H1'	2.54	0.42
1:XA:477:G:H2'	1:XA:478:A:C8	2.54	0.42
52:Y6:33:LYS:C	52:Y6:35:GLU:H	2.22	0.42
14:XN:44:LEU:CD1	14:XN:48:ALA:HB2	2.47	0.42
14:QN:47:LEU:O	14:QN:48:ALA:C	2.56	0.42
1:QA:543:C:OP1	4:QD:14:ARG:NE	2.52	0.42
50:R4:48:ARG:NH1	50:R4:51:ASP:HA	2.34	0.42
35:RP:49:ARG:HG2	35:RP:49:ARG:HH11	1.84	0.42
19:QS:62:ILE:HG22	19:QS:63:THR:N	2.34	0.42
19:QS:66:MET:O	19:QS:66:MET:HG3	2.19	0.42
25:YA:242:G:C5'	54:Y8:3:LYS:HE3	2.49	0.42
19:XS:41:VAL:HG12	19:XS:45:VAL:H	1.85	0.42
2:XB:69:LEU:HD12	2:XB:91:PRO:O	2.19	0.42
27:YD:33:LEU:O	27:YD:35:LYS:N	2.52	0.42
35:RP:112:LEU:CD1	35:RP:114:ILE:HG23	2.47	0.42
35:YP:120:ALA:HB1	35:YP:138:LEU:CB	2.49	0.42
54:Y8:53:PRO:HD2	54:Y8:54:GLU:H	1.84	0.42
13:QM:87:TYR:HA	13:QM:90:LEU:HG	2.01	0.42
33:RN:15:LEU:HD13	33:RN:15:LEU:C	2.40	0.42
50:R4:43:TYR:O	50:R4:46:GLN:HA	2.19	0.42
40:RU:91:ASP:O	40:RU:95:LEU:N	2.42	0.42
40:RU:98:LEU:O	40:RU:102:GLU:N	2.49	0.42
2:QB:162:ILE:O	2:QB:185:ILE:HG13	2.19	0.42
2:QB:16:HIS:CD2	2:QB:213:LEU:HD13	2.54	0.42
33:YN:43:THR:HA	33:YN:44:PRO:HD2	1.92	0.42
2:XB:44:LEU:CD1	2:XB:44:LEU:H	2.26	0.42
7:QG:79:ARG:NH1	7:QG:82:GLY:HA2	2.34	0.42
36:RQ:135:ASP:CG	45:RZ:81:ARG:HH12	2.23	0.42
28:YE:203:LYS:C	28:YE:203:LYS:HD2	2.39	0.42
3:QC:22:TRP:CB	3:QC:59:ARG:HB2	2.49	0.42
4:QD:24:GLU:O	4:QD:28:SER:OG	2.21	0.42
37:RR:51:LEU:HD13	37:RR:66:VAL:HG22	2.01	0.42
16:XP:20:VAL:CG2	16:XP:21:VAL:N	2.82	0.42
27:RD:108:PRO:HG2	27:RD:111:LEU:HB2	2.01	0.42
48:R2:62:THR:O	48:R2:65:ASN:HB2	2.19	0.42
31:RH:26:VAL:CG1	31:RH:33:LEU:HB2	2.49	0.42
28:RE:188:VAL:HA	28:RE:189:PRO:HD2	1.79	0.42
53:Y7:47:ARG:HB2	53:Y7:48:LYS:H	1.64	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:155:LYS:O	28:RE:156:MET:HG3	2.19	0.42
27:RD:134:ARG:HG3	27:RD:134:ARG:H	1.55	0.42
1:XA:1152:A:H2'	1:XA:1153:C:C6	2.54	0.42
25:RA:2298:A:H2'	25:RA:2299:G:O4'	2.19	0.42
20:XT:13:LEU:CD1	20:XT:17:ARG:NH1	2.82	0.42
1:QA:376:G:O3'	16:QP:5:ARG:HD2	2.19	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
13:QM:119:GLY:HA3	22:QV:29:G:OP1	2.19	0.42
12:XL:11:VAL:HG13	17:XQ:29:HIS:CD2	2.54	0.42
25:RA:2723:C:O3'	37:RR:1:MET:HE2	2.18	0.42
1:QA:1374:A:O2'	7:QG:28:ASN:HB3	2.18	0.42
48:Y2:6:VAL:O	48:Y2:7:ARG:C	2.57	0.42
6:XF:36:ARG:CZ	6:XF:38:GLU:HG2	2.50	0.42
25:RA:1937:A:O2'	25:RA:1939:U:OP2	2.34	0.42
15:XO:8:LYS:NZ	15:XO:31:LEU:HD11	2.34	0.42
8:QH:109:ILE:HD11	8:QH:120:THR:HG22	2.00	0.42
33:RN:30:ILE:HG22	33:RN:34:LEU:HD21	2.01	0.42
25:YA:1204:A:H1'	25:YA:1206:G:C4	2.54	0.42
49:Y3:46:ASN:O	49:Y3:50:VAL:HG22	2.19	0.42
37:RR:10:LEU:C	37:RR:12:ARG:N	2.72	0.42
25:YA:27:G:O2'	25:YA:28:A:C8	2.72	0.42
1:QA:1131:G:H2'	1:QA:1132:C:C6	2.54	0.42
36:YQ:60:ARG:NH1	45:YZ:114:GLY:N	2.67	0.42
25:RA:1417:C:H2'	25:RA:1418:G:O4'	2.19	0.42
25:RA:345:A:H1'	25:RA:346:A:N7	2.35	0.42
1:XA:201:C:H42	1:XA:216:G:H1	1.67	0.42
25:YA:2283:C:H2'	25:YA:2284:C:O4'	2.19	0.42
30:YG:121:ASN:HA	30:YG:181:ARG:NH2	2.34	0.42
38:YS:64:GLU:O	38:YS:68:GLN:HG3	2.19	0.42
1:XA:1057:G:H2'	1:XA:1058:G:O4'	2.19	0.42
25:YA:1319:G:C6	25:YA:1320:C:N4	2.87	0.42
25:YA:978:G:C2	25:YA:986:C:C2	3.07	0.42
1:XA:614:A:OP1	4:XD:86:LYS:HE3	2.19	0.42
35:RP:119:GLU:OE1	35:RP:119:GLU:HA	2.19	0.42
10:QJ:49:VAL:HG13	10:QJ:50:ILE:N	2.35	0.42
4:QD:19:LEU:O	4:QD:20:TYR:C	2.57	0.42
2:QB:99:GLY:O	2:QB:108:ILE:HD11	2.20	0.42
19:QS:41:VAL:CG1	19:QS:45:VAL:H	2.32	0.42
28:RE:3:GLY:HA3	28:RE:81:ILE:CD1	2.47	0.42
33:YN:15:LEU:C	33:YN:15:LEU:HD13	2.39	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RP:114:ILE:CD1	35:RP:130:PHE:CE1	2.98	0.42
27:RD:33:LEU:O	27:RD:35:LYS:N	2.52	0.42
35:YP:81:GLN:HB2	35:YP:81:GLN:HE21	1.59	0.42
28:RE:54:GLN:N	28:RE:54:GLN:CD	2.73	0.42
35:YP:52:GLU:OE2	35:YP:58:THR:N	2.52	0.42
30:YG:114:ILE:HG22	30:YG:117:PHE:HB2	2.01	0.42
38:YS:99:LYS:C	38:YS:101:LEU:N	2.72	0.42
30:RG:27:ASN:HB3	30:RG:30:GLU:OE2	2.19	0.42
39:YT:110:ILE:CG2	39:YT:111:ARG:N	2.82	0.42
52:R6:7:ILE:O	52:R6:8:LYS:CG	2.68	0.42
4:XD:90:GLY:HA3	4:XD:204:ILE:HD11	2.01	0.42
34:RO:2:ILE:N	34:RO:2:ILE:CD1	2.82	0.42
39:RT:50:ILE:HD11	39:RT:102:ILE:HG12	2.01	0.42
37:RR:44:LEU:HD23	37:RR:44:LEU:HA	1.79	0.42
52:Y6:50:ARG:HH11	52:Y6:50:ARG:HG2	1.84	0.42
27:YD:108:PRO:HG2	27:YD:111:LEU:HB2	2.01	0.42
6:QF:23:LYS:HG2	6:QF:27:GLN:OE1	2.18	0.42
27:RD:14:ARG:CG	27:RD:15:PHE:N	2.83	0.42
41:RV:44:LYS:HB3	41:RV:45:THR:H	1.56	0.42
30:RG:41:GLN:NE2	30:RG:154:GLY:O	2.52	0.42
25:YA:2584:U:H2'	25:YA:2585:U:C6	2.54	0.42
30:RG:114:ILE:O	30:RG:116:ASP:N	2.51	0.42
19:XS:21:GLU:HG3	19:XS:22:LEU:CD1	2.49	0.42
2:XB:142:LEU:O	2:XB:145:LEU:HB2	2.19	0.42
27:RD:17:THR:HG21	27:RD:204:ILE:HA	2.00	0.42
30:YG:77:ILE:H	30:YG:82:LEU:HB2	1.84	0.42
53:R7:47:ARG:HB2	53:R7:48:LYS:H	1.64	0.42
3:QC:83:ARG:O	3:QC:86:VAL:HG22	2.20	0.42
5:QE:126:ARG:CG	5:QE:126:ARG:NH1	2.79	0.42
3:QC:149:ALA:O	3:QC:169:ALA:CA	2.67	0.42
9:QI:29:ASN:OD1	9:QI:65:VAL:N	2.48	0.42
18:XR:43:PHE:HA	18:XR:51:LEU:HD12	2.01	0.42
47:Y1:13:ILE:CG1	47:Y1:42:GLN:HB2	2.49	0.42
30:YG:7:LEU:CD2	30:YG:176:LEU:HD22	2.45	0.42
36:YQ:20:ALA:HA	36:YQ:98:LYS:HB3	2.02	0.42
48:Y2:48:HIS:O	48:Y2:49:LYS:C	2.57	0.42
15:QO:17:ARG:HD3	15:QO:26:GLU:HG3	2.01	0.42
15:QO:25:THR:O	15:QO:29:VAL:HG23	2.18	0.42
1:XA:1189:C:P	10:XJ:51:ARG:NH2	2.92	0.42
4:XD:146:ILE:CD1	4:XD:146:ILE:H	2.30	0.42
25:YA:1113:U:H2'	25:YA:1114:G:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:XL:120:TYR:O	12:XL:121:GLY:C	2.57	0.42
42:YW:19:LEU:O	42:YW:22:ASP:HB2	2.19	0.42
1:QA:1067:A:H4'	1:QA:1068:G:O5'	2.18	0.42
31:RH:120:GLY:O	31:RH:136:ILE:HD12	2.19	0.42
1:QA:753:A:H4'	1:QA:754:C:O5'	2.19	0.42
1:XA:983:A:H1'	1:XA:1049:U:O2	2.18	0.42
25:RA:1042:G:H2'	25:RA:1043:C:C6	2.54	0.42
47:Y1:72:GLU:O	47:Y1:75:GLU:HB2	2.19	0.42
15:XO:64:ARG:CD	15:XO:68:ARG:NH2	2.82	0.42
2:QB:195:ASP:O	8:QH:68:ARG:NH2	2.53	0.42
25:YA:330:A:H2	25:YA:1210:A:O2'	2.02	0.42
4:QD:127:THR:HG23	4:QD:130:GLY:O	2.20	0.42
25:YA:2655:G:O2'	25:YA:2656:U:P	2.76	0.42
25:RA:1629:U:H2'	25:RA:1630:G:C8	2.55	0.42
42:RW:8:ARG:NH1	42:RW:8:ARG:HG3	2.34	0.42
45:YZ:150:LEU:HB2	45:YZ:154:ASP:OD1	2.19	0.42
25:YA:1109:C:O2'	25:YA:1110:G:OP1	2.33	0.42
25:YA:1533:C:H42	25:YA:1538:G:H1	1.66	0.42
9:XI:25:LYS:O	9:XI:60:ASP:OD1	2.37	0.42
1:XA:667:G:H4'	15:XO:51:HIS:ND1	2.35	0.42
25:YA:952:G:C6	25:YA:953:A:N7	2.87	0.42
25:YA:2409:G:H2'	25:YA:2410:G:O4'	2.18	0.42
25:YA:2133:G:H2'	25:YA:2157:G:N2	2.33	0.42
16:XP:23:ASP:O	16:XP:26:ARG:HB2	2.18	0.42
26:RB:88:C:H2'	26:RB:89:G:O4'	2.19	0.42
25:RA:244:A:H2'	25:RA:245:G:O4'	2.20	0.42
1:QA:1366:C:H2'	1:QA:1367:C:C6	2.54	0.42
7:QG:126:ASP:OD2	7:QG:126:ASP:N	2.53	0.42
16:QP:12:LYS:HB3	16:QP:12:LYS:HE2	1.73	0.42
1:QA:1388:C:H2'	1:QA:1389:C:H6	1.83	0.42
45:YZ:20:ARG:O	45:YZ:20:ARG:HD3	2.18	0.42
31:RH:58:GLU:O	31:RH:60:ARG:N	2.53	0.42
28:YE:197:ILE:CD1	28:YE:199:ARG:HH12	2.26	0.42
28:YE:28:ALA:HB3	28:YE:93:VAL:CG2	2.47	0.42
27:RD:43:ARG:CZ	27:RD:49:ILE:HG21	2.49	0.42
28:RE:28:ALA:HB3	28:RE:93:VAL:CG2	2.46	0.42
19:XS:41:VAL:CG1	19:XS:45:VAL:H	2.32	0.42
2:XB:200:ILE:HD12	2:XB:200:ILE:N	2.34	0.42
35:YP:98:GLU:O	35:YP:99:LEU:C	2.57	0.42
30:RG:145:THR:O	30:RG:146:TYR:HB3	2.19	0.42
40:RU:92:ARG:NH2	41:RV:11:GLN:O	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:R5:20:ARG:HA	51:R5:23:HIS:CE1	2.54	0.42
2:QB:204:ASN:C	2:QB:204:ASN:HD22	2.22	0.42
40:YU:91:ASP:OD2	40:YU:96:ALA:HB2	2.19	0.42
29:RF:63:LYS:HE2	29:RF:67:GLN:HB2	2.00	0.42
25:RA:1020:A:N1	25:RA:1141:U:H2'	2.34	0.42
25:YA:1359:A:H61	25:YA:1372:U:H3	1.67	0.42
44:YY:60:PHE:CD2	44:YY:60:PHE:N	2.87	0.42
7:XG:15:ASP:OD1	7:XG:23:VAL:HG11	2.18	0.42
30:RG:63:ILE:HG12	30:RG:64:THR:N	2.32	0.42
31:YH:26:VAL:CG1	31:YH:33:LEU:HB2	2.50	0.42
25:RA:111:A:O3'	48:R2:69:ARG:NH2	2.52	0.42
19:XS:18:LYS:O	19:XS:18:LYS:HD2	2.19	0.42
45:YZ:169:GLU:HG2	45:YZ:170:THR:N	2.34	0.42
39:RT:24:PRO:HA	39:RT:49:VAL:CG1	2.39	0.42
38:YS:15:ARG:O	38:YS:19:LYS:HD3	2.20	0.42
3:XC:83:ARG:O	3:XC:86:VAL:HG22	2.20	0.42
9:XI:8:GLY:CA	9:XI:79:LEU:HD12	2.49	0.42
50:Y4:23:GLU:C	50:Y4:24:THR:HG1	2.22	0.42
4:XD:206:PHE:CD2	4:XD:207:TYR:HD1	2.37	0.42
25:YA:2418:A:H2'	25:YA:2419:U:C6	2.54	0.42
29:YF:128:ALA:O	29:YF:129:PHE:CB	2.67	0.42
48:Y2:27:GLU:CD	48:Y2:27:GLU:H	2.17	0.42
39:YT:96:ARG:CZ	39:YT:96:ARG:HB2	2.49	0.42
1:QA:1297:C:HO2'	1:QA:1298:C:C5'	2.32	0.42
2:QB:60:ASP:C	2:QB:62:ALA:N	2.71	0.42
2:XB:60:ASP:C	2:XB:62:ALA:N	2.72	0.42
19:XS:29:ARG:HD3	19:XS:30:LEU:H	1.84	0.42
25:YA:784:A:C5	27:YD:229:VAL:HG21	2.55	0.42
4:XD:120:LEU:HA	4:XD:120:LEU:HD23	1.83	0.42
18:QR:74:ARG:NH2	18:QR:81:PHE:HA	2.35	0.42
44:RY:42:VAL:HG11	44:RY:65:ALA:HB3	2.02	0.42
7:XG:11:GLN:HG3	7:XG:12:LEU:H	1.85	0.42
25:YA:1398:C:OP1	43:YX:53:LYS:NZ	2.52	0.42
38:RS:95:HIS:O	38:RS:96:GLY:C	2.57	0.42
25:RA:311:A:C6	25:RA:328:U:C4	3.07	0.42
25:YA:1354:A:H2'	25:YA:1355:G:O4'	2.19	0.42
34:YO:1:MET:HG2	34:YO:67:LYS:HG2	2.01	0.42
25:RA:2892:A:H2'	25:RA:2893:G:O4'	2.19	0.42
1:QA:1190:G:OP1	3:QC:4:LYS:HA	2.19	0.42
1:QA:1326:C:H2'	1:QA:1327:C:H6	1.84	0.42
49:R3:46:ASN:O	49:R3:50:VAL:HG22	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:RN:10:GLU:OE2	33:RN:11:PRO:CD	2.67	0.42
25:RA:2105:C:H2'	25:RA:2106:G:H8	1.84	0.42
25:YA:1742:C:H5'	25:YA:1743:G:OP2	2.19	0.42
7:QG:75:VAL:HG13	7:QG:145:ALA:HA	2.00	0.42
45:RZ:136:PHE:HE1	45:RZ:138:GLU:HB3	1.83	0.42
1:XA:784:C:H4'	25:YA:1837:C:OP1	2.20	0.42
1:XA:1440:C:H2'	1:XA:1441:G:O4'	2.19	0.42
35:YP:119:GLU:OE1	35:YP:119:GLU:HA	2.18	0.42
28:YE:94:GLU:C	28:YE:96:PHE:N	2.73	0.42
30:YG:73:ALA:O	30:YG:84:LYS:O	2.38	0.42
25:YA:1257:C:H5'	29:YF:75:HIS:CE1	2.54	0.42
14:YN:48:ALA:HA	14:YN:53:LEU:HD12	2.02	0.42
31:RH:125:VAL:HG12	31:RH:126:PRO:CD	2.49	0.42
31:RH:89:ILE:H	31:RH:89:ILE:CD1	2.32	0.42
50:R4:54:GLY:HA2	50:R4:57:GLU:CG	2.50	0.42
19:XS:62:ILE:HG22	19:XS:63:THR:N	2.34	0.42
3:QC:113:ALA:C	3:QC:115:LEU:N	2.73	0.42
2:XB:163:PHE:CD2	2:XB:185:ILE:HD12	2.54	0.42
27:YD:75:ILE:HG21	27:YD:99:ASP:HB2	2.02	0.42
35:YP:125:VAL:C	35:YP:145:PRO:HD2	2.39	0.42
30:YG:117:PHE:CE1	30:YG:119:GLY:CA	3.03	0.42
13:QM:4:ILE:CG2	13:QM:5:ALA:H	2.30	0.42
30:RG:109:VAL:C	30:RG:112:PRO:HD2	2.40	0.42
40:RU:79:PHE:CD2	40:RU:83:LEU:HD13	2.54	0.42
41:YV:38:LEU:CD1	41:YV:55:ALA:HB1	2.50	0.42
52:Y6:25:LYS:HE2	52:Y6:27:LYS:CD	2.49	0.42
52:Y6:24:GLU:HB3	52:Y6:25:LYS:H	1.56	0.42
30:YG:109:VAL:C	30:YG:112:PRO:HD2	2.40	0.42
10:QJ:75:ILE:CG1	10:QJ:76:ASN:H	2.17	0.42
35:YP:64:LYS:HG3	54:Y8:25:MET:CE	2.50	0.42
37:RR:29:LEU:HD11	37:RR:48:VAL:CG1	2.50	0.42
52:Y6:36:LEU:HD13	52:Y6:50:ARG:HH12	1.81	0.42
20:QT:96:GLY:O	20:QT:99:LEU:CD1	2.67	0.42
5:QE:71:LEU:HD11	5:QE:113:ALA:O	2.20	0.42
2:XB:33:TYR:HD1	2:XB:33:TYR:C	2.23	0.42
48:R2:59:ARG:O	48:R2:62:THR:HG23	2.18	0.42
27:YD:177:LEU:C	27:YD:179:SER:H	2.23	0.42
27:YD:155:LEU:HD23	27:YD:177:LEU:HD21	2.00	0.42
11:XK:17:GLY:CA	11:XK:77:MET:HE3	2.45	0.42
28:RE:104:VAL:CG1	28:RE:188:VAL:HG23	2.49	0.42
28:RE:35:GLN:HB3	28:RE:48:GLN:HB2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:YT:54:ARG:HA	39:YT:59:THR:HG23	2.02	0.42
28:YE:104:VAL:CG1	28:YE:188:VAL:HG23	2.49	0.42
13:QM:54:VAL:O	13:QM:58:GLU:OE2	2.37	0.42
28:YE:117:MET:HA	28:YE:122:PHE:N	2.35	0.42
28:RE:121:ASN:O	28:RE:122:PHE:C	2.57	0.42
28:RE:137:HIS:CB	28:RE:138:PRO:HD2	2.42	0.42
25:YA:2729:G:H2'	25:YA:2730:C:H6	1.85	0.42
25:RA:565:C:H2'	25:RA:566:U:O4'	2.20	0.42
9:XI:6:GLY:HA3	9:XI:84:ALA:HB2	2.01	0.42
25:YA:1188:U:H4'	41:YV:79:VAL:CG2	2.49	0.42
9:XI:71:SER:O	9:XI:74:ILE:N	2.52	0.42
25:YA:771:G:OP1	53:Y7:10:ARG:NH1	2.53	0.42
47:R1:74:VAL:O	47:R1:74:VAL:CG1	2.64	0.42
51:Y5:20:ARG:HA	51:Y5:23:HIS:CE1	2.54	0.42
25:RA:1301:A:O2'	25:RA:1302:A:H3'	2.19	0.42
18:QR:63:GLN:O	18:QR:66:LEU:HB3	2.18	0.42
42:YW:81:ALA:C	42:YW:82:LEU:HD12	2.40	0.42
6:QF:45:LEU:O	6:QF:46:ARG:HB2	2.19	0.42
35:YP:37:GLY:O	35:YP:38:GLN:C	2.58	0.42
33:RN:75:TYR:HA	33:RN:82:LEU:HA	2.01	0.42
1:QA:977:A:O2'	1:QA:981:U:N3	2.50	0.42
37:YR:10:LEU:C	37:YR:12:ARG:N	2.72	0.42
22:QV:16:C:O2'	22:QV:61:C:OP1	2.37	0.42
18:XR:29:PHE:N	18:XR:29:PHE:HD2	2.17	0.42
1:QA:65:U:H5''	1:QA:65:U:H6	1.85	0.42
3:XC:143:GLU:C	3:XC:145:GLY:H	2.23	0.42
1:QA:1327:C:H2'	1:QA:1328:C:C6	2.55	0.42
1:XA:881:G:P	12:XL:12:ARG:HH22	2.43	0.42
9:QI:25:LYS:O	9:QI:60:ASP:OD1	2.37	0.42
30:RG:121:ASN:HA	30:RG:181:ARG:NH2	2.34	0.42
1:XA:109:A:H2'	1:XA:326:G:N2	2.34	0.42
30:RG:55:LYS:O	30:RG:59:GLU:HB2	2.19	0.42
1:QA:866:C:C4	1:QA:867:G:H1'	2.55	0.42
39:RT:80:SER:HA	39:RT:81:PRO:HD3	1.73	0.42
25:YA:1491:G:O2'	27:YD:101:GLU:HB2	2.19	0.42
52:R6:33:LYS:C	52:R6:35:GLU:H	2.22	0.42
25:YA:1069:A:H4'	25:YA:1070:A:H5''	2.01	0.42
45:RZ:93:ASP:N	45:RZ:93:ASP:OD1	2.53	0.42
9:XI:35:GLU:O	9:XI:35:GLU:HG2	2.19	0.42
1:XA:1006:C:H2'	1:XA:1007:C:C6	2.55	0.42
25:YA:270(J):G:H2'	25:YA:270(K):C:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:89:ILE:CD1	31:YH:89:ILE:H	2.32	0.42
4:XD:19:LEU:O	4:XD:20:TYR:C	2.57	0.42
44:YY:95:LYS:HA	44:YY:101:LYS:N	2.33	0.42
2:XB:109:SER:C	2:XB:111:ARG:H	2.21	0.42
28:YE:176:ILE:N	28:YE:176:ILE:HD12	2.35	0.42
13:XM:88:ARG:HD2	13:XM:88:ARG:O	2.19	0.42
19:XS:4:SER:O	19:XS:5:LEU:HD13	2.20	0.42
2:XB:16:HIS:CD2	2:XB:213:LEU:HD13	2.54	0.42
27:YD:71:ASP:CB	27:YD:103:ARG:HH22	2.32	0.42
35:RP:98:GLU:O	35:RP:99:LEU:C	2.57	0.42
27:RD:33:LEU:HB3	27:RD:34:VAL:H	1.48	0.42
25:YA:626:U:O4	35:YP:107:LYS:HE2	2.20	0.42
42:RW:14:PRO:O	42:RW:15:ARG:C	2.58	0.42
2:QB:69:LEU:HD12	2:QB:91:PRO:O	2.19	0.42
40:YU:79:PHE:CD2	40:YU:83:LEU:HD13	2.54	0.42
25:RA:2494:G:H2'	25:RA:2495:G:C8	2.53	0.42
36:YQ:27:VAL:HG11	36:YQ:134:ARG:HG3	2.00	0.42
34:RO:50:GLY:O	34:RO:51:ALA:C	2.57	0.42
5:XE:31:LEU:HD23	5:XE:45:PHE:HD1	1.85	0.42
3:QC:35:GLU:O	3:QC:38:ARG:N	2.53	0.42
8:XH:85:ARG:HA	8:XH:135:CYS:HB3	2.02	0.42
16:XP:55:ARG:O	16:XP:56:ALA:C	2.57	0.42
39:RT:3:ARG:O	39:RT:4:GLY:C	2.58	0.42
39:YT:3:ARG:O	39:YT:4:GLY:C	2.58	0.42
5:XE:71:LEU:HD11	5:XE:113:ALA:O	2.20	0.42
41:RV:59:ALA:HA	41:RV:95:LEU:O	2.19	0.42
25:YA:2451:A:N6	56:Z8:76:PPU:HE2	2.34	0.42
10:XJ:49:VAL:HG13	10:XJ:50:ILE:N	2.35	0.42
19:QS:18:LYS:O	19:QS:18:LYS:HD2	2.19	0.42
41:YV:59:ALA:HA	41:YV:95:LEU:O	2.19	0.42
13:XM:19:LEU:HD22	13:XM:19:LEU:N	2.33	0.42
28:RE:24:THR:HB	28:RE:184:VAL:HG23	2.02	0.42
26:YB:42:C:H42	30:YG:91:ARG:HH21	1.62	0.42
1:QA:1221:G:O3'	19:QS:77:THR:HG21	2.20	0.42
25:RA:2291:U:H2'	25:RA:2292:C:C6	2.55	0.42
3:QC:142:MET:HG2	3:QC:149:ALA:HB2	2.02	0.42
29:YF:11:VAL:HG12	29:YF:12:LEU:H	1.84	0.42
30:YG:4:ASP:O	30:YG:5:VAL:HB	2.19	0.42
1:XA:347:G:O2'	1:XA:348:G:OP2	2.32	0.42
55:R9:1:MET:HE2	55:R9:10:ILE:HD13	2.01	0.42
9:QI:71:SER:O	9:QI:74:ILE:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:Y4:12:ALA:HB1	50:Y4:30:GLU:N	2.35	0.42
54:Y8:28:GLY:O	54:Y8:29:LYS:O	2.37	0.42
8:QH:33:GLU:O	8:QH:36:LEU:N	2.53	0.42
12:XL:119:LYS:HB2	12:XL:120:TYR:HD1	1.83	0.42
19:XS:30:LEU:O	19:XS:31:ILE:HB	2.19	0.42
25:YA:2789:C:H1'	25:YA:2892:A:C2	2.47	0.42
1:QA:254:G:OP1	17:QQ:67:LYS:O	2.37	0.42
19:QS:30:LEU:O	19:QS:31:ILE:HB	2.19	0.42
18:XR:74:ARG:NH2	18:XR:81:PHE:HA	2.35	0.42
17:QQ:77:VAL:HG12	17:QQ:77:VAL:O	2.20	0.42
7:QG:11:GLN:HG3	7:QG:12:LEU:H	1.85	0.42
2:QB:158:LEU:HD12	2:QB:158:LEU:C	2.38	0.42
31:RH:136:ILE:O	31:RH:137:ASP:O	2.38	0.42
31:YH:119:GLU:CD	31:YH:120:GLY:H	2.22	0.42
31:YH:136:ILE:O	31:YH:137:ASP:O	2.38	0.42
33:RN:26:LEU:HG	33:RN:30:ILE:CD1	2.49	0.42
27:YD:2:ALA:O	27:YD:3:VAL:CB	2.68	0.42
4:QD:150:GLU:O	4:QD:152:SER:N	2.53	0.42
9:XI:100:GLY:C	9:XI:102:LEU:N	2.71	0.42
35:RP:37:GLY:O	35:RP:38:GLN:C	2.58	0.42
11:QK:21:ILE:HD13	11:QK:84:VAL:HG12	2.02	0.42
7:QG:18:TYR:CD2	7:QG:59:LEU:HD13	2.55	0.42
34:RO:1:MET:HG2	34:RO:67:LYS:HG2	2.01	0.42
29:YF:62:ARG:NH1	29:YF:62:ARG:CB	2.82	0.42
1:QA:1112:C:C4	3:QC:178:LEU:HD23	2.55	0.42
25:YA:1332:G:C8	25:YA:1332:G:H5'	2.54	0.42
16:XP:83:GLU:HG3	16:XP:84:ALA:N	2.33	0.42
1:QA:1327:C:H2'	1:QA:1328:C:H6	1.83	0.42
25:RA:1926:U:H5'	25:RA:1927:A:OP2	2.20	0.42
1:XA:814:A:N7	1:XA:816:A:C4	2.88	0.42
25:RA:2183:C:H2'	25:RA:2184:G:H8	1.84	0.42
32:RI:135:GLU:HB2	32:RI:136:VAL:H	1.67	0.42
25:RA:244:A:C2	25:RA:255:A:C4	3.08	0.42
1:QA:1388:C:H2'	1:QA:1389:C:C6	2.55	0.42
25:YA:656:G:H2'	25:YA:657:U:O4'	2.19	0.42
25:RA:1778:U:H2'	25:RA:1784:A:N6	2.34	0.42
25:RA:1412:A:H2'	25:RA:1413:G:O4'	2.20	0.42
42:RW:71:VAL:HA	42:RW:107:LEU:HD12	2.02	0.42
14:YN:9:LYS:O	14:YN:9:LYS:HG2	2.19	0.42
11:XK:33:THR:HB	11:XK:37:GLY:C	2.40	0.42
31:YH:58:GLU:O	31:YH:60:ARG:N	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R1:60:PHE:HE2	47:R1:91:LYS:NZ	2.16	0.42
44:YY:91:GLU:CG	44:YY:92:ASN:N	2.83	0.42
19:QS:7:LYS:CG	19:QS:8:GLY:N	2.83	0.42
19:QS:41:VAL:HG11	19:QS:45:VAL:HG13	2.02	0.42
1:XA:1103:C:H2'	1:XA:1104:G:O4'	2.19	0.42
2:XB:99:GLY:O	2:XB:108:ILE:HD11	2.19	0.42
2:XB:109:SER:C	2:XB:111:ARG:N	2.73	0.42
31:YH:84:SER:O	31:YH:85:LYS:CB	2.64	0.42
19:XS:66:MET:HG3	19:XS:66:MET:O	2.19	0.42
50:Y4:54:GLY:HA2	50:Y4:57:GLU:CG	2.50	0.42
25:RA:1250:G:OP2	35:RP:21:ARG:HD3	2.20	0.42
2:XB:92:TYR:C	2:XB:92:TYR:HD1	2.22	0.42
35:YP:83:VAL:HG11	35:YP:112:LEU:HD21	1.97	0.42
35:YP:114:ILE:CD1	35:YP:130:PHE:CE1	2.98	0.42
30:RG:99:MET:O	30:RG:103:LEU:HB2	2.20	0.42
40:RU:99:ALA:HA	40:RU:106:PHE:HB2	2.01	0.42
40:RU:91:ASP:OD2	40:RU:96:ALA:HB2	2.19	0.42
2:QB:67:THR:C	2:QB:68:ILE:HD12	2.40	0.42
41:YV:55:ALA:O	41:YV:56:SER:OG	2.31	0.42
33:YN:96:GLU:O	33:YN:97:ARG:C	2.57	0.42
36:RQ:27:VAL:HG11	36:RQ:134:ARG:HG3	2.00	0.42
29:YF:183:VAL:HG22	29:YF:184:TYR:N	2.35	0.42
28:RE:101:ARG:C	28:RE:201:THR:OG1	2.58	0.42
8:QH:86:ILE:CB	8:QH:133:LEU:HD22	2.49	0.42
4:QD:93:PHE:CE1	4:QD:97:LEU:HD11	2.55	0.42
4:QD:29:PRO:CG	4:QD:30:LYS:CE	2.86	0.42
7:XG:140:ASP:O	7:XG:142:GLU:N	2.52	0.42
25:RA:2839:G:H21	37:RR:92:GLY:HA3	1.85	0.42
39:RT:110:ILE:CG2	39:RT:111:ARG:N	2.82	0.42
27:YD:25:THR:HG23	27:YD:27:THR:HB	2.02	0.42
34:YO:20:MET:O	34:YO:41:ALA:CB	2.67	0.42
20:XT:99:LEU:O	20:XT:100:ILE:CB	2.68	0.42
27:RD:9:TYR:CZ	27:RD:13:ARG:HD3	2.54	0.42
29:YF:109:GLY:O	29:YF:110:LEU:C	2.58	0.42
27:RD:182:LEU:N	27:RD:272:ALA:HB3	2.32	0.42
33:RN:43:THR:HA	33:RN:44:PRO:HD2	1.92	0.42
13:XM:16:ASP:HB3	13:XM:34:LEU:CD1	2.49	0.42
12:QL:38:THR:HG22	12:QL:57:LYS:HB3	2.01	0.42
34:RO:97:ARG:CA	34:RO:117:LEU:HD22	2.50	0.42
38:YS:52:SER:HB2	38:YS:55:ALA:CB	2.49	0.42
28:RE:117:MET:HA	28:RE:122:PHE:N	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:35:GLN:HB3	28:YE:48:GLN:HB2	2.01	0.42
29:RF:198:ALA:HA	29:RF:201:VAL:CG1	2.41	0.42
11:QK:124:LYS:HB3	11:QK:125:PHE:H	1.67	0.42
25:RA:565:C:H4'	25:RA:1253:A:C6	2.54	0.42
20:QT:13:LEU:CD1	20:QT:17:ARG:NH1	2.82	0.42
31:RH:169:VAL:HG22	31:RH:170:ARG:N	2.26	0.42
1:QA:1297:C:O2'	1:QA:1298:C:O5'	2.33	0.42
1:QA:1346:A:N6	7:QG:10:ARG:HD2	2.35	0.42
29:RF:164:ARG:HG2	29:RF:164:ARG:NH1	2.34	0.42
6:XF:88:VAL:HG12	6:XF:89:MET:N	2.33	0.42
1:XA:501:C:H2'	1:XA:502:G:C8	2.53	0.42
8:XH:11:THR:HA	8:XH:14:ARG:NH1	2.35	0.42
18:QR:64:ARG:O	18:QR:65:ILE:C	2.58	0.42
44:RY:20:TYR:CE1	44:RY:42:VAL:HA	2.55	0.42
3:QC:88:ARG:NH2	3:QC:101:LEU:O	2.53	0.42
26:RB:15:A:H5'	26:RB:16:G:H8	1.83	0.42
2:QB:130:ARG:NH2	2:QB:138:LEU:HD21	2.34	0.42
25:RA:2832:U:HO2'	25:RA:2833:G:P	2.43	0.42
29:RF:132:VAL:CG2	29:RF:133:ASN:N	2.79	0.42
43:YX:87:GLN:C	43:YX:88:LYS:HG3	2.40	0.42
4:XD:150:GLU:O	4:XD:152:SER:N	2.53	0.42
42:RW:81:ALA:C	42:RW:82:LEU:HD12	2.40	0.42
25:RA:414:C:H2'	25:RA:415:A:C8	2.54	0.42
28:YE:152:LYS:HG2	33:YN:78:TYR:CD1	2.55	0.42
25:RA:389:G:N1	35:RP:71:VAL:HG12	2.34	0.42
25:RA:2020:A:OP1	40:RU:27:LEU:HD23	2.20	0.42
20:QT:10:LEU:O	20:QT:12:ALA:N	2.53	0.42
33:YN:75:TYR:HA	33:YN:82:LEU:HA	2.01	0.42
55:R9:2:LYS:HD2	55:R9:2:LYS:HA	1.93	0.42
53:Y7:12:ARG:HH21	53:Y7:44:PRO:HB3	1.85	0.42
25:RA:1459:G:H2'	25:RA:1460:A:H5''	2.01	0.42
8:QH:95:VAL:HG23	8:QH:95:VAL:O	2.20	0.42
3:QC:143:GLU:C	3:QC:145:GLY:H	2.23	0.42
28:RE:143:ASN:HB2	28:RE:147:PRO:HD2	2.01	0.42
3:XC:23:TYR:CD2	3:XC:24:ALA:N	2.88	0.42
25:YA:37:C:H2'	25:YA:38:A:C8	2.54	0.42
28:YE:143:ASN:HB2	28:YE:147:PRO:HD2	2.00	0.42
1:QA:1004:A:P	1:QA:1025:U:H3	2.42	0.42
30:YG:55:LYS:O	30:YG:59:GLU:HB2	2.19	0.42
21:QU:5:ASP:O	21:QU:11:GLY:HA3	2.19	0.42
1:XA:958:A:C6	1:XA:959:A:C6	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:QF:36:ARG:CZ	6:QF:38:GLU:HG2	2.49	0.42
1:QA:881:G:P	12:QL:12:ARG:HH22	2.43	0.42
1:XA:870:U:H4'	1:XA:871:U:H5''	2.01	0.42
25:RA:1222:C:C2	25:RA:1229(A):G:C2	3.08	0.42
28:YE:31:CYS:HB3	28:YE:49:LEU:HG	2.01	0.42
21:XU:5:ASP:O	21:XU:11:GLY:HA3	2.20	0.42
25:RA:730:C:OP2	25:RA:731:C:OP2	2.38	0.42
27:RD:168:ARG:O	27:RD:169:GLU:HB2	2.19	0.42
25:RA:528:A:C2	25:RA:2042:A:H2'	2.54	0.42
25:YA:41:C:H2'	25:YA:43:G:O4'	2.20	0.42
1:QA:407:G:O2'	4:QD:116:GLN:HG3	2.20	0.42
2:QB:109:SER:C	2:QB:111:ARG:N	2.73	0.42
31:RH:86:GLU:H	31:RH:86:GLU:CD	2.16	0.42
28:RE:176:ILE:N	28:RE:176:ILE:HD12	2.35	0.42
2:XB:97:TRP:HZ3	2:XB:172:ILE:HG22	1.85	0.42
2:XB:211:ILE:O	2:XB:215:LEU:HB2	2.20	0.42
2:XB:67:THR:C	2:XB:68:ILE:HD12	2.40	0.42
35:RP:107:LYS:O	35:RP:108:LYS:C	2.57	0.42
35:RP:115:LEU:HB3	35:RP:131:SER:HB2	2.02	0.42
35:YP:115:LEU:HB3	35:YP:131:SER:HB2	2.02	0.42
40:RU:97:ASP:HA	40:RU:100:VAL:HG23	2.02	0.42
2:QB:162:ILE:O	2:QB:185:ILE:CG1	2.67	0.42
2:QB:200:ILE:CG2	2:QB:201:ILE:N	2.83	0.42
38:RS:102:ALA:C	38:RS:104:GLY:N	2.73	0.42
2:XB:5:ILE:HB	2:XB:221:LEU:HD23	2.01	0.42
36:RQ:65:PHE:O	36:RQ:66:ILE:CG1	2.48	0.42
52:Y6:7:ILE:O	52:Y6:8:LYS:CG	2.68	0.42
3:QC:58:GLU:HB2	3:QC:65:ALA:HB3	2.01	0.42
7:XG:79:ARG:CZ	7:XG:82:GLY:HA2	2.50	0.42
52:R6:19:ARG:HD2	52:R6:19:ARG:HA	1.76	0.42
30:YG:99:MET:O	30:YG:103:LEU:HB2	2.20	0.42
16:QP:21:VAL:HG21	16:QP:59:TRP:NE1	2.35	0.42
44:RY:60:PHE:N	44:RY:60:PHE:CD2	2.87	0.42
39:YT:6:LEU:HD12	39:YT:9:LEU:HD12	2.01	0.42
41:YV:25:LEU:H	41:YV:92:THR:CG2	2.29	0.42
51:Y5:40:LYS:HE2	51:Y5:47:PRO:HG2	2.02	0.42
1:XA:971:G:O2'	1:XA:1365:G:O2'	2.11	0.42
13:QM:13:LYS:HA	13:QM:44:ARG:CD	2.48	0.42
1:XA:701:C:H1'	1:XA:703:G:C6	2.55	0.42
25:YA:270(R):G:H1'	47:Y1:78:LYS:HZ1	1.85	0.42
39:YT:24:PRO:HA	39:YT:49:VAL:CG1	2.39	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:128:SER:O	28:RE:129:HIS:HB2	2.20	0.42
53:Y7:9:ARG:NH1	53:Y7:47:ARG:HG3	2.35	0.42
10:QJ:80:LYS:HD2	1:XA:1163:C:H1'	2.01	0.42
12:XL:53:ARG:HH12	12:XL:92:ASP:CB	2.33	0.42
1:XA:191:G:H1'	20:XT:105:SER:HB3	2.02	0.42
36:YQ:20:ALA:HB2	36:YQ:99:PRO:HD2	1.99	0.42
49:R3:37:LEU:HD12	49:R3:43:ILE:CG2	2.50	0.42
29:YF:123:LEU:HD12	29:YF:124:LEU:H	1.82	0.42
27:YD:263:ARG:CB	27:YD:263:ARG:NH1	2.75	0.42
25:RA:1162:G:H1'	41:RV:23:GLU:OE2	2.19	0.42
27:RD:158:ALA:HB3	27:RD:161:THR:CG2	2.49	0.42
28:YE:128:SER:O	28:YE:129:HIS:HB2	2.19	0.42
17:QQ:27:PHE:HA	17:QQ:28:PRO:HD3	1.92	0.42
18:XR:64:ARG:O	18:XR:65:ILE:C	2.58	0.42
34:RO:71:ARG:HH11	39:RT:74:ARG:HH21	1.65	0.42
25:YA:2331:G:O2'	46:Y0:43:THR:HG22	2.20	0.42
2:XB:158:LEU:HD12	2:XB:158:LEU:C	2.39	0.42
6:XF:45:LEU:O	6:XF:46:ARG:HB2	2.19	0.42
25:YA:2406:U:N3	35:YP:72:PRO:HB2	2.33	0.42
47:R1:72:GLU:O	47:R1:75:GLU:HB2	2.20	0.42
6:QF:46:ARG:HG3	6:QF:47:ARG:N	2.34	0.42
1:XA:940:C:H2'	1:XA:941:G:C8	2.55	0.42
25:YA:1394:U:H4'	25:YA:1603:A:H4'	2.02	0.42
25:YA:2505:G:O2'	25:YA:2506:U:H5'	2.19	0.42
1:XA:271:C:H2'	1:XA:272:C:C6	2.53	0.42
17:QQ:82:MET:C	17:QQ:84:LEU:N	2.72	0.42
39:RT:134:GLU:OE1	39:RT:135:ALA:N	2.53	0.42
25:YA:612:G:N3	25:YA:613:U:O2	2.53	0.42
29:RF:61:GLY:O	29:RF:62:ARG:C	2.57	0.42
27:YD:158:ALA:HB3	27:YD:161:THR:CG2	2.49	0.42
27:YD:196:VAL:CG1	27:YD:196:VAL:O	2.68	0.42
25:YA:2126:A:H1'	25:YA:2127:G:OP2	2.20	0.42
32:YI:93:THR:O	32:YI:97:ILE:HG12	2.19	0.42
4:QD:59:ARG:NE	4:QD:59:ARG:HA	2.35	0.42
1:XA:165:C:H2'	1:XA:166:G:C8	2.54	0.42
39:RT:89:VAL:O	39:RT:90:GLN:CB	2.67	0.42
25:RA:2695:C:H2'	25:RA:2696:U:H6	1.85	0.42
35:YP:135:LEU:HD13	35:YP:139:LYS:HE3	2.01	0.42
1:QA:328:C:H4'	1:QA:329:A:H5'	2.00	0.42
1:QA:27:G:H4'	4:QD:209:ARG:HG3	2.01	0.42
1:XA:412:A:OP2	4:XD:35:ARG:NH2	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1421:G:C2	25:RA:1422:G:C8	3.07	0.42
1:XA:1128:C:H5'	9:XI:16:ARG:NH2	2.34	0.42
25:YA:1709:U:H2'	25:YA:1710:C:C6	2.54	0.42
19:XS:58:VAL:HG23	19:XS:58:VAL:O	2.20	0.42
9:QI:35:GLU:HG2	9:QI:35:GLU:O	2.19	0.42
55:Y9:17:ILE:CG2	55:Y9:18:ARG:N	2.82	0.42
25:YA:1813:G:H1'	27:YD:50:THR:OG1	2.20	0.42
25:YA:724:U:H2'	25:YA:725:G:O4'	2.20	0.42
54:R8:56:GLU:C	54:R8:58:ILE:N	2.73	0.42
35:YP:49:ARG:HG2	35:YP:49:ARG:HH11	1.84	0.42
40:YU:6:THR:HG21	40:YU:10:ARG:CZ	2.50	0.42
31:YH:84:SER:OG	31:YH:85:LYS:N	2.51	0.42
19:XS:41:VAL:HG11	19:XS:45:VAL:HG13	2.02	0.42
2:XB:162:ILE:O	2:XB:185:ILE:CG1	2.67	0.42
3:XC:113:ALA:C	3:XC:115:LEU:N	2.72	0.42
30:RG:34:LEU:HD11	30:RG:99:MET:CE	2.49	0.42
42:YW:96:ILE:O	42:YW:96:ILE:CG2	2.68	0.42
33:YN:10:GLU:OE2	33:YN:11:PRO:CD	2.68	0.42
38:RS:99:LYS:C	38:RS:101:LEU:N	2.72	0.42
8:XH:28:ALA:CB	8:XH:57:PRO:HB2	2.45	0.42
34:YO:50:GLY:O	34:YO:51:ALA:C	2.57	0.42
38:RS:30:ARG:NH2	38:RS:92:TYR:HD1	2.17	0.42
36:RQ:118:LEU:HD23	36:RQ:118:LEU:HA	1.87	0.42
48:R2:50:ILE:H	48:R2:50:ILE:HG13	1.64	0.42
30:RG:16:ARG:NE	30:RG:31:VAL:HG11	2.34	0.42
2:QB:197:VAL:CG1	2:QB:198:ASP:N	2.82	0.42
39:YT:50:ILE:HD11	39:YT:102:ILE:HG12	2.01	0.42
33:RN:62:VAL:HG12	33:RN:66:LYS:HB2	2.01	0.42
37:YR:28:LEU:HD12	37:YR:29:LEU:HD12	2.02	0.42
25:YA:1454:U:P	37:YR:77:ARG:NH1	2.93	0.42
3:XC:35:GLU:O	3:XC:38:ARG:N	2.53	0.42
37:RR:55:ALA:HA	37:RR:80:PHE:CE2	2.55	0.42
44:YY:51:VAL:CG1	44:YY:52:SER:N	2.74	0.42
28:RE:10:GLY:HA3	39:RT:8:LYS:HD3	2.02	0.42
31:YH:77:LYS:HB3	31:YH:77:LYS:HZ2	1.78	0.42
28:YE:25:VAL:CG1	39:YT:11:GLU:HG2	2.50	0.42
51:R5:56:LYS:O	51:R5:57:VAL:C	2.57	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
35:YP:65:ARG:HH21	54:Y8:15:LYS:HB3	1.84	0.42
27:YD:12:SER:O	27:YD:14:ARG:N	2.51	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:575:G:N2	1:QA:880:C:O2	2.44	0.42
51:R5:40:LYS:HE2	51:R5:47:PRO:HG2	2.02	0.42
41:YV:15:GLU:O	41:YV:96:ILE:HB	2.19	0.42
31:YH:105:LEU:N	31:YH:105:LEU:CD1	2.81	0.42
53:R7:9:ARG:NH1	53:R7:47:ARG:HG3	2.35	0.42
43:YX:60:ARG:HH12	53:Y7:47:ARG:HH22	1.67	0.42
25:YA:1308:A:H2'	25:YA:1309:G:O4'	2.19	0.42
3:QC:47:LEU:HD11	3:QC:76:VAL:CG1	2.42	0.42
34:RO:31:LYS:HA	34:RO:31:LYS:HD3	1.92	0.42
9:QL:6:GLY:HA3	9:QL:84:ALA:HB2	2.01	0.42
47:Y1:56:GLN:HB2	47:Y1:57:GLU:H	1.48	0.42
16:QP:45:THR:CG2	16:QP:46:PRO:HD2	2.46	0.42
15:QO:71:GLN:HB2	15:QO:78:TYR:CE1	2.54	0.42
49:Y3:7:LYS:O	49:Y3:7:LYS:HG2	2.19	0.42
29:RF:192:LEU:HD21	29:RF:194:MET:HE3	2.02	0.42
25:RA:265:A:C6	25:RA:428:A:C4	3.08	0.42
12:XL:109:GLY:HA3	12:XL:121:GLY:O	2.20	0.42
1:XA:35:G:O2'	12:XL:121:GLY:HA2	2.20	0.42
6:XF:36:ARG:NH2	6:XF:38:GLU:HG2	2.35	0.42
27:RD:196:VAL:CG1	27:RD:196:VAL:O	2.68	0.42
44:YY:20:TYR:CE1	44:YY:42:VAL:HA	2.55	0.42
17:QQ:76:LEU:HD21	17:QQ:79:SER:HB2	2.01	0.42
19:QS:15:LEU:CD2	19:QS:15:LEU:N	2.79	0.42
17:XQ:74:LEU:HD13	17:XQ:74:LEU:O	2.20	0.42
10:QJ:29:ARG:O	10:QJ:30:SER:HB3	2.20	0.42
32:YI:11:ASN:O	32:YI:12:LEU:HB2	2.19	0.42
29:YF:132:VAL:HG23	29:YF:133:ASN:H	1.83	0.42
17:QQ:11:VAL:HG23	17:QQ:12:SER:N	2.35	0.42
33:YN:30:ILE:HG22	33:YN:34:LEU:HD21	2.01	0.42
38:YS:49:VAL:HG21	38:YS:77:ALA:HA	2.02	0.42
6:XF:46:ARG:HG3	6:XF:47:ARG:N	2.34	0.42
38:RS:49:VAL:HG21	38:RS:77:ALA:HA	2.02	0.42
43:RX:54:VAL:C	43:RX:55:ASN:HD22	2.24	0.42
5:XE:153:LYS:C	5:XE:153:LYS:HD3	2.41	0.42
1:QA:1048:G:OP1	14:QN:3:ARG:HB3	2.19	0.42
40:RU:39:LEU:O	40:RU:42:ALA:N	2.53	0.42
38:YS:95:HIS:O	38:YS:96:GLY:C	2.58	0.42
40:YU:27:LEU:C	40:YU:29:SER:N	2.74	0.42
28:RE:144:ARG:HB3	28:RE:145:LYS:H	1.58	0.42
41:RV:21:ARG:HD2	41:RV:91:TYR:CE2	2.55	0.42
30:RG:78:SER:O	30:RG:80:PHE:N	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:219:G:N3	25:YA:234:C:O2'	2.49	0.42
1:QA:676:A:H1'	11:QK:115:PRO:HB3	2.01	0.42
53:Y7:25:PRO:HA	53:Y7:28:ARG:NH2	2.35	0.42
9:QI:22:GLY:O	9:QI:23:ASN:C	2.57	0.42
25:YA:195:A:C8	25:YA:197:A:OP1	2.72	0.42
1:QA:681:C:H2'	1:QA:682:G:C8	2.55	0.42
1:QA:934:C:HO2'	1:QA:935:A:P	2.42	0.42
25:RA:55:G:C2	25:RA:116:C:C2	3.08	0.42
1:QA:1359:C:H3'	14:QN:35:ARG:HH12	1.85	0.42
4:QD:111:ALA:HB3	4:QD:117:ALA:HB2	2.02	0.42
25:YA:2626:C:H2'	25:YA:2627:G:C8	2.54	0.42
18:QR:76:LEU:HD22	18:QR:76:LEU:N	2.35	0.42
22:XV:17:C:O2	22:XV:17:C:H2'	2.19	0.42
37:YR:34:ILE:HG22	37:YR:35:THR:N	2.35	0.42
25:YA:563:G:C6	25:YA:2018:G:C5	3.08	0.42
25:YA:1467:C:C5	25:YA:1546:C:H2'	2.55	0.42
25:RA:270(S):G:C1'	47:R1:78:LYS:HD2	2.50	0.42
44:RY:91:GLU:CG	44:RY:92:ASN:N	2.83	0.42
44:YY:90:LEU:HB2	44:YY:91:GLU:H	1.53	0.42
50:R4:61:ARG:C	50:R4:63:TYR:N	2.73	0.42
25:YA:665:C:H2'	25:YA:666:G:H8	1.85	0.42
29:YF:101:LEU:HD12	29:YF:102:PRO:N	2.33	0.42
25:RA:589:C:H2'	25:RA:590:A:C8	2.54	0.42
11:QK:72:ALA:HB1	11:QK:77:MET:HG2	2.02	0.42
35:RP:144:GLU:HA	35:RP:145:PRO:HD3	1.76	0.42
50:R4:26:SER:C	50:R4:27:THR:O	2.58	0.42
38:RS:99:LYS:HE2	38:RS:103:GLU:OE2	2.20	0.42
8:QH:74:PRO:O	8:QH:75:ARG:C	2.59	0.42
39:YT:105:LEU:HG	39:YT:105:LEU:O	2.18	0.42
1:QA:410:G:OP2	4:QD:25:ARG:HG3	2.19	0.42
52:Y6:41:PRO:HG3	52:Y6:44:ARG:HB2	2.01	0.42
7:QG:140:ASP:O	7:QG:142:GLU:N	2.52	0.42
4:XD:94:LEU:HA	4:XD:97:LEU:HD12	2.01	0.42
27:RD:110:GLY:O	27:RD:111:LEU:C	2.59	0.42
43:RX:57:LEU:HD12	43:RX:57:LEU:H	1.85	0.42
8:QH:102:ARG:NH1	8:QH:105:ARG:CZ	2.80	0.42
34:YO:2:ILE:CD1	34:YO:2:ILE:N	2.82	0.42
34:YO:2:ILE:HG12	34:YO:8:LEU:HD11	2.02	0.42
8:XH:105:ARG:O	8:XH:107:LEU:N	2.47	0.42
11:XK:72:ALA:HB1	11:XK:77:MET:HG2	2.02	0.42
29:YF:20:LEU:HD12	29:YF:21:ALA:N	2.26	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:QG:44:TYR:O	7:QG:47:CYS:N	2.53	0.42
15:QO:3:ILE:HD13	15:QO:3:ILE:N	2.22	0.42
28:RE:7:VAL:CG2	28:RE:8:LYS:H	2.11	0.42
28:YE:36:ARG:HB3	28:YE:36:ARG:NH1	2.31	0.42
3:QC:120:VAL:O	3:QC:123:GLN:HB2	2.20	0.42
18:XR:53:ARG:C	18:XR:55:ARG:H	2.22	0.42
49:R3:37:LEU:N	49:R3:37:LEU:HD23	2.35	0.42
4:QD:178:VAL:HG12	4:QD:179:GLU:N	2.35	0.42
21:XU:2:GLY:C	21:XU:4:GLY:H	2.23	0.42
1:QA:1186:G:H21	14:QN:61:TRP:C	2.22	0.42
47:R1:76:ARG:CD	47:R1:76:ARG:H	2.29	0.42
1:QA:1446:A:H5'	1:QA:1446:A:N3	2.35	0.42
26:YB:116:G:H4'	38:YS:54:LEU:HD13	2.01	0.42
30:RG:22:ARG:HH22	30:RG:175:LEU:HD21	1.85	0.42
17:XQ:76:LEU:HD21	17:XQ:79:SER:HB2	2.01	0.42
25:RA:1464:C:O2'	25:RA:1528:A:H8	2.01	0.42
25:RA:634:C:H2'	25:RA:635:C:C6	2.55	0.42
42:YW:74:ALA:O	42:YW:75:TYR:CB	2.65	0.42
43:YX:14:SER:O	43:YX:15:GLU:C	2.57	0.42
4:XD:150:GLU:C	4:XD:152:SER:N	2.73	0.42
1:QA:130:A:H5''	1:QA:190:G:H2'	2.02	0.42
25:YA:1085:A:HO2'	25:YA:1086:A:P	2.40	0.42
25:YA:1055:G:O2'	25:YA:1085:A:N1	2.35	0.42
27:YD:165:ILE:O	27:YD:166:GLN:NE2	2.53	0.42
1:XA:1060:C:C4	3:XC:2:GLY:HA2	2.54	0.42
27:RD:165:ILE:O	27:RD:166:GLN:NE2	2.53	0.42
40:YU:35:ALA:O	40:YU:39:LEU:HG	2.19	0.42
25:YA:2818:G:P	37:YR:42:LYS:HZ3	2.43	0.42
25:RA:2784:C:H5''	28:RE:41:LYS:NZ	2.35	0.42
1:XA:1202:G:O4'	14:XN:29:ARG:HD2	2.19	0.42
16:XP:9:PHE:HB3	16:XP:10:GLY:H	1.64	0.42
7:XG:18:TYR:CD2	7:XG:59:LEU:HD13	2.55	0.42
25:RA:1570:A:H2'	25:RA:1571:A:C8	2.55	0.42
25:RA:2818:G:OP2	37:RR:42:LYS:NZ	2.50	0.42
31:RH:66:GLY:O	31:RH:67:LEU:C	2.58	0.42
7:XG:95:ARG:O	7:XG:96:GLN:C	2.58	0.42
30:RG:51:ARG:NH1	30:RG:51:ARG:CB	2.83	0.42
8:XH:95:VAL:O	8:XH:95:VAL:HG23	2.20	0.42
25:RA:1061:U:H5'	25:RA:1070:A:H1'	2.01	0.42
25:RA:1792:G:H2'	25:RA:1793:C:C6	2.55	0.42
25:YA:234:C:H2'	25:YA:235:U:C6	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:RN:27:ALA:O	33:RN:28:THR:C	2.57	0.42
53:R7:25:PRO:HA	53:R7:28:ARG:NH2	2.35	0.42
25:RA:2696:U:H2'	25:RA:2697:G:C8	2.55	0.42
1:QA:817:C:H1'	1:QA:819:A:H5'	2.02	0.42
25:RA:702:G:C2	25:RA:731:C:C2	3.08	0.42
25:RA:528:A:H2	25:RA:2043:C:C5'	2.33	0.42
38:YS:51:ALA:HB3	38:YS:73:LEU:HD23	2.01	0.42
38:RS:51:ALA:HB3	38:RS:73:LEU:HD23	2.01	0.42
11:QK:33:THR:HB	11:QK:37:GLY:C	2.39	0.42
1:XA:404:U:H2'	1:XA:405:U:C6	2.54	0.42
40:RU:43:GLY:HA3	41:RV:73:SER:OG	2.19	0.42
2:QB:159:PRO:HB2	2:QB:160:ASP:H	1.74	0.42
33:YN:52:VAL:CG1	33:YN:53:VAL:N	2.82	0.42
30:YG:27:ASN:HB3	30:YG:30:GLU:OE2	2.20	0.42
19:QS:58:VAL:HG23	19:QS:58:VAL:O	2.20	0.42
14:QN:9:LYS:O	14:QN:9:LYS:HG2	2.19	0.42
50:R4:2:LYS:HD2	50:R4:2:LYS:HA	1.61	0.42
27:YD:215:LEU:HG	27:YD:215:LEU:H	1.59	0.42
25:RA:1918:A:O2'	25:RA:1920:C:N4	2.53	0.42
31:RH:128:PRO:CG	31:RH:129:THR:H	2.33	0.41
47:R1:81:LYS:CD	47:R1:81:LYS:N	2.83	0.41
4:QD:31:CYS:SG	4:QD:31:CYS:O	2.78	0.41
3:XC:113:ALA:HB3	3:XC:114:PRO:CD	2.43	0.41
35:RP:125:VAL:C	35:RP:145:PRO:HD2	2.39	0.41
25:RA:2667:C:H1'	31:RH:109:PHE:CD2	2.51	0.41
5:QE:31:LEU:HD23	5:QE:45:PHE:HD1	1.85	0.41
50:R4:38:LYS:HG3	50:R4:44:THR:OG1	2.20	0.41
38:RS:83:LYS:HE3	38:RS:84:GLN:CG	2.50	0.41
38:RS:83:LYS:HE3	38:RS:84:GLN:HG3	2.02	0.41
36:YQ:34:LEU:HD23	36:YQ:104:PHE:CD1	2.55	0.41
34:RO:86:ILE:N	34:RO:86:ILE:CD1	2.83	0.41
33:YN:58:ASP:HB3	33:YN:95:PRO:HB3	2.02	0.41
29:YF:183:VAL:O	29:YF:184:TYR:C	2.57	0.41
38:YS:26:LEU:HB3	38:YS:87:PHE:HA	2.02	0.41
8:QH:85:ARG:HA	8:QH:135:CYS:HB3	2.02	0.41
33:RN:63:THR:HG22	33:RN:66:LYS:HZ1	1.84	0.41
52:R6:25:LYS:HE2	52:R6:27:LYS:CD	2.49	0.41
37:YR:28:LEU:C	37:YR:28:LEU:HD13	2.40	0.41
25:YA:1372:U:H2'	25:YA:1373:A:H5'	2.01	0.41
41:RV:35:LEU:HB2	41:RV:37:VAL:CG2	2.49	0.41
28:YE:10:GLY:HA3	39:YT:8:LYS:HD3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:110:GLY:O	27:YD:111:LEU:C	2.58	0.41
30:RG:60:LEU:C	30:RG:60:LEU:HD23	2.41	0.41
12:QL:10:LEU:CD1	17:QQ:32:TYR:CD2	3.03	0.41
30:YG:41:GLN:NE2	30:YG:154:GLY:O	2.52	0.41
51:R5:40:LYS:HE2	51:R5:47:PRO:CG	2.49	0.41
36:YQ:64:ILE:HG13	45:YZ:178:GLU:OE1	2.20	0.41
13:QM:16:ASP:HB3	13:QM:34:LEU:CD1	2.49	0.41
20:QT:36:LEU:HD13	20:QT:36:LEU:HA	1.82	0.41
29:YF:53:THR:O	29:YF:55:GLY:N	2.53	0.41
35:YP:39:LYS:HA	35:YP:45:LEU:HD11	1.83	0.41
43:RX:60:ARG:HA	43:RX:75:ASP:OD2	2.20	0.41
48:R2:41:ILE:CD1	48:R2:41:ILE:C	2.81	0.41
25:YA:1093:G:H4'	31:YH:170:ARG:NH2	2.34	0.41
34:YO:97:ARG:CA	34:YO:117:LEU:HD22	2.50	0.41
25:RA:379:G:N2	47:R1:42:GLN:OE1	2.43	0.41
25:RA:2021:C:OP1	51:R5:12:SER:OG	2.31	0.41
42:YW:73:ALA:HB3	42:YW:106:ILE:CG1	2.46	0.41
17:XQ:22:LEU:HD13	17:XQ:41:LYS:HG2	2.01	0.41
39:RT:96:ARG:HB2	39:RT:96:ARG:CZ	2.49	0.41
16:XP:45:THR:CG2	16:XP:46:PRO:HD2	2.47	0.41
29:RF:118:ALA:HA	29:RF:123:LEU:HB3	2.02	0.41
37:YR:85:PRO:C	37:YR:87:TYR:N	2.73	0.41
54:Y8:40:GLU:O	54:Y8:41:ILE:C	2.56	0.41
29:RF:34:TRP:CA	35:RP:6:LEU:HD12	2.46	0.41
7:XG:141:VAL:CG1	7:XG:141:VAL:O	2.65	0.41
4:QD:101:LEU:CD2	4:QD:121:VAL:HG11	2.50	0.41
4:QD:13:ARG:NH2	4:QD:36:ARG:CZ	2.83	0.41
47:R1:29:GLY:O	47:R1:31:GLY:N	2.49	0.41
42:YW:25:ARG:CB	42:YW:25:ARG:NH1	2.79	0.41
25:RA:2405:G:O2'	25:RA:2406:U:P	2.78	0.41
25:YA:2336:A:H61	46:Y0:43:THR:CG2	2.33	0.41
43:RX:87:GLN:C	43:RX:88:LYS:HG3	2.40	0.41
6:QF:45:LEU:CD1	6:QF:59:TYR:HD1	2.31	0.41
14:XN:3:ARG:CG	14:XN:4:LYS:N	2.83	0.41
40:RU:35:ALA:O	40:RU:39:LEU:HG	2.19	0.41
15:XO:50:HIS:O	15:XO:53:HIS:HB3	2.20	0.41
25:RA:1204:A:O2'	25:RA:1205:U:O5'	2.38	0.41
7:QG:95:ARG:O	7:QG:96:GLN:C	2.58	0.41
25:RA:1068:G:N2	25:RA:1095:A:O2'	2.53	0.41
34:RO:16:ALA:HA	34:RO:46:ALA:CB	2.50	0.41
1:XA:328:C:H4'	1:XA:329:A:C5'	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:691:C:H2'	25:RA:692:C:C6	2.54	0.41
1:QA:1451:A:H2'	1:QA:1451:A:N3	2.35	0.41
30:YG:78:SER:O	30:YG:80:PHE:N	2.53	0.41
25:RA:817:C:H4'	25:RA:932:G:C6	2.54	0.41
15:XO:54:ARG:NH1	15:XO:58:MET:SD	2.93	0.41
25:YA:2210:G:H5'	25:YA:2211:G:C5	2.55	0.41
45:RZ:97:GLU:HB3	45:RZ:125:LEU:HD11	2.02	0.41
25:RA:407:G:H2'	25:RA:408:G:C8	2.55	0.41
1:QA:530:G:O6	24:QX:6:C:H1'	2.20	0.41
25:RA:521:G:H2'	25:RA:522:G:H8	1.85	0.41
8:QH:53:VAL:HG12	8:QH:54:ASP:OD2	2.20	0.41
34:YO:17:ARG:HG2	34:YO:17:ARG:HH11	1.84	0.41
30:RG:73:ALA:O	30:RG:84:LYS:O	2.38	0.41
25:YA:2378:A:C5	25:YA:2379:G:H1'	2.55	0.41
25:RA:556:G:H2'	25:RA:557:U:C6	2.55	0.41
25:YA:270(M):U:H1'	25:YA:270(N):G:C6	2.55	0.41
25:YA:643:A:N1	25:YA:2369:A:O2'	2.46	0.41
14:QN:41:ARG:HG3	14:QN:42:ILE:N	2.35	0.41
47:Y1:80:LEU:O	47:Y1:81:LYS:CD	2.65	0.41
28:YE:4:ILE:HG22	28:YE:198:VAL:HB	2.02	0.41
35:RP:18:ARG:HD2	35:RP:27:HIS:CD2	2.56	0.41
2:XB:166:ASP:O	2:XB:170:GLU:OE1	2.39	0.41
27:RD:35:LYS:HB3	27:RD:36:PRO:HA	2.00	0.41
13:QM:88:ARG:O	13:QM:88:ARG:HD2	2.19	0.41
1:QA:962:C:H2'	1:QA:963:G:O4'	2.20	0.41
40:RU:83:LEU:HG	40:RU:88:ILE:HG13	2.02	0.41
41:YV:47:VAL:HG13	41:YV:48:GLY:N	2.27	0.41
2:QB:155:LEU:C	2:QB:157:ARG:H	2.23	0.41
2:QB:97:TRP:HZ3	2:QB:172:ILE:HG22	1.85	0.41
33:YN:1:MET:HG3	33:YN:1:MET:O	2.19	0.41
40:YU:57:PHE:C	40:YU:59:ARG:N	2.74	0.41
36:YQ:118:LEU:HD13	36:YQ:131:ILE:HG23	2.02	0.41
2:QB:178:ARG:O	8:QH:71:GLY:HA2	2.20	0.41
38:YS:92:TYR:HB2	38:YS:98:VAL:HG11	2.02	0.41
8:QH:122:ARG:HG3	8:QH:122:ARG:HH11	1.85	0.41
25:RA:1006:C:H1'	33:RN:106:MET:CE	2.49	0.41
25:RA:2420:C:H6	25:RA:2420:C:O5'	2.03	0.41
25:RA:2420:C:OP1	54:R8:34:TRP:HB2	2.20	0.41
54:Y8:25:MET:HB3	54:Y8:26:LYS:H	1.69	0.41
16:XP:21:VAL:HG21	16:XP:59:TRP:NE1	2.35	0.41
35:RP:64:LYS:HG3	54:R8:25:MET:CE	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:YV:35:LEU:HB2	41:YV:37:VAL:CG2	2.49	0.41
52:R6:41:PRO:HG3	52:R6:44:ARG:HB2	2.01	0.41
27:YD:9:TYR:CZ	27:YD:13:ARG:HD3	2.54	0.41
27:YD:14:ARG:CG	27:YD:15:PHE:N	2.83	0.41
27:YD:145:VAL:O	27:YD:154:LYS:N	2.48	0.41
2:QB:125:PRO:O	2:QB:126:GLU:HB2	2.21	0.41
51:Y5:39:MET:C	51:Y5:40:LYS:HG3	2.39	0.41
25:YA:1021:A:H61	25:YA:1142(A):A:H61	1.67	0.41
25:RA:830:G:N2	25:RA:2445:G:O2'	2.51	0.41
41:RV:16:PRO:HB3	41:RV:97:LYS:O	2.20	0.41
2:QB:142:LEU:O	2:QB:145:LEU:HB2	2.19	0.41
41:YV:16:PRO:HB3	41:YV:97:LYS:O	2.20	0.41
7:XG:44:TYR:O	7:XG:47:CYS:N	2.53	0.41
33:RN:131:GLN:HB3	33:RN:131:GLN:HE21	1.57	0.41
25:RA:2683:C:OP1	39:RT:53:ARG:NH2	2.47	0.41
25:YA:2308:G:N1	25:YA:2311:A:C2	2.88	0.41
43:RX:60:ARG:HH12	53:R7:47:ARG:HH22	1.67	0.41
43:YX:60:ARG:HH22	53:Y7:47:ARG:HH12	1.68	0.41
39:RT:39:ARG:CG	39:RT:40:THR:H	2.22	0.41
31:YH:169:VAL:HG22	31:YH:170:ARG:N	2.26	0.41
36:RQ:20:ALA:HA	36:RQ:98:LYS:HB3	2.02	0.41
41:YV:81:TYR:C	41:YV:82:ARG:CG	2.89	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
9:QI:43:ALA:C	9:QI:45:ALA:N	2.73	0.41
1:QA:954:G:N2	1:QA:1227:A:H62	2.11	0.41
6:XF:67:MET:HB2	6:XF:68:PRO:CD	2.47	0.41
7:XG:87:VAL:HG11	7:XG:155:ARG:HA	2.02	0.41
4:QD:198:VAL:CG1	4:QD:199:ASN:H	2.32	0.41
42:YW:1:MET:HG3	42:YW:2:GLU:N	2.36	0.41
25:RA:1819:A:H5''	27:RD:158:ALA:CB	2.50	0.41
25:RA:1819:A:H4'	25:RA:1820:U:O5'	2.20	0.41
25:RA:1252:G:O4'	40:RU:33:ARG:HD3	2.20	0.41
28:YE:167:VAL:CG1	28:YE:189:PRO:HD3	2.50	0.41
29:RF:42:ALA:O	29:RF:45:ARG:HB2	2.18	0.41
39:YT:76:PHE:HA	39:YT:77:PRO:HD3	1.75	0.41
17:QQ:11:VAL:CG2	17:QQ:20:THR:HB	2.50	0.41
25:RA:1317:A:H2'	25:RA:1318:C:C6	2.55	0.41
8:XH:38:ILE:CD1	8:XH:118:VAL:HG12	2.49	0.41
4:QD:150:GLU:C	4:QD:152:SER:N	2.73	0.41
1:XA:64:G:H4'	1:XA:65:U:O5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:152:LYS:HG2	33:RN:78:TYR:CD1	2.55	0.41
14:YN:15:LYS:HD3	14:YN:15:LYS:HA	1.86	0.41
14:QN:3:ARG:CG	14:QN:4:LYS:N	2.83	0.41
25:YA:2439:A:O2'	25:YA:2440:C:OP2	2.32	0.41
7:QG:17:VAL:HG12	7:QG:18:TYR:CD1	2.55	0.41
1:XA:865:A:H2'	1:XA:866:C:C6	2.55	0.41
2:QB:231:GLU:HG3	2:QB:233:SER:H	1.86	0.41
25:RA:270(U):C:H2'	25:RA:270(V):G:C8	2.55	0.41
27:YD:109:ASP:HB2	27:YD:197:GLY:HA2	2.03	0.41
25:RA:601:C:O2'	25:RA:605:C:H5'	2.20	0.41
41:YV:72:VAL:HG13	41:YV:72:VAL:O	2.19	0.41
26:RB:93:C:H2'	26:RB:94:C:H6	1.86	0.41
25:YA:1386:C:H2'	25:YA:1387:C:C6	2.55	0.41
15:QO:54:ARG:NH1	15:QO:58:MET:SD	2.93	0.41
25:RA:2105:C:H2'	25:RA:2106:G:C8	2.55	0.41
1:XA:1489:G:H2'	1:XA:1490:C:O4'	2.20	0.41
1:XA:221:C:H2'	1:XA:222:U:H6	1.85	0.41
31:RH:146:ALA:HA	31:RH:164:TYR:OH	2.21	0.41
1:QA:937:A:N6	1:QA:1345:U:O4	2.51	0.41
1:QA:1268:A:H4'	21:QU:19:GLY:C	2.40	0.41
25:YA:1363:C:O2'	25:YA:1809:A:N3	2.43	0.41
1:XA:1360:A:OP1	1:XA:1360:A:H8	2.03	0.41
5:QE:26:PHE:CD1	5:QE:26:PHE:N	2.87	0.41
1:XA:1394:A:H8	1:XA:1394:A:OP1	2.03	0.41
28:RE:94:GLU:C	28:RE:96:PHE:N	2.73	0.41
25:RA:1248:G:N2	29:RF:88:VAL:HG22	2.35	0.41
29:YF:80:ALA:O	29:YF:83:PHE:HB2	2.20	0.41
14:QN:22:THR:HB	14:QN:33:VAL:CG1	2.50	0.41
54:R8:16:ILE:HD11	54:R8:57:ARG:CG	2.44	0.41
30:RG:143:GLU:C	50:R4:28:LYS:HZ2	2.24	0.41
42:YW:17:VAL:O	42:YW:18:ARG:C	2.57	0.41
40:YU:83:LEU:HG	40:YU:88:ILE:HG13	2.02	0.41
7:QG:80:VAL:CG1	7:QG:81:GLY:N	2.83	0.41
8:QH:6:ILE:HB	8:QH:85:ARG:HH11	1.74	0.41
4:QD:94:LEU:HA	4:QD:97:LEU:HD12	2.01	0.41
33:RN:62:VAL:CG1	33:RN:66:LYS:HB2	2.51	0.41
25:YA:1454:U:O2'	25:YA:1455:G:N7	2.46	0.41
28:RE:25:VAL:CG1	39:RT:11:GLU:HG2	2.50	0.41
28:YE:9:VAL:HB	28:YE:10:GLY:H	1.70	0.41
20:QT:101:GLY:C	20:QT:103:GLY:N	2.73	0.41
20:QT:95:ALA:O	20:QT:97:ALA:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:YX:57:LEU:H	43:YX:57:LEU:HD12	1.85	0.41
7:XG:24:THR:HA	7:XG:27:ILE:HD13	2.02	0.41
20:XT:48:LYS:O	20:XT:49:ALA:C	2.59	0.41
25:RA:727:A:H2	27:RD:9:TYR:CD2	2.38	0.41
27:RD:13:ARG:O	27:RD:13:ARG:HG2	2.20	0.41
1:XA:1366:C:O2'	10:XJ:60:ARG:NH2	2.52	0.41
13:XM:13:LYS:HA	13:XM:44:ARG:CD	2.48	0.41
31:RH:105:LEU:N	31:RH:105:LEU:CD1	2.81	0.41
29:RF:53:THR:O	29:RF:55:GLY:N	2.53	0.41
11:XK:124:LYS:HB3	11:XK:125:PHE:CD1	2.47	0.41
30:YG:47:LYS:HE3	30:YG:47:LYS:HB2	1.80	0.41
38:RS:53:SER:HA	38:RS:56:LEU:CD2	2.50	0.41
33:RN:114:ARG:C	33:RN:116:LEU:N	2.74	0.41
3:XC:76:VAL:CG2	3:XC:103:VAL:HG11	2.49	0.41
34:YO:31:LYS:O	34:YO:32:TYR:HD2	2.03	0.41
7:XG:111:ARG:HH11	7:XG:111:ARG:CB	2.23	0.41
41:RV:81:TYR:C	41:RV:82:ARG:CG	2.89	0.41
1:XA:1162:C:O2'	1:XA:1163:C:O5'	2.37	0.41
7:QG:118:VAL:HG23	7:QG:119:ARG:N	2.35	0.41
3:XC:142:MET:HG2	3:XC:149:ALA:HB2	2.01	0.41
2:XB:23:ARG:H	2:XB:23:ARG:CD	2.30	0.41
9:XI:118:LYS:NZ	9:XI:118:LYS:HB3	2.34	0.41
1:QA:1371:G:C6	1:QA:1372:U:C4	3.08	0.41
25:RA:2009:G:H1'	37:RR:107:ASP:O	2.19	0.41
13:QM:119:GLY:O	13:QM:120:LYS:O	2.39	0.41
25:RA:264:C:C2'	25:RA:265:A:H5''	2.50	0.41
29:YF:176:LEU:HD11	29:YF:180:GLY:O	2.19	0.41
25:RA:297:C:H5''	44:RY:85:VAL:CG2	2.46	0.41
42:RW:55:ALA:O	42:RW:58:ALA:HB3	2.20	0.41
29:YF:64:ILE:HG23	29:YF:65:TRP:CD1	2.54	0.41
4:XD:33:MET:HE1	4:XD:37:PRO:O	2.20	0.41
12:QL:117:ARG:HB3	12:QL:122:THR:HB	2.02	0.41
4:XD:198:VAL:CG1	4:XD:199:ASN:H	2.32	0.41
17:QQ:74:LEU:HD13	17:QQ:74:LEU:O	2.20	0.41
11:QK:92:GLU:O	11:QK:95:ILE:N	2.54	0.41
29:YF:34:TRP:CA	35:YP:6:LEU:HD12	2.47	0.41
7:XG:101:LEU:O	7:XG:104:LEU:HB2	2.20	0.41
12:XL:89:ARG:HB3	12:XL:97:ARG:HA	2.02	0.41
42:RW:19:LEU:HD12	42:RW:19:LEU:HA	1.79	0.41
14:XN:18:VAL:CG2	14:XN:19:ARG:N	2.82	0.41
25:YA:1348:G:C2'	25:YA:1349:A:H5''	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:Y3:39:ASP:O	49:Y3:40:THR:C	2.59	0.41
30:RG:53:LEU:CD1	30:RG:87:PRO:HB2	2.51	0.41
1:QA:1118:C:OP1	9:QI:104:ARG:NH1	2.49	0.41
43:YX:7:VAL:O	43:YX:30:VAL:CG1	2.67	0.41
39:YT:134:GLU:OE1	39:YT:135:ALA:N	2.53	0.41
17:XQ:82:MET:C	17:XQ:84:LEU:N	2.72	0.41
39:RT:134:GLU:O	39:RT:135:ALA:CB	2.69	0.41
4:XD:127:THR:HG23	4:XD:130:GLY:O	2.19	0.41
33:YN:109:LYS:N	33:YN:109:LYS:CD	2.83	0.41
42:YW:8:ARG:NH1	42:YW:8:ARG:HG3	2.34	0.41
25:RA:896:A:H2	45:RZ:146:ILE:HD11	1.86	0.41
50:R4:68:ARG:HB2	50:R4:69:LYS:H	1.35	0.41
25:RA:139:G:N2	25:RA:1596:A:H4'	2.35	0.41
32:RI:8:PRO:HG3	32:RI:14:ASP:HB2	2.01	0.41
25:RA:2747:G:O6	25:RA:2755:C:H5''	2.21	0.41
18:QR:20:ALA:C	18:QR:21:LYS:HG3	2.41	0.41
14:YN:9:LYS:HE2	14:YN:9:LYS:HB3	1.85	0.41
25:YA:1545(A):A:H2'	25:YA:1546:C:O4'	2.20	0.41
34:YO:92:GLU:O	34:YO:93:PRO:C	2.58	0.41
13:QM:47:ASP:O	13:QM:48:LEU:HB3	2.20	0.41
1:QA:1228:C:H2'	1:QA:1229:A:H8	1.86	0.41
1:XA:1508:G:H2'	1:XA:1509:C:C6	2.55	0.41
1:XA:1051:C:H2'	1:XA:1052:U:C6	2.55	0.41
1:QA:468:A:H4'	16:QP:80:PHE:O	2.19	0.41
25:RA:2734:A:H5'	25:RA:2735:G:OP2	2.20	0.41
1:XA:11:G:C6	1:XA:12:U:C4	3.09	0.41
1:QA:32:A:C2	1:QA:33:A:C4	3.08	0.41
1:QA:909:A:H2'	1:QA:910:C:O4'	2.19	0.41
1:QA:381:C:H2'	1:QA:382:A:O4'	2.20	0.41
1:QA:1386:G:C2	1:QA:1387:G:C8	3.09	0.41
27:RD:269:PHE:N	27:RD:269:PHE:CD2	2.88	0.41
1:QA:1194:U:H4'	5:QE:22:GLY:O	2.20	0.41
1:QA:665:A:H2'	1:QA:725:G:N2	2.35	0.41
25:YA:638:G:C5	25:YA:651:G:C2	3.09	0.41
25:YA:341:G:H2'	25:YA:342:G:O4'	2.20	0.41
25:RA:1936:A:H61	25:RA:1963:U:H3	1.69	0.41
19:QS:4:SER:O	19:QS:5:LEU:HD13	2.20	0.41
50:R4:64:GLY:C	50:R4:66:SER:N	2.73	0.41
1:XA:1312:G:N7	19:XS:2:PRO:HD2	2.36	0.41
28:YE:54:GLN:N	28:YE:54:GLN:CD	2.73	0.41
27:RD:75:ILE:HG21	27:RD:99:ASP:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:13:ARG:HH11	28:RE:13:ARG:HB2	1.81	0.41
2:XB:178:ARG:O	8:XH:71:GLY:HA2	2.21	0.41
40:RU:91:ASP:OD2	40:RU:96:ALA:CA	2.68	0.41
41:RV:38:LEU:CD2	41:RV:39:LEU:N	2.82	0.41
41:RV:38:LEU:CD1	41:RV:55:ALA:CB	2.99	0.41
41:RV:38:LEU:CD1	41:RV:55:ALA:HB1	2.50	0.41
25:YA:1266:G:O2'	25:YA:2012:G:O6	2.32	0.41
2:QB:163:PHE:CD2	2:QB:185:ILE:HD12	2.54	0.41
33:YN:42:TRP:HA	33:YN:48:MET:HE1	2.02	0.41
40:YU:97:ASP:HA	40:YU:100:VAL:HG23	2.01	0.41
40:YU:92:ARG:NH2	41:YV:11:GLN:O	2.53	0.41
2:QB:5:ILE:HB	2:QB:221:LEU:HD23	2.01	0.41
14:YN:22:THR:HB	14:YN:33:VAL:CG1	2.50	0.41
38:YS:83:LYS:HE3	38:YS:84:GLN:CG	2.49	0.41
7:QG:79:ARG:CZ	7:QG:82:GLY:HA2	2.51	0.41
33:YN:21:LYS:O	33:YN:22:THR:O	2.39	0.41
33:YN:28:THR:O	33:YN:29:LYS:C	2.59	0.41
36:RQ:34:LEU:HD23	36:RQ:104:PHE:CD1	2.55	0.41
52:R6:6:ARG:HA	52:R6:6:ARG:NE	2.35	0.41
16:QP:22:THR:HB	16:QP:32:TYR:HB3	2.03	0.41
54:Y8:26:LYS:HD3	54:Y8:26:LYS:HA	1.86	0.41
37:RR:28:LEU:C	37:RR:28:LEU:HD13	2.40	0.41
20:QT:50:GLU:HA	20:QT:100:ILE:HG22	2.02	0.41
27:YD:145:VAL:CG1	27:YD:146:GLU:N	2.84	0.41
33:YN:114:ARG:C	33:YN:116:LEU:N	2.74	0.41
44:YY:6:HIS:O	44:YY:7:VAL:CG1	2.59	0.41
34:YO:31:LYS:HD3	34:YO:31:LYS:HA	1.92	0.41
28:YE:35:GLN:HG3	28:YE:37:ARG:NH2	2.35	0.41
28:RE:111:ARG:NE	28:RE:160:TYR:CE1	2.76	0.41
3:XC:128:PHE:O	3:XC:130:VAL:N	2.54	0.41
12:XL:53:ARG:HH12	12:XL:92:ASP:HB3	1.85	0.41
49:Y3:37:LEU:N	49:Y3:37:LEU:HD23	2.35	0.41
3:XC:59:ARG:HH12	3:XC:97:LYS:CE	2.33	0.41
34:YO:107:ARG:HA	34:YO:112:MET:HE1	2.01	0.41
9:QI:8:GLY:CA	9:QI:79:LEU:HD12	2.50	0.41
9:QI:83:ARG:HA	9:QI:86:VAL:HG12	2.02	0.41
9:QI:118:LYS:NZ	9:QI:118:LYS:HB3	2.34	0.41
25:YA:1478:G:O2'	25:YA:1479:G:H5'	2.19	0.41
12:XL:8:ASN:O	12:XL:11:VAL:HG23	2.20	0.41
1:XA:1442:G:H1	1:XA:1461:G:H21	1.67	0.41
25:RA:2392:A:H2	25:RA:2424:C:N4	2.15	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:QH:11:THR:HA	8:QH:14:ARG:NH1	2.35	0.41
17:XQ:77:VAL:O	17:XQ:77:VAL:HG12	2.20	0.41
4:XD:52:SER:O	4:XD:55:ALA:N	2.52	0.41
18:XR:74:ARG:NE	18:XR:80:PRO:O	2.48	0.41
3:XC:88:ARG:NH2	3:XC:101:LEU:O	2.53	0.41
17:XQ:11:VAL:HG23	17:XQ:12:SER:N	2.35	0.41
12:XL:62:SER:HB2	12:XL:64:TYR:CD1	2.56	0.41
26:RB:52:A:N6	38:RS:33:LYS:HG3	2.35	0.41
11:XK:56:GLY:O	11:XK:89:ALA:HB3	2.21	0.41
1:XA:1106:G:H2'	1:XA:1107:C:H6	1.85	0.41
16:QP:8:ARG:NH1	16:QP:8:ARG:HG2	2.31	0.41
7:XG:17:VAL:HG12	7:XG:18:TYR:CD1	2.55	0.41
25:RA:686:G:H21	25:RA:788:A:H61	1.69	0.41
12:QL:90:VAL:HG12	12:QL:92:ASP:H	1.85	0.41
25:YA:27:G:O2'	25:YA:28:A:H8	2.02	0.41
25:RA:784:A:O2'	25:RA:785:G:H5''	2.21	0.41
25:YA:2758:A:C2	25:YA:2759:G:H1'	2.55	0.41
2:XB:231:GLU:HG3	2:XB:233:SER:H	1.86	0.41
1:XA:1126:U:C5	1:XA:1127:G:C4	3.08	0.41
25:RA:890:A:O2'	25:RA:892:G:H8	2.04	0.41
30:YG:51:ARG:CB	30:YG:51:ARG:NH1	2.83	0.41
25:RA:2031:A:C6	25:RA:2498:C:H1'	2.55	0.41
25:YA:742:G:H2'	25:YA:743:G:C8	2.55	0.41
18:XR:20:ALA:C	18:XR:21:LYS:HG3	2.41	0.41
25:YA:2862:G:H2'	25:YA:2863:C:H6	1.84	0.41
25:YA:2057:A:H2'	25:YA:2058:A:O4'	2.20	0.41
1:XA:277:C:H2'	1:XA:278:G:H8	1.85	0.41
1:QA:1338:G:C6	1:QA:1339:A:C6	3.08	0.41
33:RN:52:VAL:CG1	33:RN:53:VAL:N	2.82	0.41
1:QA:743:U:H2'	1:QA:744:C:C6	2.55	0.41
25:YA:1329:U:H5''	25:YA:1330:C:H5	1.85	0.41
1:QA:37:U:O2'	1:QA:500:G:H4'	2.20	0.41
18:XR:76:LEU:N	18:XR:76:LEU:HD22	2.35	0.41
1:QA:384:G:H2'	1:QA:385:C:C6	2.55	0.41
27:YD:269:PHE:N	27:YD:269:PHE:CD2	2.88	0.41
25:RA:2774:C:H2'	25:RA:2775:A:O4'	2.20	0.41
1:XA:1293:G:H2'	1:XA:1294:G:O4'	2.20	0.41
1:QA:117:G:H2'	1:QA:118:U:O4'	2.21	0.41
1:QA:675:A:H1'	11:QK:116:HIS:CG	2.55	0.41
14:QN:48:ALA:HA	14:QN:53:LEU:HD12	2.02	0.41
47:R1:94:LEU:HA	47:R1:94:LEU:HD23	1.81	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:RY:97:ARG:HH21	44:RY:98:VAL:CG2	2.32	0.41
44:YY:95:LYS:CD	44:YY:95:LYS:H	2.33	0.41
31:RH:86:GLU:HG3	31:RH:165:ALA:CA	2.49	0.41
31:YH:86:GLU:HG3	31:YH:165:ALA:CA	2.49	0.41
28:RE:179:GLU:CB	28:RE:181:LEU:HD23	2.24	0.41
28:RE:197:ILE:HD11	28:RE:199:ARG:NH1	2.30	0.41
19:XS:41:VAL:HG13	19:XS:44:MET:CB	2.38	0.41
19:XS:39:THR:HG23	19:XS:68:GLY:O	2.21	0.41
50:Y4:61:ARG:C	50:Y4:63:TYR:N	2.73	0.41
2:XB:155:LEU:C	2:XB:157:ARG:H	2.23	0.41
3:XC:46:GLU:C	3:XC:48:TYR:H	2.23	0.41
42:YW:14:PRO:C	42:YW:16:LYS:N	2.73	0.41
42:RW:17:VAL:O	42:RW:18:ARG:C	2.57	0.41
33:YN:9:VAL:HB	33:YN:10:GLU:H	1.70	0.41
36:YQ:27:VAL:HG22	36:YQ:105:GLU:CD	2.41	0.41
33:YN:27:ALA:O	33:YN:28:THR:C	2.57	0.41
36:RQ:134:ARG:HD3	45:RZ:122:ARG:NH1	2.36	0.41
33:RN:21:LYS:O	33:RN:22:THR:O	2.39	0.41
50:Y4:38:LYS:HG3	50:Y4:44:THR:OG1	2.20	0.41
16:XP:22:THR:HB	16:XP:32:TYR:HB3	2.02	0.41
5:XE:78:HIS:HE1	5:XE:143:ARG:N	2.12	0.41
1:QA:345:C:O2	1:QA:346:G:N2	2.52	0.41
27:YD:182:LEU:N	27:YD:272:ALA:HB3	2.32	0.41
30:RG:117:PHE:CE1	30:RG:119:GLY:CA	3.03	0.41
30:YG:60:LEU:HD23	30:YG:60:LEU:C	2.41	0.41
29:RF:111:ALA:O	29:RF:112:MET:C	2.59	0.41
2:XB:95:GLN:O	2:XB:96:ARG:C	2.59	0.41
28:RE:167:VAL:CG1	28:RE:189:PRO:HD3	2.50	0.41
9:XI:20:ARG:O	9:XI:21:PRO:C	2.59	0.41
28:RE:35:GLN:HG3	28:RE:37:ARG:NH2	2.36	0.41
8:XH:122:ARG:HH11	8:XH:122:ARG:HG3	1.85	0.41
25:RA:1190:G:H2'	25:RA:1191:G:H8	1.84	0.41
9:XI:49:PRO:O	9:XI:85:LEU:HD21	2.20	0.41
49:R3:7:LYS:HG2	49:R3:7:LYS:O	2.20	0.41
44:RY:2:ARG:O	44:RY:3:VAL:O	2.38	0.41
25:RA:2566:A:H4'	25:RA:2567:G:O5'	2.21	0.41
41:RV:22:VAL:CG1	41:RV:23:GLU:H	2.32	0.41
19:XS:13:ASP:O	19:XS:14:HIS:O	2.39	0.41
11:XK:20:TYR:N	11:XK:31:THR:O	2.54	0.41
7:QG:141:VAL:CG1	7:QG:141:VAL:O	2.65	0.41
48:R2:61:LEU:HD23	48:R2:64:LEU:HD12	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:QL:21:LYS:CD	12:QL:21:LYS:N	2.83	0.41
2:XB:130:ARG:HH22	2:XB:138:LEU:HD21	1.85	0.41
26:RB:28:C:OP2	38:RS:33:LYS:HE3	2.20	0.41
11:QK:56:GLY:O	11:QK:89:ALA:HB3	2.21	0.41
3:XC:108:ASN:CG	3:XC:111:LEU:HG	2.41	0.41
25:YA:2850:A:C2	25:YA:2851:A:C4	3.09	0.41
27:RD:2:ALA:O	27:RD:3:VAL:CB	2.68	0.41
25:RA:1057:A:H62	25:RA:1086:A:H2'	1.84	0.41
25:RA:328:U:H4'	44:RY:68:HIS:CG	2.55	0.41
25:YA:99:U:H4'	25:YA:101:G:H5'	2.03	0.41
20:XT:10:LEU:O	20:XT:12:ALA:N	2.53	0.41
25:YA:1676:A:H2'	25:YA:1677:A:O4'	2.20	0.41
27:YD:158:ALA:O	27:YD:196:VAL:HG11	2.21	0.41
41:YV:21:ARG:HD2	41:YV:91:TYR:CE2	2.55	0.41
25:YA:1550:C:H2'	25:YA:1551:C:C6	2.55	0.41
25:RA:932:G:H4'	25:RA:933:A:O5'	2.21	0.41
10:QJ:45:ARG:HB2	10:QJ:65:LEU:HB3	2.03	0.41
25:RA:196:A:O5'	35:RP:46:LYS:NZ	2.38	0.41
10:XJ:45:ARG:HG3	10:XJ:45:ARG:HH11	1.86	0.41
25:RA:26:G:H1'	25:RA:515:A:N6	2.35	0.41
13:XM:110:ARG:HG3	13:XM:110:ARG:O	2.20	0.41
25:RA:1045:A:N3	25:RA:1047:G:N2	2.68	0.41
38:RS:64:GLU:O	38:RS:68:GLN:HG3	2.19	0.41
25:RA:2018:G:H2'	25:RA:2019:A:O4'	2.20	0.41
25:YA:1570:A:H2'	25:YA:1571:A:C8	2.55	0.41
1:QA:1501:C:OP2	1:QA:1504:G:O2'	2.31	0.41
25:YA:1579:A:H2'	25:YA:1580:A:C8	2.55	0.41
1:QA:607:A:H2'	1:QA:608:A:O4'	2.20	0.41
46:Y0:30:VAL:HG22	46:Y0:66:VAL:HG12	2.02	0.41
25:RA:2397:G:H5''	47:R1:28:GLY:HA2	2.02	0.41
25:RA:1973:G:H2'	25:RA:1974:C:C6	2.55	0.41
4:XD:111:ALA:HB3	4:XD:117:ALA:HB2	2.02	0.41
25:YA:1870:C:H2'	25:YA:1871:A:O4'	2.20	0.41
31:YH:146:ALA:HB2	31:YH:164:TYR:OH	2.21	0.41
25:YA:1221:C:OP1	41:YV:68:LYS:HE2	2.20	0.41
18:QR:84:LYS:HG2	18:QR:84:LYS:H	1.56	0.41
45:YZ:6:LYS:NZ	45:YZ:43:GLU:HG3	2.36	0.41
25:RA:825:C:H2'	25:RA:826:U:O4'	2.21	0.41
1:QA:853:G:H2'	1:QA:854:G:H8	1.86	0.41
44:YY:95:LYS:HB2	44:YY:95:LYS:HZ1	1.86	0.41
1:QA:1316:G:N2	1:QA:1318:A:H3'	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:QS:41:VAL:HG12	19:QS:45:VAL:H	1.85	0.41
25:YA:242:G:O3'	54:Y8:6:THR:HG23	2.21	0.41
28:RE:93:VAL:HG21	28:RE:180:ASN:HA	2.03	0.41
13:QM:80:ARG:NH1	19:QS:65:ASN:O	2.51	0.41
28:YE:63:LEU:CD1	28:YE:64:LYS:N	2.71	0.41
5:QE:10:MET:CE	5:QE:13:ILE:HD13	2.51	0.41
42:YW:14:PRO:C	42:YW:18:ARG:HD2	2.41	0.41
2:QB:166:ASP:O	2:QB:170:GLU:OE1	2.38	0.41
52:R6:8:LYS:O	52:R6:9:LEU:HB2	2.20	0.41
7:QG:24:THR:HA	7:QG:27:ILE:HD13	2.02	0.41
30:RG:44:GLY:C	30:RG:46:ALA:N	2.73	0.41
14:XN:34:TYR:CD1	14:XN:34:TYR:N	2.89	0.41
21:QU:2:GLY:C	21:QU:4:GLY:H	2.23	0.41
1:QA:529:G:O6	12:QL:49:ASN:HA	2.19	0.41
4:XD:209:ARG:NE	4:XD:209:ARG:HA	2.36	0.41
18:QR:53:ARG:O	18:QR:55:ARG:N	2.53	0.41
10:QJ:40:LEU:HB3	10:QJ:41:PRO:HD2	2.02	0.41
25:RA:1331:A:H2'	25:RA:1333:C:C5	2.56	0.41
49:Y3:37:LEU:HD12	49:Y3:43:ILE:CG2	2.50	0.41
10:XJ:40:LEU:HB3	10:XJ:41:PRO:HD2	2.02	0.41
29:YF:129:PHE:O	29:YF:142:TRP:HD1	2.04	0.41
25:YA:1279:G:H2'	25:YA:1280:G:O4'	2.21	0.41
25:RA:637:A:N3	25:RA:638:G:H1'	2.36	0.41
38:RS:42:ASP:C	38:RS:44:LYS:N	2.72	0.41
54:Y8:14:VAL:CG1	54:Y8:60:LEU:HD11	2.50	0.41
42:RW:1:MET:HG3	42:RW:2:GLU:N	2.36	0.41
27:RD:158:ALA:O	27:RD:196:VAL:HG11	2.21	0.41
11:XK:21:ILE:HD13	11:XK:84:VAL:HG12	2.02	0.41
1:QA:1151:A:H2'	1:QA:1152:A:H8	1.86	0.41
26:YB:12:C:O4'	26:YB:15:A:N6	2.53	0.41
7:XG:103:TRP:O	7:XG:104:LEU:C	2.59	0.41
12:XL:25:PRO:HD2	12:XL:97:ARG:HH11	1.86	0.41
34:YO:71:ARG:HH11	39:YT:74:ARG:HH21	1.65	0.41
25:YA:1335:U:OP1	43:YX:65:ARG:NE	2.54	0.41
4:QD:36:ARG:HA	4:QD:37:PRO:HD2	1.82	0.41
6:QF:92:LYS:CB	6:QF:92:LYS:NZ	2.84	0.41
25:RA:1678:G:N2	25:RA:1989:G:N2	2.67	0.41
43:RX:83:VAL:CG1	43:RX:87:GLN:HB2	2.50	0.41
39:RT:76:PHE:HA	39:RT:77:PRO:HD3	1.75	0.41
45:YZ:77:ASP:OD2	45:YZ:80:ARG:HD3	2.21	0.41
50:Y4:4:GLY:O	50:Y4:5:ILE:C	2.59	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:XE:68:GLU:CG	5:XE:68:GLU:O	2.68	0.41
5:XE:68:GLU:HG3	5:XE:70:PRO:HD3	2.03	0.41
50:R4:4:GLY:O	50:R4:5:ILE:C	2.59	0.41
11:QK:20:TYR:N	11:QK:31:THR:O	2.54	0.41
40:YU:39:LEU:O	40:YU:42:ALA:N	2.53	0.41
1:QA:436:C:H2'	1:QA:437:U:H6	1.86	0.41
30:RG:135:LEU:N	30:RG:135:LEU:CD1	2.84	0.41
41:RV:61:VAL:O	41:RV:61:VAL:CG2	2.68	0.41
25:YA:2328:A:H2'	25:YA:2329:G:C8	2.56	0.41
25:RA:2648:C:H2'	25:RA:2649:U:C6	2.55	0.41
25:YA:1608:A:H1'	25:YA:1610:A:OP2	2.20	0.41
25:RA:741:G:H2'	25:RA:742:G:C8	2.55	0.41
6:QF:36:ARG:NH2	6:QF:38:GLU:HG2	2.35	0.41
27:YD:168:ARG:O	27:YD:169:GLU:HB2	2.19	0.41
25:YA:748:G:C8	42:YW:89:ALA:HB1	2.55	0.41
1:QA:408:A:H2'	1:QA:409:G:O4'	2.20	0.41
25:RA:2512:C:H2'	25:RA:2513:G:O4'	2.21	0.41
25:YA:944:G:H5''	25:YA:945:A:O5'	2.20	0.41
44:RY:13:VAL:O	44:RY:24:VAL:HA	2.20	0.41
25:YA:1965:C:H3'	25:YA:1966:A:H2'	2.03	0.41
22:QV:18:G:C6	22:QV:57:A:C6	3.08	0.41
7:XG:126:ASP:N	7:XG:126:ASP:OD2	2.53	0.41
5:XE:26:PHE:N	5:XE:26:PHE:CD1	2.87	0.41
48:Y2:61:LEU:HD23	48:Y2:61:LEU:HA	1.85	0.41
54:R8:26:LYS:HD3	54:R8:26:LYS:HA	1.86	0.41
1:XA:743:U:H2'	1:XA:744:C:C6	2.56	0.41
25:RA:744:G:OP1	28:RE:132:HIS:ND1	2.54	0.41
47:Y1:82:LEU:HD13	47:Y1:83:GLU:C	2.36	0.41
47:Y1:86:SER:O	47:Y1:89:GLU:HB2	2.21	0.41
1:QA:1318:A:H4'	19:QS:11:VAL:CG1	2.46	0.41
10:QJ:71:LEU:HD12	10:QJ:72:VAL:H	1.85	0.41
54:Y8:56:GLU:C	54:Y8:58:ILE:N	2.73	0.41
40:RU:6:THR:HG21	40:RU:10:ARG:CZ	2.50	0.41
25:RA:607:U:OP1	29:RF:102:PRO:HA	2.21	0.41
19:XS:39:THR:O	19:XS:40:ILE:HB	2.20	0.41
2:XB:200:ILE:CG2	2:XB:201:ILE:N	2.83	0.41
2:XB:75:LYS:C	2:XB:77:ALA:H	2.24	0.41
3:XC:19:GLU:HA	3:XC:54:ARG:NH1	2.14	0.41
3:XC:70:VAL:HG12	3:XC:71:ALA:H	1.84	0.41
2:XB:178:ARG:CD	8:XH:71:GLY:C	2.89	0.41
42:YW:14:PRO:HG3	42:YW:101:SER:OG	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:RW:14:PRO:HG3	42:RW:101:SER:OG	2.21	0.41
42:RW:14:PRO:C	42:RW:18:ARG:HD2	2.41	0.41
34:YO:48:PRO:O	34:YO:50:GLY:N	2.54	0.41
25:RA:675:A:N6	25:RA:676:A:N6	2.68	0.41
29:RF:183:VAL:HG22	29:RF:184:TYR:N	2.35	0.41
7:QG:78:ARG:NH1	7:QG:78:ARG:CG	2.84	0.41
52:Y6:8:LYS:O	52:Y6:9:LEU:HB2	2.20	0.41
2:QB:168:THR:CG2	2:QB:192:SER:HB2	2.51	0.41
4:QD:30:LYS:HG3	4:QD:35:ARG:CZ	2.47	0.41
37:YR:55:ALA:HA	37:YR:80:PHE:CE2	2.55	0.41
37:RR:47:PHE:O	37:RR:51:LEU:HD23	2.21	0.41
48:R2:18:PRO:C	48:R2:20:GLU:N	2.73	0.41
16:XP:20:VAL:CG2	16:XP:32:TYR:CD2	3.04	0.41
37:RR:28:LEU:HD12	37:RR:29:LEU:HD12	2.01	0.41
25:YA:1693:U:H1'	27:YD:14:ARG:HH22	1.85	0.41
42:YW:68:ARG:O	42:YW:110:LYS:N	2.46	0.41
30:YG:44:GLY:C	30:YG:46:ALA:N	2.73	0.41
30:YG:67:LYS:NZ	50:Y4:6:HIS:CD2	2.89	0.41
1:XA:779:C:H2'	1:XA:780:A:O4'	2.20	0.41
28:YE:24:THR:HB	28:YE:184:VAL:HG23	2.02	0.41
48:R2:41:ILE:HD12	48:R2:43:GLN:N	2.35	0.41
43:YX:60:ARG:HA	43:YX:75:ASP:OD2	2.20	0.41
30:RG:77:ILE:H	30:RG:82:LEU:HB2	1.84	0.41
27:RD:68:LYS:HG3	27:RD:68:LYS:O	2.20	0.41
18:XR:53:ARG:O	18:XR:55:ARG:N	2.53	0.41
25:RA:1153:C:H2'	25:RA:1154:G:O4'	2.20	0.41
40:RU:76:TYR:O	40:RU:80:ILE:HG12	2.21	0.41
20:XT:101:GLY:C	20:XT:103:GLY:N	2.73	0.41
50:R4:14:ILE:HA	50:R4:31:ILE:O	2.21	0.41
9:QI:71:SER:O	9:QI:72:GLY:C	2.58	0.41
11:QK:22:HIS:HB3	11:QK:29:ILE:HG22	2.03	0.41
15:QO:74:ASP:C	15:QO:76:GLU:H	2.24	0.41
37:RR:1:MET:SD	37:RR:1:MET:N	2.75	0.41
54:R8:14:VAL:CG1	54:R8:60:LEU:HD11	2.51	0.41
50:R4:12:ALA:HB1	50:R4:30:GLU:N	2.35	0.41
31:YH:59:ARG:NH1	31:YH:59:ARG:CG	2.79	0.41
41:YV:22:VAL:CG1	41:YV:23:GLU:H	2.32	0.41
42:YW:29:LEU:HD23	42:YW:29:LEU:C	2.41	0.41
6:QF:3:ARG:HB3	6:QF:93:SER:CB	2.47	0.41
1:XA:266:G:H5'	1:XA:268:C:H41	1.85	0.41
1:QA:539:A:H2'	1:QA:540:G:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:65:C:P	43:YX:71:GLY:HA3	2.61	0.41
18:XR:74:ARG:HG2	18:XR:79:LEU:HB2	2.01	0.41
7:QG:103:TRP:O	7:QG:104:LEU:C	2.59	0.41
7:QG:22:LEU:O	7:QG:25:ALA:HB3	2.21	0.41
4:XD:101:LEU:CD2	4:XD:121:VAL:HG11	2.50	0.41
31:RH:137:ASP:HB2	31:RH:140:LYS:CE	2.51	0.41
43:YX:83:VAL:CG1	43:YX:87:GLN:HB2	2.50	0.41
3:QC:108:ASN:CG	3:QC:111:LEU:HG	2.41	0.41
3:QC:108:ASN:HB3	3:QC:111:LEU:CG	2.51	0.41
25:YA:2360:A:H2'	25:YA:2361:A:O4'	2.21	0.41
16:XP:40:ASP:C	16:XP:42:ARG:N	2.73	0.41
12:XL:44:THR:HA	12:XL:45:PRO:HD3	1.71	0.41
7:QG:121:ALA:O	7:QG:125:MET:HG3	2.21	0.41
12:QL:53:ARG:HH12	12:QL:92:ASP:CB	2.33	0.41
25:YA:26:G:C6	25:YA:27:G:N1	2.89	0.41
25:YA:581:C:H2'	25:YA:582:G:C8	2.55	0.41
7:QG:92:SER:HB3	7:QG:95:ARG:HB2	2.03	0.41
42:RW:96:ILE:O	42:RW:96:ILE:CG2	2.68	0.41
1:QA:1065:U:O2'	1:QA:1066:C:OP2	2.30	0.41
38:YS:66:ALA:HA	38:YS:69:VAL:CG1	2.51	0.41
31:RH:45:VAL:O	31:RH:45:VAL:CG1	2.69	0.41
38:RS:66:ALA:HA	38:RS:69:VAL:CG1	2.51	0.41
10:QJ:45:ARG:HH11	10:QJ:45:ARG:HG3	1.86	0.41
1:XA:562:C:O2'	12:XL:16:GLU:O	2.16	0.41
8:XH:1:MET:O	8:XH:2:LEU:HB2	2.21	0.41
1:QA:468:A:O3'	16:QP:80:PHE:O	2.39	0.41
28:YE:161:GLY:O	28:YE:162:ALA:HB3	2.20	0.41
25:RA:2516:G:C5	25:RA:2517:C:C4	3.09	0.41
25:RA:2517:C:C2	25:RA:2542:A:N6	2.89	0.41
1:QA:803:G:C6	1:QA:804:U:C4	3.09	0.41
1:QA:262:A:C6	1:QA:263:A:C6	3.09	0.41
25:RA:2196:C:N4	25:RA:2197:U:O4	2.54	0.41
1:XA:807:A:H2'	1:XA:808:C:C6	2.56	0.41
25:RA:2320:A:N3	25:RA:2320:A:H2'	2.35	0.41
1:XA:558:G:H2'	1:XA:559:A:H2	1.85	0.41
1:XA:372:C:H42	1:XA:389:A:H62	1.68	0.41
1:XA:1194:U:H4'	5:XE:22:GLY:O	2.20	0.41
15:XO:69:TYR:CZ	15:XO:73:GLU:HG3	2.55	0.41
39:YT:28:VAL:HG23	39:YT:87:ASP:O	2.21	0.41
5:QE:27:ARG:CG	5:QE:28:PHE:N	2.84	0.41
25:RA:754:C:H2'	25:RA:755:C:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:XJ:54:PHE:CZ	10:XJ:55:LYS:CE	3.04	0.41
1:XA:1317:C:H5''	1:XA:1318:A:OP2	2.21	0.41
19:XS:7:LYS:CG	19:XS:8:GLY:N	2.83	0.41
2:XB:212:GLN:NE2	2:XB:212:GLN:O	2.54	0.41
35:YP:101:VAL:HG23	35:YP:106:LEU:HB3	2.03	0.41
29:RF:46:ARG:NH1	29:RF:46:ARG:CG	2.72	0.41
40:YU:91:ASP:OD2	40:YU:96:ALA:CA	2.69	0.41
41:YV:38:LEU:O	41:YV:51:VAL:HA	2.21	0.41
29:YF:68:LYS:O	29:YF:69:HIS:HB2	2.21	0.41
34:RO:48:PRO:O	34:RO:50:GLY:N	2.54	0.41
52:Y6:27:LYS:CB	52:Y6:27:LYS:NZ	2.73	0.41
7:XG:80:VAL:CG1	7:XG:81:GLY:N	2.83	0.41
4:QD:30:LYS:HB3	4:QD:35:ARG:CG	2.36	0.41
2:XB:87:ARG:HH11	2:XB:223:ILE:HD11	1.82	0.41
30:YG:95:ARG:CA	30:YG:99:MET:HB3	2.50	0.41
1:XA:1285:A:H4'	1:XA:1286:A:O5'	2.21	0.41
4:XD:93:PHE:CE1	4:XD:97:LEU:HD11	2.55	0.41
37:RR:55:ALA:O	37:RR:58:GLY:HA3	2.21	0.41
34:RO:2:ILE:HG12	34:RO:8:LEU:HD11	2.02	0.41
44:YY:49:VAL:O	44:YY:50:ARG:C	2.59	0.41
27:RD:177:LEU:C	27:RD:179:SER:H	2.23	0.41
2:QB:32:ILE:HD13	2:QB:190:THR:HG21	2.03	0.41
10:QJ:8:LEU:HD11	10:QJ:23:ILE:CD1	2.37	0.41
27:YD:154:LYS:C	27:YD:155:LEU:HD12	2.41	0.41
2:QB:115:LEU:O	2:QB:119:GLU:N	2.54	0.41
2:XB:115:LEU:O	2:XB:119:GLU:N	2.54	0.41
2:XB:95:GLN:HB3	2:XB:148:TYR:HD1	1.84	0.41
13:QM:15:VAL:O	13:QM:19:LEU:HD22	2.21	0.41
36:YQ:90:VAL:C	36:YQ:92:GLY:N	2.71	0.41
13:XM:15:VAL:O	13:XM:19:LEU:HD22	2.21	0.41
13:XM:117:VAL:CG2	13:XM:118:ALA:H	2.31	0.41
48:Y2:41:ILE:C	48:Y2:41:ILE:CD1	2.81	0.41
3:QC:78:GLY:HA3	3:QC:83:ARG:HB2	2.03	0.41
25:RA:2295:C:P	38:RS:10:ARG:HD2	2.61	0.41
28:YE:36:ARG:O	28:YE:37:ARG:C	2.59	0.41
1:XA:1346:A:H5'	9:XI:120:ARG:NH1	2.32	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
16:QP:6:LEU:N	16:QP:6:LEU:CD1	2.84	0.41
36:RQ:20:ALA:HB1	36:RQ:99:PRO:CG	2.51	0.41
25:RA:396:G:H1'	47:R1:42:GLN:HB3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:XT:89:ARG:HH12	20:XT:106:ALA:CB	2.34	0.41
33:YN:62:VAL:CG1	33:YN:66:LYS:HB2	2.50	0.41
1:XA:1349:A:OP2	9:XI:118:LYS:NZ	2.51	0.41
9:XI:43:ALA:C	9:XI:45:ALA:N	2.73	0.41
1:QA:376:G:OP1	16:QP:5:ARG:HB2	2.20	0.41
25:YA:2563:U:H2'	25:YA:2565:A:OP2	2.20	0.41
25:RA:140:A:C8	25:RA:1408:C:O2'	2.70	0.41
54:R8:64:TYR:HB3	54:R8:65:GLU:H	1.40	0.41
1:XA:485:G:H1'	1:XA:486:U:H5	1.85	0.41
2:XB:62:ALA:O	2:XB:65:GLY:N	2.53	0.41
27:RD:263:ARG:NH1	27:RD:263:ARG:CB	2.75	0.41
42:YW:55:ALA:O	42:YW:58:ALA:HB3	2.21	0.41
42:RW:29:LEU:C	42:RW:29:LEU:HD23	2.41	0.41
1:QA:184:G:H2'	1:QA:185:A:C8	2.45	0.41
27:YD:117:VAL:HG22	27:YD:118:VAL:N	2.35	0.41
44:YY:2:ARG:O	44:YY:3:VAL:O	2.38	0.41
1:XA:1151:A:N3	10:XJ:39:PRO:HG3	2.36	0.41
25:RA:1799:G:H5'	25:RA:1819:A:H61	1.84	0.41
2:QB:71:VAL:HG23	2:QB:164:VAL:HG22	2.02	0.41
3:QC:92:ALA:HB2	3:QC:99:VAL:HG13	2.03	0.41
9:QI:88:TYR:O	9:QI:89:ASN:HB2	2.20	0.41
35:RP:55:ARG:NH2	35:RP:55:ARG:HG2	2.36	0.41
25:YA:1952:A:C6	25:YA:1953:A:N1	2.89	0.41
5:QE:153:LYS:HD3	5:QE:153:LYS:C	2.40	0.41
25:YA:1418:G:H8	25:YA:1418:G:O5'	2.03	0.41
34:YO:10:VAL:HG21	34:YO:16:ALA:HB3	2.03	0.41
34:RO:10:VAL:HG21	34:RO:16:ALA:HB3	2.03	0.41
27:YD:197:GLY:O	27:YD:198:ASN:HB3	2.21	0.41
30:YG:78:SER:O	30:YG:79:ASN:C	2.59	0.41
27:RD:197:GLY:O	27:RD:198:ASN:HB3	2.21	0.41
53:Y7:24:THR:HB	53:Y7:25:PRO:HD2	2.03	0.41
25:RA:1836:C:H2'	25:RA:1837:C:H6	1.86	0.41
25:YA:475:U:C4	25:YA:481:G:O6	2.74	0.41
12:QL:43:VAL:HG13	12:QL:55:VAL:HG21	2.03	0.41
25:YA:521:G:H2'	25:YA:522:G:C8	2.55	0.41
16:QP:50:LYS:C	16:QP:50:LYS:HD3	2.41	0.41
36:RQ:139:GLU:CG	36:RQ:140:ALA:N	2.84	0.41
25:RA:2725:A:O2'	25:RA:2726:U:H5''	2.20	0.41
15:QO:69:TYR:CZ	15:QO:73:GLU:HG3	2.56	0.41
25:RA:1688:U:O2	25:RA:1700:A:H8	2.04	0.41
51:Y5:41:PRO:HA	51:Y5:42:PRO:HD3	1.82	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1071:G:O5'	25:YA:1071:G:H8	2.04	0.41
17:QQ:89:LEU:HD23	17:QQ:89:LEU:HA	1.93	0.41
17:XQ:85:VAL:HG12	17:XQ:85:VAL:O	2.20	0.41
3:QC:55:VAL:O	3:QC:55:VAL:HG12	2.21	0.41
38:YS:93:LYS:HE3	38:YS:93:LYS:HB2	1.93	0.41
12:XL:91:LYS:HE2	12:XL:91:LYS:HB2	1.76	0.41
44:RY:43:ASN:O	44:RY:43:ASN:OD1	2.39	0.41
39:RT:28:VAL:HG23	39:RT:87:ASP:O	2.21	0.41
25:YA:2025:C:H2'	25:YA:2026:C:C6	2.55	0.41
25:YA:642:G:N2	25:YA:645:C:OP2	2.53	0.41
25:YA:554:U:HO2'	25:YA:556:G:H8	1.68	0.41
25:RA:299:A:N3	25:RA:319:C:O2'	2.52	0.41
44:RY:86:ARG:HA	44:RY:86:ARG:HD2	1.91	0.41
50:R4:63:TYR:O	50:R4:65:ASP:N	2.54	0.41
54:R8:3:LYS:HB3	54:R8:3:LYS:HE2	1.82	0.41
19:QS:39:THR:HG23	19:QS:68:GLY:O	2.21	0.41
28:RE:4:ILE:HG22	28:RE:198:VAL:HB	2.02	0.41
19:XS:10:PHE:CD2	19:XS:11:VAL:N	2.89	0.41
2:XB:204:ASN:HD22	2:XB:204:ASN:C	2.22	0.41
35:RP:101:VAL:HG23	35:RP:106:LEU:HB3	2.03	0.41
31:RH:145:ALA:O	31:RH:148:ILE:HB	2.21	0.41
35:YP:101:VAL:O	35:YP:103:ALA:N	2.53	0.41
28:RE:51:PHE:CG	28:RE:52:LEU:N	2.89	0.41
13:QM:82:MET:HG2	13:QM:93:ARG:HG3	2.03	0.41
8:XH:20:TYR:CD1	8:XH:65:TYR:CD2	2.98	0.41
28:YE:62:PRO:O	28:YE:63:LEU:C	2.59	0.41
35:YP:18:ARG:HD2	35:YP:27:HIS:CD2	2.55	0.41
50:Y4:26:SER:C	50:Y4:27:THR:O	2.58	0.41
5:QE:32:VAL:CG2	5:QE:58:ALA:HB1	2.51	0.41
5:QE:132:ALA:O	5:QE:133:TYR:C	2.59	0.41
33:RN:133:GLN:C	33:RN:134:ARG:HG2	2.41	0.41
13:QM:8:GLU:C	13:QM:9:ILE:CG2	2.90	0.41
30:RG:61:ALA:CB	30:RG:67:LYS:HA	2.50	0.41
30:RG:67:LYS:NZ	50:R4:6:HIS:CD2	2.89	0.41
40:RU:83:LEU:CD1	40:RU:113:ALA:HB2	2.50	0.41
42:YW:14:PRO:O	42:YW:15:ARG:C	2.58	0.41
40:YU:57:PHE:O	40:YU:60:LEU:N	2.54	0.41
40:YU:92:ARG:O	40:YU:92:ARG:CG	2.54	0.41
41:YV:38:LEU:CD1	41:YV:55:ALA:CB	2.99	0.41
38:RS:106:ARG:CZ	38:RS:106:ARG:HB2	2.49	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)
36:RQ:27:VAL:HG22	36:RQ:105:GLU:CD	2.41	0.41
28:YE:101:ARG:C	28:YE:201:THR:OG1	2.58	0.41
26:RB:55:U:H5'	30:RG:28:VAL:HG21	2.02	0.41
33:RN:58:ASP:HB3	33:RN:95:PRO:HB3	2.02	0.41
37:YR:29:LEU:HD11	37:YR:48:VAL:CG1	2.50	0.41
2:QB:223:ILE:O	2:QB:226:ARG:HB3	2.21	0.41
37:YR:55:ALA:O	37:YR:58:GLY:HA3	2.21	0.41
16:XP:1:MET:H2	16:XP:24:ALA:HB3	1.85	0.41
48:Y2:18:PRO:C	48:Y2:20:GLU:N	2.73	0.41
35:RP:65:ARG:C	35:RP:66:GLY:O	2.59	0.41
35:RP:66:GLY:O	35:RP:67:MET:CB	2.63	0.41
37:RR:94:TYR:CD2	37:RR:94:TYR:N	2.87	0.41
28:RE:9:VAL:HB	28:RE:10:GLY:H	1.71	0.41
27:RD:145:VAL:CG1	27:RD:146:GLU:N	2.83	0.41
27:RD:154:LYS:C	27:RD:155:LEU:HD12	2.41	0.41
27:RD:147:LEU:CD1	27:RD:155:LEU:HD21	2.51	0.41
5:XE:51:VAL:CB	5:XE:52:PRO:HD3	2.38	0.41
5:QE:72:GLN:C	5:QE:74:GLY:H	2.23	0.41
5:QE:41:VAL:O	5:QE:66:MET:HA	2.21	0.41
48:R2:65:ASN:O	48:R2:66:GLU:C	2.59	0.41
27:RD:272:ALA:HB1	27:RD:273:ARG:H	1.58	0.41
2:QB:95:GLN:O	2:QB:96:ARG:C	2.59	0.41
13:QM:7:VAL:HB	30:RG:115:ARG:NH1	2.35	0.41
40:RU:57:PHE:O	40:RU:60:LEU:N	2.54	0.41
5:QE:90:VAL:C	5:QE:91:LEU:HD12	2.42	0.41
27:YD:134:ARG:HG3	27:YD:134:ARG:H	1.55	0.41
13:XM:117:VAL:O	13:XM:119:GLY:N	2.53	0.41
25:YA:2295:C:P	38:YS:10:ARG:HD2	2.60	0.41
38:YS:53:SER:HA	38:YS:56:LEU:CD2	2.50	0.41
48:Y2:41:ILE:HD12	48:Y2:43:GLN:N	2.35	0.41
3:QC:47:LEU:CD1	3:QC:76:VAL:HG12	2.42	0.41
30:RG:47:LYS:HE3	30:RG:47:LYS:HB2	1.80	0.41
3:XC:47:LEU:CD1	3:XC:76:VAL:HG12	2.42	0.41
39:RT:39:ARG:HG2	39:RT:40:THR:N	2.25	0.41
25:RA:631:A:P	54:R8:46:ARG:HH21	2.40	0.41
38:RS:15:ARG:O	38:RS:19:LYS:HD3	2.20	0.41
38:RS:6:ALA:O	38:RS:10:ARG:HD3	2.21	0.41
9:XI:10:ARG:CG	9:XI:105:ASP:HB2	2.51	0.41
35:YP:12:ALA:C	35:YP:14:LYS:N	2.73	0.41
1:XA:336:C:H2'	1:XA:337:C:C6	2.55	0.41
12:XL:90:VAL:HG12	12:XL:92:ASP:H	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:XG:118:VAL:HG23	7:XG:119:ARG:N	2.35	0.41
1:QA:558:G:H2'	1:QA:559:A:C2	2.56	0.41
2:XB:37:ASN:C	2:XB:39:ILE:N	2.73	0.41
30:RG:7:LEU:CD2	30:RG:176:LEU:HD22	2.45	0.41
9:XI:113:LYS:H	9:XI:113:LYS:CD	2.28	0.41
9:QI:49:PRO:O	9:QI:85:LEU:HD21	2.20	0.41
4:XD:178:VAL:HG12	4:XD:179:GLU:N	2.35	0.41
15:QO:25:THR:CG2	15:QO:70:LEU:HB2	2.48	0.41
13:QM:117:VAL:O	13:QM:119:GLY:N	2.53	0.41
48:Y2:53:LEU:O	48:Y2:57:ILE:HG13	2.21	0.41
25:RA:1542:G:H5''	25:RA:1543:A:OP2	2.21	0.41
25:RA:2199:A:H3'	25:RA:2205:C:C6	2.55	0.41
17:QQ:51:TYR:HA	17:QQ:52:LYS:HZ2	1.85	0.41
1:XA:502:G:P	12:XL:118:SER:HB2	2.60	0.41
8:XH:33:GLU:C	8:XH:35:ILE:H	2.25	0.41
17:QQ:67:LYS:O	17:QQ:68:ARG:HB3	2.21	0.41
30:YG:22:ARG:HH22	30:YG:175:LEU:HD21	1.85	0.41
25:RA:993:G:P	40:RU:50:ARG:HH22	2.40	0.41
8:QH:18:ARG:HA	8:QH:18:ARG:HD2	1.92	0.41
33:RN:56:ASN:ND2	33:RN:126:PRO:N	2.69	0.41
40:RU:33:ARG:O	40:RU:37:GLU:HB2	2.21	0.41
26:YB:15:A:H5'	26:YB:16:G:H8	1.80	0.41
19:QS:29:ARG:HG2	19:QS:29:ARG:NH1	2.36	0.41
10:XJ:29:ARG:O	10:XJ:30:SER:HB3	2.20	0.41
7:QG:101:LEU:O	7:QG:104:LEU:HB2	2.21	0.41
45:YZ:97:GLU:HG3	45:YZ:127:LYS:NZ	2.35	0.41
45:YZ:91:LEU:HB3	45:YZ:130:PRO:HB3	2.02	0.41
17:XQ:11:VAL:HG23	17:XQ:12:SER:H	1.85	0.41
25:RA:2832:U:O2'	25:RA:2833:G:P	2.79	0.41
12:XL:62:SER:O	12:XL:64:TYR:N	2.54	0.41
14:QN:18:VAL:CG2	14:QN:19:ARG:H	2.32	0.41
12:QL:62:SER:HB2	12:QL:64:TYR:CD1	2.56	0.41
43:YX:31:HIS:HA	43:YX:32:PRO:HD3	1.88	0.41
17:QQ:11:VAL:HG23	17:QQ:12:SER:H	1.85	0.41
31:YH:137:ASP:HB2	31:YH:140:LYS:CE	2.51	0.41
47:R1:18:ILE:HG22	47:R1:18:ILE:O	2.21	0.41
1:XA:675:A:H1'	11:XK:116:HIS:CG	2.56	0.41
42:RW:50:VAL:O	42:RW:53:SER:N	2.50	0.41
17:QQ:60:ILE:HG23	17:QQ:60:ILE:O	2.21	0.41
1:QA:129(A):G:C6	1:QA:191(A):G:H1'	2.56	0.41
8:QH:38:ILE:CD1	8:QH:118:VAL:HG12	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:97:U:H2'	1:XA:99:C:C6	2.56	0.41
1:QA:1098:C:H2'	1:QA:1099:G:O4'	2.21	0.41
30:YG:53:LEU:CD1	30:YG:87:PRO:HB2	2.51	0.41
13:QM:28:ALA:C	13:QM:30:ALA:H	2.25	0.41
25:YA:569:U:C4	25:YA:570:G:C6	3.08	0.41
5:QE:68:GLU:CG	5:QE:68:GLU:O	2.68	0.41
25:RA:389:G:H22	35:RP:72:PRO:CD	2.34	0.41
25:YA:1991:U:H2'	25:YA:1992:G:H5''	2.02	0.41
43:YX:54:VAL:C	43:YX:55:ASN:HD22	2.23	0.41
40:RU:27:LEU:C	40:RU:29:SER:N	2.73	0.41
1:XA:719:C:O2	18:XR:50:ILE:HD13	2.21	0.41
1:XA:864:A:H2'	1:XA:865:A:C8	2.56	0.41
17:XQ:63:ARG:HG2	17:XQ:64:PRO:HD2	2.03	0.41
55:Y9:2:LYS:HA	55:Y9:2:LYS:HD2	1.96	0.41
17:XQ:86:GLU:O	17:XQ:87:LYS:C	2.60	0.41
33:YN:101:HIS:HD2	33:YN:102:ALA:N	2.19	0.41
25:RA:1149:G:H2'	25:RA:1150:C:H6	1.85	0.41
32:RI:38:LEU:HD12	32:RI:38:LEU:H	1.86	0.41
25:YA:515:A:H1'	25:YA:581:C:H1'	2.03	0.41
1:XA:1434:A:H2'	1:XA:1435:G:O4'	2.21	0.41
7:XG:92:SER:HB3	7:XG:95:ARG:HB2	2.03	0.41
25:YA:2790:A:O2'	25:YA:2893:G:N3	2.50	0.41
25:RA:2776:A:H4'	25:RA:2777:G:O5'	2.21	0.41
12:QL:109:GLY:HA3	12:QL:121:GLY:O	2.20	0.41
25:RA:508:G:HO2'	25:RA:509:C:P	2.43	0.41
10:QJ:84:GLN:HG3	10:QJ:84:GLN:H	1.50	0.41
33:RN:10:GLU:OE2	33:RN:11:PRO:HD2	2.21	0.41
26:RB:14:U:OP2	26:RB:70:C:O2'	2.30	0.41
3:QC:23:TYR:CD2	3:QC:24:ALA:N	2.88	0.41
53:R7:24:THR:HB	53:R7:25:PRO:HD2	2.03	0.41
28:RE:147:PRO:HB2	28:RE:149:ARG:HG2	2.03	0.41
25:YA:2159:G:H2'	25:YA:2160:G:H8	1.85	0.41
25:RA:196:A:OP2	35:RP:46:LYS:NZ	2.54	0.41
10:XJ:45:ARG:HB2	10:XJ:65:LEU:HB3	2.03	0.41
13:QM:110:ARG:O	13:QM:110:ARG:HG3	2.20	0.41
1:XA:626:U:C2	1:XA:627:G:C8	3.09	0.41
25:YA:1155:A:O3'	40:YU:55:ARG:NH1	2.54	0.41
1:XA:626:U:H2'	1:XA:627:G:H8	1.86	0.41
1:XA:627:G:H2'	1:XA:628:G:C8	2.56	0.41
25:YA:1321:A:H2'	25:YA:1322:A:O4'	2.21	0.41
25:YA:1257:C:O2'	29:YF:84:VAL:HG12	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:146:ALA:HA	31:YH:164:TYR:OH	2.20	0.41
36:RQ:139:GLU:HG2	36:RQ:140:ALA:N	2.36	0.41
25:RA:1688:U:H1'	25:RA:1701:A:C6	2.56	0.41
25:RA:397:G:H1'	25:RA:2231:C:O2'	2.20	0.41
25:YA:118:A:C8	25:YA:119:A:C8	3.08	0.41
12:QL:89:ARG:HB3	12:QL:97:ARG:HA	2.02	0.41
39:RT:84:GLN:HG2	39:RT:85:LYS:N	2.36	0.41
44:YY:13:VAL:O	44:YY:24:VAL:HA	2.20	0.41
41:RV:67:GLY:O	41:RV:68:LYS:C	2.60	0.41
25:YA:315:G:H2'	25:YA:316:C:C6	2.56	0.41
25:RA:995:C:N4	33:RN:2:LYS:HG3	2.36	0.41
42:YW:71:VAL:HA	42:YW:107:LEU:HD12	2.02	0.41
25:RA:2770:G:H5''	25:RA:2771:C:OP2	2.20	0.41
1:XA:579:G:H5'	1:XA:728:A:H1'	2.02	0.41
48:Y2:11:GLU:HA	48:Y2:14:ARG:HD2	2.02	0.41
54:Y8:17:THR:O	54:Y8:20:GLY:N	2.46	0.41
25:YA:2296:U:H2'	38:YS:9:ARG:NH1	2.36	0.41
25:RA:2051:A:H5'	25:RA:2578:G:O4'	2.20	0.41
1:QA:337:C:H2'	1:QA:338:A:C8	2.55	0.41
25:YA:864:G:C6	25:YA:865:C:N4	2.89	0.41
40:YU:5:LYS:C	40:YU:7:GLY:N	2.74	0.41
25:RA:978:G:H1	25:RA:985:C:H42	1.69	0.41
36:RQ:52:VAL:O	36:RQ:53:ALA:C	2.59	0.41
25:RA:270(H):C:H2'	25:RA:270(I):G:C8	2.55	0.41
35:RP:9:ASN:HB2	35:RP:10:PRO:HD2	2.03	0.41
17:QQ:85:VAL:HG12	17:QQ:85:VAL:O	2.20	0.41
45:RZ:76:LEU:HD23	45:RZ:76:LEU:H	1.86	0.41
17:XQ:89:LEU:HD23	17:XQ:89:LEU:HA	1.93	0.41
18:XR:84:LYS:H	18:XR:84:LYS:HG2	1.56	0.41
30:YG:18:GLU:OE2	30:YG:18:GLU:HA	2.21	0.41
1:QA:296:U:H2'	1:QA:297:G:C8	2.56	0.41
1:XA:648:A:H2'	1:XA:649:G:C8	2.55	0.41
25:YA:2764:A:N6	25:YA:2766:G:C2	2.89	0.41
25:YA:2303:G:O2'	30:YG:132:ASN:ND2	2.45	0.41
28:RE:161:GLY:O	28:RE:162:ALA:HB3	2.20	0.41
1:XA:1199:U:H4'	10:XJ:54:PHE:CE2	2.54	0.41
14:YN:48:ALA:O	14:YN:51:GLY:N	2.53	0.41
47:R1:85:LEU:N	47:R1:85:LEU:CD2	2.84	0.41
47:Y1:91:LYS:HG3	47:Y1:92:LYS:N	2.32	0.41
47:Y1:94:LEU:HA	47:Y1:94:LEU:HD23	1.82	0.41
4:XD:19:LEU:HG	4:XD:21:LEU:HG	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:YY:97:ARG:NH2	44:YY:98:VAL:CG2	2.84	0.41
44:YY:98:VAL:O	44:YY:99:CYS:HB3	2.21	0.41
50:Y4:60:GLN:HB3	50:Y4:61:ARG:H	1.56	0.41
50:Y4:64:GLY:C	50:Y4:66:SER:N	2.73	0.41
50:Y4:63:TYR:O	50:Y4:65:ASP:N	2.54	0.41
31:YH:145:ALA:O	31:YH:148:ILE:HB	2.21	0.41
2:XB:97:TRP:CH2	2:XB:176:GLU:HB2	2.54	0.41
2:XB:76:GLN:OE1	2:XB:206:ASP:HB3	2.21	0.41
35:RP:84:ASN:HB2	35:RP:87:ASP:OD2	2.21	0.41
27:RD:31:LYS:O	27:RD:32:SER:O	2.39	0.41
28:RE:62:PRO:O	28:RE:63:LEU:C	2.59	0.41
33:RN:133:GLN:CB	33:RN:135:PRO:HD3	2.42	0.41
50:R4:42:PHE:CZ	50:R4:43:TYR:HB3	2.57	0.41
13:QM:3:ARG:NH2	30:RG:139:LEU:HD13	2.35	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:YN:1:MET:HE3	40:YU:95:LEU:HD21	1.98	0.41
38:RS:100:ALA:CA	38:RS:103:GLU:HG2	2.49	0.41
2:QB:17:PHE:HB2	2:QB:42:ILE:CG2	2.50	0.41
52:Y6:6:ARG:NE	52:Y6:6:ARG:HA	2.36	0.41
38:YS:89:ARG:NH1	38:YS:89:ARG:HG2	2.36	0.41
3:QC:95:THR:HG23	3:QC:97:LYS:HZ1	1.86	0.41
33:RN:23:LEU:CD1	33:RN:99:LEU:HD23	2.51	0.41
16:QP:20:VAL:HG22	16:QP:21:VAL:H	1.83	0.41
27:YD:228:PRO:HD3	27:YD:234:GLY:O	2.21	0.41
25:YA:2404:C:H1'	35:YP:67:MET:HE2	2.02	0.41
34:RO:20:MET:O	34:RO:41:ALA:CB	2.67	0.41
20:QT:47:GLY:C	20:QT:49:ALA:N	2.72	0.41
1:QA:193:C:OP1	20:QT:57:ARG:HD2	2.21	0.41
42:YW:66:GLU:HG2	42:YW:67:ASP:N	2.36	0.41
27:YD:147:LEU:CD1	27:YD:155:LEU:HD21	2.51	0.41
31:RH:26:VAL:HG12	31:RH:33:LEU:HB2	2.03	0.41
1:QA:1287:A:H2'	1:QA:1288:A:C8	2.56	0.41
1:QA:1286:A:C8	1:QA:1287:A:H4'	2.56	0.41
15:QO:3:ILE:CD1	15:QO:3:ILE:H	2.20	0.41
5:XE:90:VAL:C	5:XE:91:LEU:HD12	2.42	0.41
12:XL:38:THR:HG22	12:XL:57:LYS:HB3	2.01	0.41
38:YS:20:ARG:HE	38:YS:21:THR:HA	1.86	0.41
53:R7:5:TRP:HE1	53:R7:7:PRO:HG3	1.85	0.41
39:YT:39:ARG:HG2	39:YT:40:THR:N	2.25	0.41
29:YF:198:ALA:HA	29:YF:201:VAL:CG1	2.41	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:68:LYS:HG3	27:YD:68:LYS:O	2.20	0.41
34:RO:31:LYS:C	34:RO:32:TYR:CD2	2.94	0.41
36:RQ:39:PRO:HA	36:RQ:97:VAL:O	2.21	0.41
2:XB:114:ARG:O	2:XB:118:LEU:HG	2.21	0.41
1:XA:1305:G:C5'	21:XU:4:GLY:HA3	2.50	0.41
25:YA:1844:C:H2'	25:YA:1845:G:C8	2.54	0.41
48:R2:48:HIS:O	48:R2:49:LYS:C	2.57	0.41
54:Y8:40:GLU:O	54:Y8:42:ARG:N	2.54	0.41
1:QA:1298:C:H4'	1:QA:1299:A:C8	2.56	0.41
2:QB:62:ALA:O	2:QB:65:GLY:N	2.53	0.41
25:YA:49:A:H61	25:YA:177:G:H2'	1.86	0.41
6:QF:75:LEU:HD23	6:QF:75:LEU:C	2.41	0.41
32:RI:88:ILE:H	32:RI:88:ILE:HG12	1.57	0.41
12:XL:117:ARG:HB3	12:XL:122:THR:HB	2.02	0.41
8:XH:33:GLU:O	8:XH:36:LEU:N	2.53	0.41
4:QD:199:ASN:OD1	4:QD:201:GLN:HB3	2.21	0.41
11:XK:31:THR:O	11:XK:31:THR:HG23	2.21	0.41
3:XC:92:ALA:HB2	3:XC:99:VAL:HG13	2.03	0.41
8:XH:109:ILE:HG13	8:XH:120:THR:HB	2.03	0.41
2:QB:130:ARG:HH22	2:QB:138:LEU:HD21	1.85	0.41
32:RI:23:PRO:O	32:RI:27:ARG:HG2	2.21	0.41
26:RB:28:C:H2'	26:RB:29:A:C8	2.56	0.41
16:XP:8:ARG:HG2	16:XP:8:ARG:NH1	2.31	0.41
9:QI:13:ALA:H	9:QI:68:GLY:HA3	1.86	0.41
25:YA:2848:G:O2'	25:YA:2867:G:N2	2.50	0.41
25:YA:458:G:C8	53:Y7:37:LYS:HE3	2.56	0.41
1:XA:130:A:N3	1:XA:263:A:O2'	2.46	0.41
17:QQ:86:GLU:O	17:QQ:87:LYS:C	2.60	0.41
37:YR:61:HIS:CE1	37:YR:65:LEU:HD11	2.56	0.41
12:QL:53:ARG:HH12	12:QL:92:ASP:HB3	1.85	0.41
33:RN:137:LYS:HD2	33:RN:137:LYS:HA	1.89	0.41
22:XV:4:G:O2'	22:XV:5:G:H8	2.04	0.41
1:XA:960:U:O2	1:XA:960:U:H2'	2.19	0.41
1:XA:1020:U:H2'	1:XA:1021:G:C8	2.55	0.41
7:XG:89:MET:HE1	7:XG:156:TRP:H	1.86	0.41
25:RA:833:U:H2'	25:RA:834:C:H6	1.84	0.41
10:XJ:84:GLN:H	10:XJ:84:GLN:HG3	1.50	0.41
45:YZ:152:ALA:HB2	45:YZ:168:GLU:HA	2.03	0.41
31:YH:45:VAL:O	31:YH:45:VAL:CG1	2.69	0.41
1:QA:736:C:H2'	1:QA:737:A:C8	2.56	0.41
1:XA:163:C:H2'	1:XA:164:U:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1384:C:H2'	1:QA:1385:G:C8	2.55	0.41
25:RA:554:U:HO2'	25:RA:556:G:H8	1.69	0.41
25:YA:2037:G:C6	25:YA:2038:G:C6	3.09	0.41
25:YA:1847:A:H5'	25:YA:1848:A:OP2	2.21	0.41
29:YF:13:SER:OG	29:YF:14:PRO:HD2	2.21	0.41
1:QA:1441:G:H4'	1:QA:1442:G:C4	2.56	0.41
25:RA:1520:U:H2'	25:RA:1521:G:O4'	2.21	0.41
1:QA:545:C:OP2	4:QD:62:GLN:NE2	2.52	0.41
1:QA:186(D):C:H2'	1:QA:186(E):C:C6	2.56	0.41
1:QA:825:G:H1'	8:QH:2:LEU:HD21	2.02	0.41
34:YO:106:LEU:HA	34:YO:106:LEU:HD23	1.89	0.41
4:QD:15:GLU:OE1	4:QD:15:GLU:N	2.54	0.41
4:XD:15:GLU:OE1	4:XD:15:GLU:N	2.54	0.41
3:XC:55:VAL:O	3:XC:55:VAL:HG12	2.20	0.41
1:QA:51:A:N1	1:QA:314:C:O2'	2.48	0.41
14:YN:47:LEU:O	14:YN:50:LYS:N	2.52	0.40
44:RY:87:LYS:HB2	44:RY:87:LYS:HZ2	1.85	0.40
44:RY:90:LEU:HB2	44:RY:91:GLU:H	1.53	0.40
25:YA:252:G:OP2	35:YP:50:ARG:NH1	2.54	0.40
28:YE:93:VAL:H	28:YE:95:ILE:CD1	2.22	0.40
1:XA:1312:G:OP1	50:Y4:58:ARG:NH1	2.43	0.40
3:QC:46:GLU:C	3:QC:48:TYR:H	2.23	0.40
27:YD:31:LYS:O	27:YD:32:SER:O	2.39	0.40
35:YP:84:ASN:HB2	35:YP:87:ASP:OD2	2.22	0.40
25:YA:2392:A:H2'	25:YA:2393:A:O4'	2.20	0.40
13:XM:8:GLU:C	13:XM:9:ILE:CG2	2.90	0.40
41:RV:38:LEU:O	41:RV:51:VAL:HA	2.20	0.40
42:RW:14:PRO:C	42:RW:16:LYS:N	2.73	0.40
37:RR:22:ARG:O	37:RR:26:LYS:HG3	2.21	0.40
40:YU:57:PHE:O	40:YU:58:ARG:C	2.59	0.40
34:YO:86:ILE:CD1	34:YO:86:ILE:N	2.83	0.40
29:RF:68:LYS:O	29:RF:69:HIS:HB2	2.21	0.40
25:YA:2416:C:H5''	35:YP:64:LYS:HE3	2.03	0.40
2:XB:168:THR:CG2	2:XB:192:SER:HB2	2.51	0.40
44:RY:49:VAL:O	44:RY:50:ARG:C	2.59	0.40
25:YA:483:A:H4'	44:YY:49:VAL:HG13	2.03	0.40
39:YT:10:VAL:O	39:YT:11:GLU:C	2.60	0.40
52:Y6:50:ARG:HG2	52:Y6:50:ARG:NH1	2.36	0.40
5:QE:101:ILE:HD13	5:QE:118:ILE:O	2.21	0.40
4:XD:170:VAL:CG2	4:XD:171:GLY:H	2.17	0.40
12:QL:8:ASN:O	12:QL:11:VAL:HG23	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:Y2:65:ASN:O	48:Y2:66:GLU:C	2.59	0.40
35:YP:85:LEU:HA	35:YP:85:LEU:HD23	1.92	0.40
2:XB:143:GLU:O	2:XB:147:LYS:HB2	2.21	0.40
36:RQ:76:LYS:HB3	36:RQ:90:VAL:CG1	2.51	0.40
25:RA:1689:A:OP2	25:RA:1698:A:N6	2.54	0.40
16:XP:50:LYS:HD3	16:XP:51:VAL:O	2.21	0.40
27:RD:134:ARG:HD3	27:RD:135:PHE:HE2	1.82	0.40
25:RA:819:A:OP2	25:RA:1187:G:N2	2.24	0.40
18:QR:52:PRO:HG2	18:QR:55:ARG:HG2	2.04	0.40
40:YU:76:TYR:O	40:YU:80:ILE:HG12	2.21	0.40
28:YE:119:ARG:HG2	28:YE:160:TYR:HB2	2.03	0.40
55:R9:10:ILE:HD12	55:R9:32:HIS:CG	2.56	0.40
29:RF:128:ALA:O	29:RF:129:PHE:CB	2.67	0.40
2:XB:47:THR:O	2:XB:51:LEU:N	2.32	0.40
1:QA:1322:C:H5'	13:QM:100:GLY:HA2	2.02	0.40
29:YF:118:ALA:HA	29:YF:123:LEU:HB3	2.02	0.40
1:QA:1297:C:O2'	1:QA:1298:C:P	2.79	0.40
1:XA:267:C:OP2	17:XQ:67:LYS:HD2	2.21	0.40
25:YA:857:C:H1'	46:Y0:26:TYR:CE2	2.56	0.40
1:QA:35:G:N2	12:QL:118:SER:OG	2.51	0.40
4:XD:68:TYR:OH	4:XD:196:LEU:HD21	2.21	0.40
11:XK:92:GLU:O	11:XK:95:ILE:N	2.54	0.40
18:QR:74:ARG:HG2	18:QR:79:LEU:HB2	2.02	0.40
1:XA:509:A:H5''	4:XD:55:ALA:HB2	2.02	0.40
3:XC:140:ARG:HB2	3:XC:140:ARG:NH1	2.36	0.40
3:QC:140:ARG:HB2	3:QC:140:ARG:NH1	2.36	0.40
7:XG:21:VAL:HG23	7:XG:22:LEU:N	2.32	0.40
15:QO:11:VAL:O	15:QO:12:ILE:C	2.60	0.40
1:XA:598:U:H2'	1:XA:599:C:C6	2.56	0.40
48:R2:11:GLU:HA	48:R2:14:ARG:HD2	2.02	0.40
25:YA:1667:G:H2'	25:YA:1991:U:O4	2.21	0.40
40:YU:30:LYS:HA	40:YU:30:LYS:HD3	1.84	0.40
15:QO:50:HIS:O	15:QO:53:HIS:HB3	2.20	0.40
1:XA:189:U:C2	17:XQ:72:ARG:NH1	2.90	0.40
4:XD:110:PHE:HE2	4:XD:148:VAL:HG23	1.85	0.40
4:QD:110:PHE:HE2	4:QD:148:VAL:HG23	1.86	0.40
39:YT:29:ARG:HB2	39:YT:29:ARG:NH1	2.36	0.40
29:YF:62:ARG:CZ	29:YF:62:ARG:HB3	2.51	0.40
22:QV:25:C:H2'	22:QV:26:G:O4'	2.21	0.40
3:XC:5:ILE:CD1	3:XC:5:ILE:H	2.35	0.40
34:YO:16:ALA:HA	34:YO:46:ALA:CB	2.50	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:QE:64:ARG:CZ	5:QE:64:ARG:HB2	2.51	0.40
25:YA:414:C:H1'	25:YA:1864:U:O2'	2.21	0.40
25:RA:873:G:H1	25:RA:904:C:N4	2.19	0.40
29:RF:80:ALA:O	29:RF:83:PHE:HB2	2.20	0.40
31:YH:20:ALA:HB3	31:YH:23:ARG:HG2	2.03	0.40
13:XM:54:VAL:HG12	13:XM:54:VAL:O	2.21	0.40
25:RA:910:A:C5	36:RQ:13:GLN:HG3	2.57	0.40
12:XL:43:VAL:HG13	12:XL:55:VAL:HG21	2.03	0.40
1:XA:1256:A:H4'	1:XA:1258:G:C4	2.56	0.40
1:QA:452:A:O2'	1:QA:453:A:O4'	2.38	0.40
11:QK:83:ILE:HG12	11:QK:109:VAL:CG2	2.51	0.40
1:QA:935:A:H1'	1:QA:1384:C:N3	2.36	0.40
25:RA:852:G:H2'	25:RA:853:G:H8	1.86	0.40
29:RF:144:LYS:C	29:RF:146:ALA:N	2.75	0.40
8:QH:1:MET:O	8:QH:2:LEU:HB2	2.21	0.40
26:RB:3:C:H2'	26:RB:4:C:C6	2.56	0.40
29:RF:13:SER:OG	29:RF:14:PRO:HD2	2.21	0.40
36:YQ:139:GLU:CG	36:YQ:140:ALA:N	2.84	0.40
25:RA:2070:G:H2'	25:RA:2071:A:H8	1.86	0.40
5:XE:6:PHE:HB2	5:XE:63:ARG:HH12	1.86	0.40
1:XA:1517:G:H1'	25:YA:1919:A:O3'	2.21	0.40
1:XA:1159:U:O2'	1:XA:1160:G:N7	2.49	0.40
25:YA:1534:G:H2'	25:YA:1534:G:N3	2.36	0.40
1:XA:911:U:H2'	1:XA:912:C:C6	2.56	0.40
38:RS:12:PHE:HD2	38:RS:12:PHE:HA	1.80	0.40
25:YA:2678:C:H2'	25:YA:2679:A:O4'	2.20	0.40
25:RA:1105:U:H2'	25:RA:1106:G:H8	1.86	0.40
14:QN:34:TYR:CD1	14:QN:34:TYR:N	2.89	0.40
47:R1:82:LEU:HD13	47:R1:83:GLU:CA	2.49	0.40
47:Y1:85:LEU:N	47:Y1:85:LEU:CD2	2.84	0.40
25:RA:2811:G:P	28:RE:61:ARG:HG3	2.60	0.40
41:RV:55:ALA:O	41:RV:56:SER:OG	2.31	0.40
2:QB:212:GLN:O	2:QB:212:GLN:NE2	2.54	0.40
33:YN:10:GLU:OE2	33:YN:11:PRO:HD2	2.21	0.40
38:YS:102:ALA:C	38:YS:104:GLY:N	2.73	0.40
2:XB:17:PHE:HB2	2:XB:42:ILE:CG2	2.50	0.40
34:RO:47:ILE:HD12	34:RO:48:PRO:CD	2.43	0.40
5:XE:132:ALA:O	5:XE:133:TYR:C	2.59	0.40
48:R2:32:LEU:HD23	48:R2:32:LEU:O	2.21	0.40
1:QA:590:C:O2'	1:QA:591:U:H5'	2.21	0.40
25:YA:2376:A:N1	38:YS:87:PHE:CD2	2.90	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:QH:100:ILE:HA	8:QH:101:PRO:HD3	1.85	0.40
25:RA:1022:G:C6	25:RA:1140:C:C4	3.09	0.40
52:R6:24:GLU:HB3	52:R6:25:LYS:H	1.56	0.40
30:YG:112:PRO:CA	50:Y4:37:SER:HB2	2.51	0.40
7:QG:140:ASP:C	7:QG:142:GLU:N	2.68	0.40
35:RP:65:ARG:HH21	54:R8:15:LYS:HB3	1.85	0.40
25:YA:483:A:H5'	44:YY:49:VAL:HG13	2.03	0.40
20:QT:44:ALA:HB3	20:QT:91:LEU:HD12	2.03	0.40
27:YD:107:ALA:HA	27:YD:108:PRO:HD2	2.01	0.40
27:YD:13:ARG:HG2	27:YD:13:ARG:O	2.20	0.40
10:QJ:22:LYS:CD	10:QJ:22:LYS:C	2.89	0.40
20:XT:44:ALA:HB3	20:XT:91:LEU:HD12	2.03	0.40
5:XE:75:THR:CG2	5:XE:76:ILE:N	2.80	0.40
25:YA:1141:U:H1'	25:YA:1142(A):A:C6	2.57	0.40
30:YG:61:ALA:CB	30:YG:67:LYS:HA	2.51	0.40
1:XA:1453:G:H2'	20:XT:39:LYS:NZ	2.35	0.40
13:XM:40:ASN:HA	13:XM:41:PRO:HD3	1.84	0.40
19:QS:32:LYS:HA	19:QS:50:ALA:HB3	2.03	0.40
43:RX:60:ARG:HH22	53:R7:47:ARG:HH12	1.68	0.40
38:RS:52:SER:HB2	38:RS:55:ALA:HB3	2.03	0.40
3:XC:47:LEU:HD11	3:XC:76:VAL:CG1	2.42	0.40
25:RA:2291:U:O2'	25:RA:2374:C:O2	2.34	0.40
28:RE:119:ARG:HG2	28:RE:160:TYR:HB2	2.03	0.40
34:YO:13:ASN:HD21	34:YO:97:ARG:HB3	1.87	0.40
3:XC:120:VAL:O	3:XC:123:GLN:HB2	2.20	0.40
36:YQ:20:ALA:HB1	36:YQ:99:PRO:CG	2.51	0.40
34:YO:110:GLY:HA2	34:YO:112:MET:HE2	2.03	0.40
25:RA:2477:C:H2'	55:R9:1:MET:CG	2.50	0.40
5:XE:36:ASP:O	5:XE:37:ARG:HG2	2.21	0.40
38:RS:62:LYS:HD3	38:RS:97:ARG:CZ	2.52	0.40
13:QM:39:ILE:CD1	13:QM:56:LEU:HB2	2.51	0.40
25:RA:1543:A:HO2'	25:RA:1544:C:P	2.44	0.40
38:RS:42:ASP:O	38:RS:43:GLU:CB	2.62	0.40
54:Y8:64:TYR:HB3	54:Y8:65:GLU:H	1.40	0.40
25:RA:2199:A:H3'	25:RA:2205:C:H6	1.86	0.40
2:XB:132:LYS:HA	2:XB:135:GLN:CG	2.51	0.40
1:XA:643:C:H5'	8:XH:31:PHE:CE1	2.57	0.40
7:QG:87:VAL:HG11	7:QG:155:ARG:HA	2.03	0.40
4:XD:199:ASN:OD1	4:XD:201:GLN:HB3	2.21	0.40
44:YY:42:VAL:HG21	44:YY:67:LEU:CD1	2.52	0.40
45:YZ:182:LYS:CG	45:YZ:183:LEU:HA	2.50	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:XK:91:ARG:NH2	18:XR:88:LYS:HZ1	2.19	0.40
3:XC:178:LEU:CD2	3:XC:178:LEU:N	2.85	0.40
25:RA:443:A:H3'	29:RF:45:ARG:HH12	1.86	0.40
15:XO:11:VAL:O	15:XO:12:ILE:C	2.60	0.40
39:YT:20:PRO:HG2	39:YT:86:ILE:O	2.21	0.40
13:QM:36:LYS:HE3	13:QM:59:TYR:CD1	2.57	0.40
9:XI:9:ARG:CG	9:XI:14:VAL:HG22	2.51	0.40
17:XQ:68:ARG:O	17:XQ:68:ARG:HG3	2.21	0.40
25:YA:2870:C:H5'	37:YR:65:LEU:HD21	2.03	0.40
31:YH:66:GLY:O	31:YH:67:LEU:C	2.58	0.40
3:QC:178:LEU:CD2	3:QC:178:LEU:N	2.85	0.40
25:YA:2619:C:O2'	25:YA:2620:C:H5'	2.21	0.40
1:QA:1301:U:O2	1:QA:1301:U:H2'	2.20	0.40
25:RA:2469:A:OP1	25:RA:2469:A:H4'	2.20	0.40
11:QK:25:TYR:H	11:QK:25:TYR:HD1	1.69	0.40
10:QJ:65:LEU:HA	14:QN:55:GLY:O	2.22	0.40
25:RA:489:G:N7	42:RW:49:LYS:NZ	2.69	0.40
25:YA:2715:C:H2'	25:YA:2716:U:C6	2.56	0.40
25:RA:945:A:C4	25:RA:2448:A:C2	3.09	0.40
26:RB:11:C:H3'	26:RB:12:C:C6	2.57	0.40
25:YA:1707:G:C5	25:YA:1756:G:C6	3.09	0.40
25:RA:969:U:H2'	25:RA:970:C:C6	2.57	0.40
29:YF:59:TYR:HB3	29:YF:60:SER:H	1.70	0.40
18:QR:37:VAL:O	18:QR:40:LEU:N	2.54	0.40
1:QA:730:G:C5	1:QA:731:G:H1'	2.56	0.40
34:RO:106:LEU:HA	34:RO:106:LEU:HD23	1.89	0.40
41:YV:70:ILE:HG22	41:YV:70:ILE:O	2.21	0.40
36:YQ:52:VAL:O	36:YQ:53:ALA:C	2.59	0.40
3:XC:33:LEU:HD11	14:YN:53:LEU:HD23	2.04	0.40
14:YN:43:CYS:C	14:YN:45:ARG:N	2.73	0.40
47:R1:86:SER:O	47:R1:89:GLU:HB2	2.21	0.40
47:R1:96:LYS:O	47:R1:96:LYS:HG2	2.21	0.40
4:QD:14:ARG:HD3	4:QD:14:ARG:HA	1.89	0.40
44:RY:95:LYS:HA	44:RY:101:LYS:CB	2.51	0.40
44:YY:97:ARG:O	44:YY:97:ARG:CG	2.69	0.40
1:QA:1312:G:H3'	50:R4:67:TYR:OH	2.21	0.40
28:YE:93:VAL:HG21	28:YE:180:ASN:HA	2.03	0.40
28:RE:5:LEU:O	28:RE:28:ALA:HA	2.22	0.40
19:XS:3:ARG:CG	19:XS:4:SER:N	2.83	0.40
3:QC:113:ALA:HB3	3:QC:114:PRO:CD	2.43	0.40
35:RP:19:VAL:HG22	35:RP:21:ARG:N	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:70:PHE:O	2:XB:92:TYR:HA	2.22	0.40
3:XC:70:VAL:CG1	3:XC:71:ALA:H	2.35	0.40
50:R4:26:SER:O	50:R4:27:THR:O	2.40	0.40
33:YN:7:LYS:CG	33:YN:8:GLN:N	2.81	0.40
25:YA:997:G:OP1	40:YU:93:LYS:HD3	2.21	0.40
54:R8:53:PRO:HD2	54:R8:54:GLU:H	1.84	0.40
54:R8:53:PRO:CG	54:R8:54:GLU:N	2.84	0.40
38:RS:92:TYR:HB2	38:RS:98:VAL:HG11	2.02	0.40
36:RQ:66:ILE:O	36:RQ:67:ARG:HB2	2.22	0.40
2:QB:178:ARG:CD	8:QH:71:GLY:O	2.68	0.40
29:YF:36:VAL:HG11	29:YF:183:VAL:HG11	2.04	0.40
3:QC:59:ARG:NH1	3:QC:97:LYS:HE3	2.34	0.40
39:YT:50:ILE:CG2	39:YT:62:THR:OG1	2.68	0.40
4:QD:29:PRO:HD2	4:QD:30:LYS:HE2	2.03	0.40
50:Y4:42:PHE:CZ	50:Y4:43:TYR:HB3	2.57	0.40
35:RP:65:ARG:O	35:RP:66:GLY:C	2.60	0.40
44:RY:57:GLN:O	44:RY:58:GLY:C	2.60	0.40
10:XJ:22:LYS:HZ1	10:XJ:23:ILE:HG12	1.86	0.40
5:XE:48:ALA:C	5:XE:50:GLU:H	2.24	0.40
41:YV:24:LYS:CA	41:YV:92:THR:HG23	2.39	0.40
31:YH:26:VAL:HG12	31:YH:33:LEU:HB2	2.03	0.40
2:XB:125:PRO:O	2:XB:126:GLU:HB2	2.21	0.40
30:RG:41:GLN:HB3	30:RG:43:LEU:CD1	2.51	0.40
2:QB:143:GLU:O	2:QB:147:LYS:HB2	2.21	0.40
1:QA:1404:C:H2'	1:QA:1405:G:C8	2.55	0.40
1:XA:1131:G:H1	1:XA:1143:G:H21	1.69	0.40
48:Y2:37:PHE:O	48:Y2:40:SER:HB3	2.22	0.40
25:RA:631:A:H2'	25:RA:632:A:O4'	2.22	0.40
16:XP:50:LYS:C	16:XP:50:LYS:HD3	2.41	0.40
25:RA:2298:A:N6	25:RA:2318:G:H8	2.05	0.40
3:XC:138:VAL:HG22	3:XC:151:VAL:HG23	2.03	0.40
50:Y4:21:VAL:O	50:Y4:22:ILE:O	2.40	0.40
54:Y8:32:LEU:HA	54:Y8:32:LEU:HD23	1.94	0.40
38:RS:43:GLU:HG2	46:R0:49:LYS:NZ	2.36	0.40
1:XA:186:C:O3'	20:XT:82:SER:HB3	2.21	0.40
54:R8:32:LEU:HA	54:R8:32:LEU:HD23	1.94	0.40
1:QA:1176:A:H2'	1:QA:1177:G:H5'	2.03	0.40
6:QF:61:LEU:HB3	6:QF:63:TYR:CE2	2.53	0.40
27:RD:117:VAL:HG22	27:RD:118:VAL:N	2.35	0.40
19:XS:29:ARG:NH1	19:XS:29:ARG:HG2	2.37	0.40
19:XS:31:ILE:HG23	19:XS:31:ILE:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:XG:50:ILE:HA	7:XG:54:THR:CG2	2.52	0.40
25:YA:64:A:N9	43:YX:66:LEU:HD13	2.37	0.40
4:XD:120:LEU:CD2	4:XD:125:HIS:HB2	2.46	0.40
11:XK:21:ILE:CD1	11:XK:82:VAL:HG13	2.51	0.40
19:QS:31:ILE:HG23	19:QS:31:ILE:O	2.21	0.40
4:QD:52:SER:HB3	4:QD:55:ALA:HB3	2.01	0.40
18:XR:73:ALA:HB3	18:XR:79:LEU:CD1	2.47	0.40
25:YA:2867:G:O2'	25:YA:2868:A:H8	2.04	0.40
42:RW:100:THR:O	42:RW:100:THR:HG23	2.22	0.40
1:XA:1149:C:OP1	9:XI:9:ARG:NH2	2.55	0.40
25:YA:141(A):C:H2'	25:YA:142:G:O4'	2.21	0.40
48:Y2:15:LYS:H	48:Y2:67:LYS:HZ3	1.70	0.40
29:RF:62:ARG:HB3	29:RF:62:ARG:CZ	2.52	0.40
25:YA:2688:U:C5	25:YA:2720:U:OP2	2.74	0.40
13:XM:28:ALA:C	13:XM:30:ALA:H	2.24	0.40
17:QQ:63:ARG:HA	17:QQ:64:PRO:HD3	1.94	0.40
45:YZ:45:ASP:O	45:YZ:49:ARG:HG2	2.22	0.40
37:RR:34:ILE:HG22	37:RR:35:THR:N	2.35	0.40
1:QA:518:C:H2'	1:QA:530:G:N3	2.36	0.40
1:XA:112:G:H4'	1:XA:389:A:H5''	2.04	0.40
1:QA:776:G:HO2'	1:QA:777:A:H8	1.68	0.40
1:XA:762:C:H2'	1:XA:763:G:H8	1.85	0.40
25:YA:388:G:C6	25:YA:390:A:C2	3.10	0.40
25:YA:57:C:H2'	25:YA:58:G:O4'	2.21	0.40
26:RB:104:A:H2'	26:RB:105:G:O4'	2.21	0.40
8:XH:53:VAL:HG12	8:XH:54:ASP:OD2	2.20	0.40
25:YA:2877:G:H2'	25:YA:2878:U:O4'	2.21	0.40
25:RA:592:G:H1	25:RA:665:C:H42	1.68	0.40
1:XA:228:A:H2'	1:XA:229:U:O4'	2.22	0.40
18:XR:37:VAL:O	18:XR:40:LEU:N	2.54	0.40
25:RA:503:A:H4'	25:RA:504:U:H5''	2.03	0.40
1:XA:343:U:O2'	1:XA:344:A:H8	2.05	0.40
25:YA:1427:A:H4'	25:YA:1428:C:O4'	2.21	0.40
25:YA:1705:G:C6	25:YA:1706:U:C4	3.09	0.40
54:Y8:39:LYS:O	54:Y8:39:LYS:HD2	2.22	0.40
13:QM:122:LYS:HE2	13:QM:122:LYS:O	2.21	0.40
13:XM:122:LYS:HE2	13:XM:122:LYS:O	2.22	0.40
34:RO:92:GLU:O	34:RO:93:PRO:C	2.58	0.40
1:QA:948:C:H2'	1:QA:949:A:H8	1.86	0.40
47:Y1:96:LYS:O	47:Y1:96:LYS:HG2	2.21	0.40
44:YY:95:LYS:HA	44:YY:101:LYS:CB	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:Y4:49:PHE:HD1	50:Y4:49:PHE:N	2.17	0.40
50:Y4:52:THR:O	50:Y4:53:GLU:CB	2.69	0.40
3:QC:13:GLY:O	3:QC:14:ILE:HB	2.21	0.40
3:XC:13:GLY:O	3:XC:14:ILE:HB	2.22	0.40
27:YD:72:LYS:HG2	27:YD:103:ARG:HH22	1.85	0.40
8:XH:74:PRO:O	8:XH:75:ARG:C	2.58	0.40
13:XM:4:ILE:CG2	13:XM:5:ALA:H	2.30	0.40
37:RR:18:LEU:HD11	37:RR:22:ARG:NE	2.36	0.40
38:RS:83:LYS:CE	38:RS:109:GLY:HA2	2.47	0.40
38:YS:99:LYS:HE2	38:YS:103:GLU:OE2	2.20	0.40
34:YO:47:ILE:HD12	34:YO:48:PRO:CD	2.43	0.40
29:RF:36:VAL:HG11	29:RF:183:VAL:HG11	2.04	0.40
27:RD:228:PRO:HD3	27:RD:234:GLY:O	2.21	0.40
8:QH:97:VAL:O	8:QH:100:ILE:HG13	2.21	0.40
4:QD:96:LEU:C	4:QD:98:GLU:N	2.72	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
52:R6:50:ARG:NH1	52:R6:50:ARG:HG2	2.37	0.40
52:R6:36:LEU:CD1	52:R6:50:ARG:NH1	2.82	0.40
2:XB:223:ILE:O	2:XB:226:ARG:HB3	2.21	0.40
25:YA:1454:U:O2	37:YR:64:ARG:NH1	2.49	0.40
16:QP:22:THR:CA	16:QP:33:ILE:HG12	2.42	0.40
20:QT:48:LYS:O	20:QT:49:ALA:C	2.59	0.40
20:XT:49:ALA:HA	20:XT:92:LEU:HD21	2.03	0.40
25:RA:2056:G:N3	25:RA:2056:G:H2'	2.35	0.40
41:YV:95:LEU:HD13	41:YV:95:LEU:C	2.42	0.40
39:RT:54:ARG:HA	39:RT:59:THR:HG23	2.02	0.40
34:RO:13:ASN:HD21	34:RO:97:ARG:HB3	1.86	0.40
29:YF:198:ALA:C	29:YF:200:GLU:H	2.25	0.40
3:QC:128:PHE:O	3:QC:130:VAL:N	2.54	0.40
3:QC:138:VAL:HG22	3:QC:151:VAL:HG23	2.03	0.40
8:XH:97:VAL:O	8:XH:100:ILE:HG13	2.21	0.40
18:XR:44:LEU:C	18:XR:45:SER:O	2.59	0.40
3:XC:149:ALA:O	3:XC:169:ALA:CA	2.67	0.40
50:R4:21:VAL:O	50:R4:22:ILE:O	2.40	0.40
1:XA:191:G:O2'	20:XT:101:GLY:O	2.39	0.40
36:YQ:39:PRO:HA	36:YQ:97:VAL:O	2.21	0.40
9:XI:118:LYS:HZ2	9:XI:118:LYS:HB2	1.85	0.40
9:XI:71:SER:O	9:XI:72:GLY:C	2.58	0.40
25:RA:95:G:HO2'	48:R2:48:HIS:CE1	2.29	0.40
10:QJ:101:VAL:O	10:QJ:101:VAL:HG13	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:YF:124:LEU:HD12	29:YF:125:LEU:O	2.22	0.40
37:RR:84:ALA:O	37:RR:85:PRO:C	2.59	0.40
42:RW:1:MET:CE	42:RW:2:GLU:H	2.31	0.40
25:YA:2227:A:H5''	27:YD:263:ARG:NH1	2.36	0.40
20:QT:82:SER:O	20:QT:86:ARG:CB	2.70	0.40
37:RR:14:SER:HB2	37:RR:15:SER:H	1.72	0.40
6:QF:8:ILE:HG22	6:QF:10:LEU:HD12	2.03	0.40
1:QA:643:C:H5'	8:QH:31:PHE:CE1	2.56	0.40
17:XQ:51:TYR:HA	17:XQ:52:LYS:HZ2	1.86	0.40
1:QA:1392:G:N2	1:QA:1502:A:H8	2.18	0.40
40:YU:33:ARG:O	40:YU:37:GLU:HB2	2.21	0.40
6:QF:98:LEU:C	6:QF:98:LEU:HD12	2.41	0.40
7:QG:69:VAL:HG12	7:QG:100:ALA:HA	2.03	0.40
25:RA:1465:G:H5'	25:RA:1528:A:H1'	2.03	0.40
6:QF:12:PRO:HG2	6:QF:13:ASN:N	2.34	0.40
27:YD:230:ASP:OD2	27:YD:230:ASP:N	2.54	0.40
1:QA:129(A):G:N2	1:QA:188:U:HO2'	2.19	0.40
25:YA:2455:G:H2'	25:YA:2456:C:C6	2.57	0.40
25:YA:1263:U:O2'	51:Y5:11:THR:HG23	2.22	0.40
7:XG:121:ALA:O	7:XG:125:MET:HG3	2.21	0.40
17:XQ:82:MET:C	17:XQ:84:LEU:H	2.25	0.40
17:XQ:83:ASP:O	17:XQ:87:LYS:HG2	2.22	0.40
41:YV:61:VAL:O	41:YV:61:VAL:CG2	2.68	0.40
33:RN:101:HIS:HD2	33:RN:102:ALA:N	2.19	0.40
25:YA:287:C:O2'	25:YA:288:C:O4'	2.33	0.40
32:RI:129:THR:HG22	32:RI:137:PRO:HB3	2.04	0.40
30:RG:78:SER:O	30:RG:79:ASN:C	2.59	0.40
33:RN:28:THR:O	33:RN:29:LYS:C	2.59	0.40
38:YS:24:LEU:HD22	38:YS:24:LEU:N	2.36	0.40
4:QD:73:ARG:O	4:QD:74:GLN:C	2.58	0.40
16:QP:26:ARG:HH21	16:QP:31:LYS:HG2	1.86	0.40
25:YA:2164:C:H2'	25:YA:2165:G:O4'	2.20	0.40
25:RA:868:U:H2'	25:RA:869:G:O4'	2.22	0.40
45:RZ:103:ARG:HD3	45:RZ:136:PHE:CD1	2.55	0.40
17:XQ:94:ASN:O	17:XQ:97:SER:N	2.53	0.40
1:QA:1148:U:H2'	1:QA:1149:C:O4'	2.21	0.40
5:QE:6:PHE:HB2	5:QE:63:ARG:HH12	1.86	0.40
3:QC:129:ALA:C	3:QC:131:ARG:N	2.72	0.40
1:QA:722:A:H4'	1:QA:723:U:C4	2.57	0.40
1:XA:1262:C:H2'	1:XA:1263:C:C6	2.57	0.40
25:RA:987:G:O2'	25:RA:1000:A:N3	2.48	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2674:G:H2'	25:YA:2675:A:C8	2.57	0.40
31:YH:128:PRO:CG	31:YH:129:THR:H	2.33	0.40
14:QN:48:ALA:O	14:QN:51:GLY:N	2.53	0.40
47:Y1:86:SER:O	47:Y1:89:GLU:N	2.54	0.40
4:QD:11:LEU:O	4:QD:12:CYS:C	2.60	0.40
50:Y4:51:ASP:CG	50:Y4:51:ASP:O	2.60	0.40
27:YD:35:LYS:CE	27:YD:64:ILE:C	2.89	0.40
27:RD:92:ILE:CD1	27:RD:104:TYR:CD2	3.05	0.40
30:YG:137:GLU:OE2	30:YG:139:LEU:HD11	2.22	0.40
5:QE:48:ALA:C	5:QE:50:GLU:H	2.25	0.40
30:RG:112:PRO:CA	50:R4:37:SER:HB2	2.51	0.40
2:QB:5:ILE:CG2	2:QB:224:GLN:HG2	2.51	0.40
38:RS:89:ARG:NH1	38:RS:89:ARG:HG2	2.36	0.40
1:XA:1285:A:H4'	1:XA:1286:A:C5'	2.52	0.40
48:Y2:18:PRO:C	48:Y2:20:GLU:H	2.24	0.40
27:RD:25:THR:HG23	27:RD:27:THR:HB	2.02	0.40
39:RT:10:VAL:O	39:RT:11:GLU:C	2.59	0.40
35:RP:2:LYS:O	35:RP:5:ASP:CB	2.70	0.40
38:YS:59:LYS:CG	38:YS:60:GLY:N	2.80	0.40
8:QH:105:ARG:O	8:QH:107:LEU:N	2.47	0.40
20:XT:50:GLU:HA	20:XT:100:ILE:HG22	2.03	0.40
34:RO:112:MET:O	34:RO:115:VAL:HG23	2.22	0.40
39:RT:23:ARG:O	39:RT:49:VAL:HG11	2.21	0.40
39:RT:58:ASN:N	39:RT:58:ASN:ND2	2.70	0.40
13:XM:119:GLY:O	13:XM:120:LYS:O	2.38	0.40
25:YA:2308:G:H22	25:YA:2311:A:H2	1.68	0.40
13:QM:54:VAL:HG12	13:QM:54:VAL:O	2.21	0.40
25:RA:1310:G:OP2	53:R7:9:ARG:NH1	2.55	0.40
38:RS:20:ARG:HE	38:RS:21:THR:HA	1.87	0.40
8:XH:122:ARG:O	8:XH:123:GLU:C	2.60	0.40
25:YA:396:G:H1'	47:Y1:42:GLN:HB3	2.02	0.40
25:RA:2472:G:H22	25:RA:2477:C:H5''	1.86	0.40
27:YD:142:VAL:HA	27:YD:194:GLY:H	1.86	0.40
1:QA:953:G:N7	13:QM:104:ARG:NH2	2.68	0.40
15:XO:70:LEU:HD23	15:XO:81:LEU:HD23	2.04	0.40
2:QB:132:LYS:HA	2:QB:135:GLN:CG	2.52	0.40
8:XH:41:ARG:CG	8:XH:41:ARG:NH1	2.76	0.40
6:QF:29:ALA:O	6:QF:30:LEU:C	2.60	0.40
48:R2:53:LEU:O	48:R2:57:ILE:HG13	2.21	0.40
1:QA:1298:C:O2'	1:QA:1299:A:OP2	2.27	0.40
6:XF:29:ALA:O	6:XF:30:LEU:C	2.60	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:R8:40:GLU:O	54:R8:42:ARG:N	2.54	0.40
27:RD:117:VAL:HG21	27:RD:128:GLY:O	2.22	0.40
6:XF:40:VAL:HA	6:XF:62:TRP:O	2.22	0.40
6:XF:75:LEU:C	6:XF:75:LEU:HD23	2.41	0.40
6:XF:8:ILE:HG22	6:XF:10:LEU:HD12	2.03	0.40
1:QA:950:U:H2'	1:QA:951:G:C8	2.56	0.40
6:QF:99:ALA:O	6:QF:100:ASN:CB	2.70	0.40
4:QD:3:ARG:HB3	4:QD:69:GLY:O	2.22	0.40
4:QD:68:TYR:OH	4:QD:196:LEU:HD21	2.21	0.40
6:XF:3:ARG:NH1	6:XF:38:GLU:OE1	2.54	0.40
17:QQ:68:ARG:O	17:QQ:68:ARG:HG3	2.21	0.40
19:QS:13:ASP:O	19:QS:14:HIS:C	2.60	0.40
25:RA:2395:C:H2'	25:RA:2396:G:O4'	2.22	0.40
12:XL:21:LYS:N	12:XL:21:LYS:CD	2.83	0.40
3:XC:172:ARG:C	3:XC:173:VAL:HG23	2.42	0.40
25:RA:1041:C:H2'	25:RA:1042:G:C8	2.55	0.40
3:XC:108:ASN:HB3	3:XC:111:LEU:CG	2.51	0.40
3:XC:108:ASN:HB3	3:XC:111:LEU:CD1	2.52	0.40
9:XI:13:ALA:H	9:XI:68:GLY:HA3	1.86	0.40
9:QI:9:ARG:CG	9:QI:14:VAL:HG22	2.51	0.40
33:RN:75:TYR:O	33:RN:76:SER:O	2.40	0.40
17:QQ:83:ASP:O	17:QQ:87:LYS:HG2	2.21	0.40
42:RW:88:ARG:HD2	42:RW:88:ARG:HA	1.92	0.40
25:RA:2151:G:H2'	25:RA:2152:G:C8	2.57	0.40
29:YF:61:GLY:O	29:YF:62:ARG:C	2.57	0.40
25:YA:2646:C:H2'	25:YA:2647:U:O4'	2.22	0.40
16:XP:39:TYR:CD2	16:XP:41:PRO:HD3	2.56	0.40
1:QA:57:G:C5	1:QA:58:C:C4	3.10	0.40
25:RA:1750:G:H2'	25:RA:1751:C:H6	1.87	0.40
31:RH:20:ALA:HB3	31:RH:23:ARG:HG2	2.03	0.40
45:YZ:5:LEU:HD21	45:YZ:44:PHE:HA	2.03	0.40
25:RA:1178:C:HO2'	25:RA:1179:C:P	2.44	0.40
4:QD:63:LYS:O	4:QD:67:ILE:HG13	2.21	0.40
1:QA:512:U:H2'	1:QA:513:C:H6	1.86	0.40
10:XJ:65:LEU:HA	14:YN:55:GLY:O	2.21	0.40
33:YN:53:VAL:HG22	33:YN:121:LYS:HB2	2.04	0.40
1:QA:530:G:HO2'	1:QA:531:U:P	2.44	0.40
31:RH:146:ALA:HB2	31:RH:164:TYR:OH	2.21	0.40
36:YQ:139:GLU:HG2	36:YQ:140:ALA:N	2.36	0.40
25:RA:2070:G:H2'	25:RA:2071:A:C8	2.56	0.40
13:XM:47:ASP:O	13:XM:48:LEU:HB3	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:488:G:N2	25:YA:491:G:H5'	2.37	0.40
17:QQ:8:GLY:HA3	17:QQ:21:VAL:HG12	2.03	0.40
25:YA:2001:A:H2'	25:YA:2002:G:C8	2.56	0.40
1:QA:256:U:H2'	1:QA:257:G:C8	2.56	0.40
25:YA:1567:A:H4'	27:YD:58:HIS:CE1	2.56	0.40
29:YF:33:LEU:O	29:YF:37:VAL:HG23	2.21	0.40
25:YA:2721:A:H1'	25:YA:2873:A:O2'	2.22	0.40
1:XA:20:U:H2'	1:XA:21:G:O4'	2.21	0.40
28:YE:154:LYS:C	28:YE:154:LYS:HD3	2.42	0.40
25:YA:751:A:H5'	42:YW:90:ARG:HA	2.03	0.40

All (6) 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)
11:QK:99:GLN:NE2	3:XC:79:ARG:NH2[4_555]	1.49	0.71
41:YV:51:VAL:N	51:Y5:60:VAL:O[4_445]	1.70	0.50
11:QK:99:GLN:OE1	3:XC:79:ARG:NE[4_555]	2.04	0.16
41:YV:50:PRO:CG	51:Y5:60:VAL:O[4_445]	2.14	0.06
32:RI:91:SER:OG	1:XA:368:U:OP1[4_555]	2.15	0.05
41:YV:50:PRO:C	51:Y5:60:VAL:O[4_445]	2.18	0.02

## 5.3 Torsion angles [i](#)

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

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	QB	235/256 (92%)	153 (65%)	52 (22%)	30 (13%)	0	1
2	XB	235/256 (92%)	153 (65%)	52 (22%)	30 (13%)	0	1
3	QC	203/239 (85%)	129 (64%)	55 (27%)	19 (9%)	1	4
3	XC	203/239 (85%)	129 (64%)	55 (27%)	19 (9%)	1	4

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
4	QD	206/209 (99%)	136 (66%)	50 (24%)	20 (10%)	1	4
4	XD	206/209 (99%)	135 (66%)	49 (24%)	22 (11%)	0	3
5	QE	149/162 (92%)	103 (69%)	31 (21%)	15 (10%)	1	4
5	XE	149/162 (92%)	103 (69%)	30 (20%)	16 (11%)	0	3
6	QF	99/101 (98%)	66 (67%)	24 (24%)	9 (9%)	1	5
6	XF	99/101 (98%)	66 (67%)	24 (24%)	9 (9%)	1	5
7	QG	153/156 (98%)	102 (67%)	36 (24%)	15 (10%)	1	4
7	XG	153/156 (98%)	103 (67%)	36 (24%)	14 (9%)	1	4
8	QH	136/138 (99%)	92 (68%)	29 (21%)	15 (11%)	0	3
8	XH	136/138 (99%)	92 (68%)	29 (21%)	15 (11%)	0	3
9	QI	125/128 (98%)	77 (62%)	32 (26%)	16 (13%)	0	1
9	XI	125/128 (98%)	77 (62%)	32 (26%)	16 (13%)	0	1
10	QJ	97/105 (92%)	68 (70%)	20 (21%)	9 (9%)	1	4
10	XJ	97/105 (92%)	68 (70%)	19 (20%)	10 (10%)	1	4
11	QK	117/129 (91%)	87 (74%)	21 (18%)	9 (8%)	1	6
11	XK	117/129 (91%)	87 (74%)	21 (18%)	9 (8%)	1	6
12	QL	123/132 (93%)	85 (69%)	24 (20%)	14 (11%)	0	2
12	XL	123/132 (93%)	85 (69%)	24 (20%)	14 (11%)	0	2
13	QM	119/126 (94%)	71 (60%)	27 (23%)	21 (18%)	0	0
13	XM	119/126 (94%)	71 (60%)	26 (22%)	22 (18%)	0	0
14	QN	58/61 (95%)	31 (53%)	15 (26%)	12 (21%)	0	0
14	XN	58/61 (95%)	32 (55%)	14 (24%)	12 (21%)	0	0
15	QO	86/89 (97%)	61 (71%)	19 (22%)	6 (7%)	1	8
15	XO	86/89 (97%)	61 (71%)	19 (22%)	6 (7%)	1	8
16	QP	82/88 (93%)	48 (58%)	24 (29%)	10 (12%)	0	2
16	XP	82/88 (93%)	48 (58%)	23 (28%)	11 (13%)	0	1
17	QQ	98/105 (93%)	75 (76%)	15 (15%)	8 (8%)	1	6
17	XQ	98/105 (93%)	75 (76%)	15 (15%)	8 (8%)	1	6
18	QR	68/88 (77%)	45 (66%)	15 (22%)	8 (12%)	0	2
18	XR	68/88 (77%)	46 (68%)	14 (21%)	8 (12%)	0	2
19	QS	82/93 (88%)	46 (56%)	18 (22%)	18 (22%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
19	XS	82/93 (88%)	46 (56%)	18 (22%)	18 (22%)	0	0
20	QT	97/106 (92%)	63 (65%)	16 (16%)	18 (19%)	0	0
20	XT	97/106 (92%)	63 (65%)	15 (16%)	19 (20%)	0	0
21	QU	23/27 (85%)	15 (65%)	4 (17%)	4 (17%)	0	0
21	XU	23/27 (85%)	15 (65%)	4 (17%)	4 (17%)	0	0
27	RD	270/276 (98%)	203 (75%)	48 (18%)	19 (7%)	1	8
27	YD	270/276 (98%)	204 (76%)	47 (17%)	19 (7%)	1	8
28	RE	203/206 (98%)	120 (59%)	41 (20%)	42 (21%)	0	0
28	YE	203/206 (98%)	120 (59%)	41 (20%)	42 (21%)	0	0
29	RF	200/210 (95%)	144 (72%)	36 (18%)	20 (10%)	1	4
29	YF	200/210 (95%)	144 (72%)	36 (18%)	20 (10%)	1	4
30	RG	179/182 (98%)	119 (66%)	39 (22%)	21 (12%)	0	2
30	YG	179/182 (98%)	119 (66%)	39 (22%)	21 (12%)	0	2
31	RH	168/180 (93%)	94 (56%)	36 (21%)	38 (23%)	0	0
31	YH	168/180 (93%)	94 (56%)	36 (21%)	38 (23%)	0	0
32	RI	144/148 (97%)	102 (71%)	27 (19%)	15 (10%)	1	3
32	YI	144/148 (97%)	103 (72%)	25 (17%)	16 (11%)	0	3
33	RN	136/140 (97%)	84 (62%)	30 (22%)	22 (16%)	0	0
33	YN	136/140 (97%)	84 (62%)	30 (22%)	22 (16%)	0	0
34	RO	120/122 (98%)	90 (75%)	21 (18%)	9 (8%)	1	7
34	YO	120/122 (98%)	90 (75%)	21 (18%)	9 (8%)	1	7
35	RP	148/150 (99%)	97 (66%)	19 (13%)	32 (22%)	0	0
35	YP	148/150 (99%)	97 (66%)	19 (13%)	32 (22%)	0	0
36	RQ	139/141 (99%)	95 (68%)	30 (22%)	14 (10%)	1	4
36	YQ	139/141 (99%)	97 (70%)	28 (20%)	14 (10%)	1	4
37	RR	116/118 (98%)	83 (72%)	19 (16%)	14 (12%)	0	2
37	YR	116/118 (98%)	82 (71%)	20 (17%)	14 (12%)	0	2
38	RS	109/112 (97%)	62 (57%)	28 (26%)	19 (17%)	0	0
38	YS	109/112 (97%)	62 (57%)	28 (26%)	19 (17%)	0	0
39	RT	135/146 (92%)	83 (62%)	32 (24%)	20 (15%)	0	1
39	YT	135/146 (92%)	83 (62%)	32 (24%)	20 (15%)	0	1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
40	RU	115/118 (98%)	87 (76%)	19 (16%)	9 (8%)	1	6
40	YU	115/118 (98%)	86 (75%)	20 (17%)	9 (8%)	1	6
41	RV	99/101 (98%)	73 (74%)	16 (16%)	10 (10%)	1	4
41	YV	99/101 (98%)	73 (74%)	16 (16%)	10 (10%)	1	4
42	RW	111/113 (98%)	75 (68%)	22 (20%)	14 (13%)	0	1
42	YW	111/113 (98%)	75 (68%)	22 (20%)	14 (13%)	0	1
43	RX	90/96 (94%)	77 (86%)	8 (9%)	5 (6%)	2	13
43	YX	90/96 (94%)	77 (86%)	8 (9%)	5 (6%)	2	13
44	RY	100/110 (91%)	58 (58%)	16 (16%)	26 (26%)	0	0
44	YY	100/110 (91%)	57 (57%)	17 (17%)	26 (26%)	0	0
45	RZ	181/206 (88%)	126 (70%)	35 (19%)	20 (11%)	0	3
45	YZ	181/206 (88%)	135 (75%)	28 (16%)	18 (10%)	1	4
46	R0	80/85 (94%)	71 (89%)	7 (9%)	2 (2%)	7	34
46	Y0	80/85 (94%)	72 (90%)	6 (8%)	2 (2%)	7	34
47	R1	95/98 (97%)	64 (67%)	20 (21%)	11 (12%)	0	2
47	Y1	95/98 (97%)	64 (67%)	20 (21%)	11 (12%)	0	2
48	R2	67/72 (93%)	46 (69%)	12 (18%)	9 (13%)	0	1
48	Y2	67/72 (93%)	47 (70%)	11 (16%)	9 (13%)	0	1
49	R3	57/60 (95%)	45 (79%)	9 (16%)	3 (5%)	2	15
49	Y3	57/60 (95%)	45 (79%)	9 (16%)	3 (5%)	2	15
50	R4	69/71 (97%)	23 (33%)	20 (29%)	26 (38%)	0	0
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%)	2	10
53	Y7	47/49 (96%)	37 (79%)	7 (15%)	3 (6%)	2	10
54	R8	62/65 (95%)	36 (58%)	15 (24%)	11 (18%)	0	0
54	Y8	62/65 (95%)	36 (58%)	15 (24%)	11 (18%)	0	0
55	R9	35/37 (95%)	31 (89%)	4 (11%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
55	Y9	35/37 (95%)	31 (89%)	4 (11%)	0	100	100
All	All	11470/12128 (95%)	7666 (67%)	2321 (20%)	1483 (13%)	0	1

All (1483) 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	29	PRO
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
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

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Mol	Chain	Res	Type
12	QL	18	VAL
12	QL	27	LEU
12	QL	48	PRO
12	QL	62	SER
12	QL	121	GLY
13	QM	67	GLU
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
14	QN	24	CYS
14	QN	44	LEU
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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	10	GLU
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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	111	VAL
47	R1	30	VAL
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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
14	XN	43	CYS
14	XN	44	LEU
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

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Mol	Chain	Res	Type
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
31	YH	155	SER
31	YH	169	VAL
32	YI	10	GLU
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
44	YY	3	VAL
44	YY	23	ARG
44	YY	48	ALA
44	YY	49	VAL
44	YY	50	ARG
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	146	ILE
45	YZ	152	ALA
45	YZ	159	PRO
45	YZ	166	SER
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
50	Y4	23	GLU

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Mol	Chain	Res	Type
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
4	QD	164	ALA

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Mol	Chain	Res	Type
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
8	QH	128	GLY
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	68	GLY
13	QM	120	LYS
14	QN	14	PRO
14	QN	15	LYS
14	QN	27	CYS
15	QO	77	ARG
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	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	5	VAL
30	RG	36	LYS
30	RG	81	LYS
30	RG	82	LEU
30	RG	96	ARG
30	RG	110	ALA

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
30	RG	115	ARG
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	11	ASN
32	RI	84	GLY
32	RI	117	GLU
32	RI	133	HIS
32	RI	145	VAL
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
37	RR	11	ASN
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
40	RU	28	ARG

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Mol	Chain	Res	Type
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	91	GLU
44	RY	99	CYS
45	RZ	51	ALA
45	RZ	108	PRO
45	RZ	116	VAL
45	RZ	153	SER
45	RZ	177	PRO
46	R0	3	HIS
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
4	XD	164	ALA
4	XD	170	VAL

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Mol	Chain	Res	Type
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
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
14	XN	40	CYS
15	XO	77	ARG
16	XP	49	LEU
17	XQ	14	LYS
17	XQ	33	GLY
17	XQ	78	GLU
17	XQ	100	LYS

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Mol	Chain	Res	Type
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	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	36	LYS
30	YG	81	LYS
30	YG	82	LEU
30	YG	96	ARG
30	YG	110	ALA
30	YG	126	ASP
30	YG	136	ARG

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Mol	Chain	Res	Type
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	84	GLY
32	YI	114	LEU
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
37	YR	11	ASN
38	YS	61	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
40	YU	73	GLY
40	YU	90	VAL
42	YW	63	ASP
42	YW	66	GLU
43	YX	67	GLY
44	YY	4	LYS

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Mol	Chain	Res	Type
44	YY	41	GLY
44	YY	53	PRO
44	YY	56	PRO
44	YY	57	GLN
44	YY	99	CYS
45	YZ	53	ILE
45	YZ	59	LEU
45	YZ	81	ARG
45	YZ	113	ALA
46	Y0	18	ALA
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	26	CYS
4	QD	136	PRO
5	QE	37	ARG
6	QF	41	GLU
6	QF	87	ARG
7	QG	35	LYS
7	QG	62	PHE
7	QG	149	ARG
8	QH	2	LEU
9	QI	12	GLU
9	QI	13	ALA
10	QJ	57	LYS
12	QL	51	ALA
12	QL	123	LYS
13	QM	12	ASN

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Mol	Chain	Res	Type
13	QM	101	GLN
13	QM	121	LYS
14	QN	9	LYS
15	QO	14	GLU
15	QO	23	GLY
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	242	ARG
27	RD	262	ARG
28	RE	20	ALA
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
30	RG	128	ARG
30	RG	174	GLU
31	RH	50	VAL
31	RH	81	GLU
31	RH	152	ARG
32	RI	15	VAL
32	RI	72	LEU
32	RI	118	LYS
33	RN	45	ASN
33	RN	130	HIS
33	RN	132	ALA
33	RN	135	PRO
35	RP	7	ARG
35	RP	14	LYS
35	RP	43	GLY
35	RP	89	ALA

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Mol	Chain	Res	Type
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
38	RS	75	GLU
39	RT	78	LEU
39	RT	112	ARG
40	RU	46	ALA
40	RU	58	ARG
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
44	RY	69	ALA
44	RY	102	CYS
45	RZ	112	ARG
45	RZ	166	SER
46	R0	18	ALA
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
3	XC	16	ARG

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Mol	Chain	Res	Type
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
8	XH	128	GLY
9	XI	12	GLU
9	XI	13	ALA
10	XJ	57	LYS
12	XL	51	ALA
12	XL	123	LYS
13	XM	12	ASN
13	XM	101	GLN
13	XM	121	LYS
14	XN	9	LYS
14	XN	48	ALA
15	XO	14	GLU
15	XO	23	GLY
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
19	XS	64	GLU
20	XT	82	SER
20	XT	98	PRO
27	YD	111	LEU
27	YD	239	ARG
27	YD	242	ARG
27	YD	262	ARG
28	YE	62	PRO
28	YE	69	LYS
28	YE	71	GLY
28	YE	82	ARG

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Mol	Chain	Res	Type
28	YE	117	MET
28	YE	130	GLY
28	YE	132	HIS
30	YG	5	VAL
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	72	LEU
32	YI	87	LYS
32	YI	113	ARG
32	YI	118	LYS
33	YN	45	ASN
33	YN	130	HIS
33	YN	135	PRO
35	YP	7	ARG
35	YP	14	LYS
35	YP	43	GLY
35	YP	89	ALA
35	YP	102	ARG
35	YP	115	LEU
36	YQ	57	HIS
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	74	ALA
38	YS	75	GLU
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

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Mol	Chain	Res	Type
43	YX	87	GLN
44	YY	21	LYS
44	YY	39	VAL
44	YY	42	VAL
44	YY	69	ALA
44	YY	91	GLU
44	YY	102	CYS
45	YZ	13	GLU
45	YZ	92	SER
45	YZ	181	GLU
46	Y0	15	ASP
47	Y1	74	VAL
47	Y1	91	LYS
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
11	QK	105	VAL
12	QL	64	TYR
13	QM	4	ILE

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Mol	Chain	Res	Type
13	QM	14	ARG
13	QM	69	GLU
13	QM	77	ASN
14	QN	26	ARG
14	QN	48	ALA
15	QO	86	GLY
16	QP	26	ARG
16	QP	28	ARG
16	QP	48	TRP
19	QS	28	LYS
19	QS	44	MET
20	QT	40	ALA
20	QT	51	GLU
27	RD	12	SER
27	RD	73	VAL
27	RD	238	GLY
28	RE	66	HIS
28	RE	126	PRO
29	RF	43	LYS
29	RF	130	ALA
29	RF	136	THR
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	115	ALA
32	RI	122	GLU
33	RN	96	GLU
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	74	LEU
42	RW	14	PRO
42	RW	48	ALA
45	RZ	7	ALA

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Mol	Chain	Res	Type
45	RZ	13	GLU
45	RZ	92	SER
50	R4	8	LYS
51	R5	14	ALA
51	R5	37	LYS
51	R5	42	PRO
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
2	XB	19	HIS
2	XB	131	PRO
2	XB	160	ASP
2	XB	175	ARG
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	93	GLY
12	XL	64	TYR
13	XM	4	ILE
13	XM	14	ARG
13	XM	69	GLU
13	XM	77	ASN
14	XN	22	THR
15	XO	86	GLY

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Mol	Chain	Res	Type
16	XP	26	ARG
16	XP	28	ARG
16	XP	48	TRP
19	XS	28	LYS
19	XS	44	MET
20	XT	40	ALA
20	XT	51	GLU
27	YD	12	SER
27	YD	73	VAL
28	YE	66	HIS
28	YE	126	PRO
29	YF	43	LYS
29	YF	130	ALA
29	YF	136	THR
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	12	LEU
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	78	LEU
39	YT	95	ARG
40	YU	74	LEU
42	YW	14	PRO
42	YW	48	ALA
50	Y4	8	LYS
51	Y5	14	ALA
51	Y5	37	LYS
51	Y5	45	VAL
51	Y5	48	GLU

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Mol	Chain	Res	Type
52	Y6	8	LYS
52	Y6	9	LEU
52	Y6	10	LEU
52	Y6	49	HIS
54	Y8	25	MET
54	Y8	53	PRO
54	Y8	57	ARG
2	QB	23	ARG
2	QB	25	ASN
2	QB	98	LEU
2	QB	129	GLU
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	89	ASN
10	QJ	53	PRO
10	QJ	59	SER
10	QJ	75	ILE
11	QK	64	ALA
12	QL	63	GLY
18	QR	58	LEU
19	QS	11	VAL
27	RD	33	LEU
28	RE	79	ARG
29	RF	47	GLY
29	RF	118	ALA
31	RH	11	VAL
31	RH	27	LYS
31	RH	47	GLU

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Mol	Chain	Res	Type
31	RH	77	LYS
31	RH	170	ARG
33	RN	29	LYS
33	RN	104	LYS
33	RN	127	ASP
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	61	LEU
45	RZ	66	SER
45	RZ	81	ARG
45	RZ	130	PRO
49	R3	13	ILE
50	R4	30	GLU
52	R6	35	GLU
54	R8	64	TYR
2	XB	23	ARG
2	XB	98	LEU
2	XB	129	GLU
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	112	LEU
5	XE	128	PRO
5	XE	132	ALA
6	XF	12	PRO
6	XF	96	PRO
7	XG	109	ASN
8	XH	34	GLU
8	XH	103	VAL
9	XI	44	VAL

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Mol	Chain	Res	Type
9	XI	88	TYR
9	XI	89	ASN
10	XJ	53	PRO
10	XJ	59	SER
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
28	YE	79	ARG
29	YF	47	GLY
29	YF	118	ALA
31	YH	11	VAL
31	YH	27	LYS
31	YH	47	GLU
31	YH	77	LYS
31	YH	170	ARG
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
40	YU	91	ASP
42	YW	32	ALA
43	YX	19	ALA
44	YY	7	VAL
45	YZ	7	ALA
45	YZ	61	LEU
45	YZ	143	GLY
45	YZ	153	SER
49	Y3	13	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

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Mol	Chain	Res	Type
54	Y8	64	TYR
3	QC	51	GLY
5	QE	115	VAL
9	QI	88	TYR
11	QK	106	LYS
13	QM	13	LYS
13	QM	48	LEU
14	QN	20	ALA
16	QP	57	ARG
27	RD	178	PRO
30	RG	109	VAL
30	RG	181	ARG
31	RH	7	LEU
31	RH	26	VAL
32	RI	9	LEU
32	RI	12	LEU
39	RT	38	ASN
42	RW	11	ARG
42	RW	33	ARG
50	R4	33	VAL
50	R4	69	LYS
50	R4	70	GLY
51	R5	57	VAL
53	R7	44	PRO
2	XB	25	ASN
3	XC	51	GLY
5	XE	115	VAL
6	XF	32	ASN
10	XJ	85	LEU
11	XK	106	LYS
13	XM	13	LYS
13	XM	48	LEU
13	XM	109	THR
14	XN	20	ALA
16	XP	57	ARG
20	XT	70	SER
27	YD	178	PRO
27	YD	241	PRO
30	YG	109	VAL
30	YG	181	ARG
31	YH	7	LEU
31	YH	26	VAL

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Mol	Chain	Res	Type
32	YI	13	GLY
39	YT	38	ASN
41	YV	36	PRO
42	YW	11	ARG
42	YW	33	ARG
45	YZ	177	PRO
50	Y4	69	LYS
51	Y5	57	VAL
2	QB	202	PRO
2	QB	239	VAL
4	QD	88	VAL
5	QE	49	PRO
7	QG	55	GLY
7	QG	58	PRO
8	QH	106	GLY
18	QR	37	VAL
20	QT	63	ILE
28	RE	86	PRO
28	RE	184	VAL
36	RQ	86	GLY
37	RR	32	GLY
41	RV	36	PRO
42	RW	35	ILE
45	RZ	53	ILE
2	XB	202	PRO
2	XB	239	VAL
3	XC	114	PRO
4	XD	88	VAL
5	XE	49	PRO
7	XG	55	GLY
7	XG	58	PRO
18	XR	37	VAL
20	XT	63	ILE
28	YE	86	PRO
28	YE	184	VAL
32	YI	15	VAL
32	YI	18	VAL
32	YI	71	ILE
36	YQ	86	GLY
37	YR	32	GLY
42	YW	35	ILE
2	QB	227	GLY

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Mol	Chain	Res	Type
3	QC	114	PRO
4	QD	90	GLY
9	QI	24	GLY
13	QM	60	VAL
15	QO	18	PHE
16	QP	53	VAL
27	RD	241	PRO
32	RI	18	VAL
44	RY	32	PRO
45	RZ	94	GLU
51	R5	46	CYS
2	XB	227	GLY
3	XC	134	ILE
4	XD	90	GLY
8	XH	106	GLY
9	XI	24	GLY
13	XM	60	VAL
15	XO	18	PHE
16	XP	53	VAL
30	YG	52	ILE
44	YY	27	VAL
44	YY	32	PRO
45	YZ	160	GLY
51	Y5	46	CYS
3	QC	134	ILE
13	QM	84	ILE
27	RD	34	VAL
30	RG	52	ILE
34	RO	114	ILE
44	RY	27	VAL
44	RY	51	VAL
45	RZ	62	PRO
45	RZ	165	VAL
51	R5	34	PRO
13	XM	84	ILE
27	YD	34	VAL
34	YO	114	ILE
44	YY	51	VAL
51	Y5	34	PRO
9	QI	21	PRO
13	QM	78	ILE
28	RE	52	LEU

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Mol	Chain	Res	Type
28	RE	55	ASN
34	RO	27	GLY
49	R3	40	THR
9	XI	21	PRO
13	XM	78	ILE
28	YE	52	LEU
28	YE	55	ASN
34	YO	27	GLY
49	Y3	40	THR
7	QG	14	PRO
8	QH	51	VAL
20	QT	97	ALA
32	RI	71	ILE
5	XE	129	ILE
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%)	7	27
2	XB	205/220 (93%)	181 (88%)	24 (12%)	7	27
3	QC	159/188 (85%)	143 (90%)	16 (10%)	9	33
3	XC	159/188 (85%)	143 (90%)	16 (10%)	9	33
4	QD	180/181 (99%)	160 (89%)	20 (11%)	8	30
4	XD	180/181 (99%)	165 (92%)	15 (8%)	14	46
5	QE	116/123 (94%)	108 (93%)	8 (7%)	19	54
5	XE	116/123 (94%)	107 (92%)	9 (8%)	16	49
6	QF	90/90 (100%)	76 (84%)	14 (16%)	3	14

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
6	XF	90/90 (100%)	76 (84%)	14 (16%)	3	14
7	QG	126/127 (99%)	114 (90%)	12 (10%)	11	38
7	XG	126/127 (99%)	115 (91%)	11 (9%)	13	44
8	QH	119/119 (100%)	106 (89%)	13 (11%)	8	30
8	XH	119/119 (100%)	106 (89%)	13 (11%)	8	30
9	QI	98/99 (99%)	87 (89%)	11 (11%)	7	29
9	XI	98/99 (99%)	87 (89%)	11 (11%)	7	29
10	QJ	89/92 (97%)	81 (91%)	8 (9%)	12	41
10	XJ	89/92 (97%)	81 (91%)	8 (9%)	12	41
11	QK	90/99 (91%)	81 (90%)	9 (10%)	9	34
11	XK	90/99 (91%)	81 (90%)	9 (10%)	9	34
12	QL	104/109 (95%)	90 (86%)	14 (14%)	5	20
12	XL	104/109 (95%)	90 (86%)	14 (14%)	5	20
13	QM	97/101 (96%)	81 (84%)	16 (16%)	3	12
13	XM	97/101 (96%)	81 (84%)	16 (16%)	3	12
14	QN	49/50 (98%)	40 (82%)	9 (18%)	2	9
14	XN	49/50 (98%)	44 (90%)	5 (10%)	9	33
15	QO	79/80 (99%)	73 (92%)	6 (8%)	16	50
15	XO	79/80 (99%)	73 (92%)	6 (8%)	16	50
16	QP	72/74 (97%)	63 (88%)	9 (12%)	6	23
16	XP	72/74 (97%)	63 (88%)	9 (12%)	6	23
17	QQ	95/97 (98%)	89 (94%)	6 (6%)	22	58
17	XQ	95/97 (98%)	89 (94%)	6 (6%)	22	58
18	QR	61/77 (79%)	54 (88%)	7 (12%)	7	27
18	XR	61/77 (79%)	54 (88%)	7 (12%)	7	27
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%)	8	32
20	XT	76/82 (93%)	68 (90%)	8 (10%)	8	32
21	QU	20/22 (91%)	19 (95%)	1 (5%)	30	67
21	XU	20/22 (91%)	19 (95%)	1 (5%)	30	67

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
27	RD	214/218 (98%)	177 (83%)	37 (17%)	2	11
27	YD	214/218 (98%)	177 (83%)	37 (17%)	2	11
28	RE	165/166 (99%)	128 (78%)	37 (22%)	1	5
28	YE	165/166 (99%)	127 (77%)	38 (23%)	1	4
29	RF	161/166 (97%)	140 (87%)	21 (13%)	5	21
29	YF	161/166 (97%)	140 (87%)	21 (13%)	5	21
30	RG	155/156 (99%)	130 (84%)	25 (16%)	3	12
30	YG	155/156 (99%)	130 (84%)	25 (16%)	3	12
31	RH	142/148 (96%)	114 (80%)	28 (20%)	1	7
31	YH	142/148 (96%)	114 (80%)	28 (20%)	1	7
32	RI	122/124 (98%)	100 (82%)	22 (18%)	2	9
32	YI	122/124 (98%)	98 (80%)	24 (20%)	1	7
33	RN	117/119 (98%)	98 (84%)	19 (16%)	3	12
33	YN	117/119 (98%)	98 (84%)	19 (16%)	3	12
34	RO	100/100 (100%)	90 (90%)	10 (10%)	9	34
34	YO	100/100 (100%)	90 (90%)	10 (10%)	9	34
35	RP	116/116 (100%)	89 (77%)	27 (23%)	1	4
35	YP	116/116 (100%)	89 (77%)	27 (23%)	1	4
36	RQ	111/111 (100%)	93 (84%)	18 (16%)	3	12
36	YQ	111/111 (100%)	93 (84%)	18 (16%)	3	12
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%)	4	16
38	YS	87/88 (99%)	74 (85%)	13 (15%)	4	16
39	RT	120/127 (94%)	97 (81%)	23 (19%)	2	8
39	YT	120/127 (94%)	97 (81%)	23 (19%)	2	8
40	RU	93/94 (99%)	80 (86%)	13 (14%)	4	19
40	YU	93/94 (99%)	80 (86%)	13 (14%)	4	19
41	RV	82/82 (100%)	71 (87%)	11 (13%)	5	20
41	YV	82/82 (100%)	71 (87%)	11 (13%)	5	20
42	RW	92/92 (100%)	77 (84%)	15 (16%)	3	12

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
42	YW	92/92 (100%)	77 (84%)	15 (16%)	3	12
43	RX	74/78 (95%)	63 (85%)	11 (15%)	4	16
43	YX	74/78 (95%)	63 (85%)	11 (15%)	4	16
44	RY	85/91 (93%)	70 (82%)	15 (18%)	2	10
44	YY	85/91 (93%)	70 (82%)	15 (18%)	2	10
45	RZ	162/179 (90%)	138 (85%)	24 (15%)	4	16
45	YZ	162/179 (90%)	142 (88%)	20 (12%)	6	24
46	R0	65/67 (97%)	58 (89%)	7 (11%)	8	31
46	Y0	65/67 (97%)	63 (97%)	2 (3%)	47	80
47	R1	82/83 (99%)	67 (82%)	15 (18%)	2	9
47	Y1	82/83 (99%)	67 (82%)	15 (18%)	2	9
48	R2	64/67 (96%)	57 (89%)	7 (11%)	8	30
48	Y2	64/67 (96%)	57 (89%)	7 (11%)	8	30
49	R3	51/52 (98%)	40 (78%)	11 (22%)	1	6
49	Y3	51/52 (98%)	40 (78%)	11 (22%)	1	6
50	R4	63/63 (100%)	44 (70%)	19 (30%)	0	1
50	Y4	63/63 (100%)	44 (70%)	19 (30%)	0	1
51	R5	51/52 (98%)	39 (76%)	12 (24%)	1	4
51	Y5	51/52 (98%)	39 (76%)	12 (24%)	1	4
52	R6	48/52 (92%)	38 (79%)	10 (21%)	1	6
52	Y6	48/52 (92%)	38 (79%)	10 (21%)	1	6
53	R7	42/42 (100%)	39 (93%)	3 (7%)	18	54
53	Y7	42/42 (100%)	39 (93%)	3 (7%)	18	54
54	R8	54/55 (98%)	39 (72%)	15 (28%)	0	1
54	Y8	54/55 (98%)	39 (72%)	15 (28%)	0	1
55	R9	34/34 (100%)	32 (94%)	2 (6%)	24	60
55	Y9	34/34 (100%)	32 (94%)	2 (6%)	24	60
All	All	9702/10066 (96%)	8299 (86%)	1403 (14%)	4	17

All (1403) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	QB	5	ILE

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Mol	Chain	Res	Type
2	QB	8	LYS
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

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Mol	Chain	Res	Type
4	QD	12	CYS
4	QD	13	ARG
4	QD	14	ARG
4	QD	30	LYS
4	QD	31	CYS
4	QD	50	ARG
4	QD	53	ASP
4	QD	73	ARG
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	79	GLU
5	QE	101	ILE
5	QE	153	LYS
6	QF	17	SER
6	QF	21	LEU
6	QF	27	GLN
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	38	LEU

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Mol	Chain	Res	Type
7	QG	78	ARG
7	QG	84	ASN
7	QG	98	SER
7	QG	111	ARG
7	QG	114	ARG
7	QG	124	LEU
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

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Mol	Chain	Res	Type
11	QK	32	ILE
11	QK	63	LEU
11	QK	75	TYR
11	QK	92	GLU
11	QK	109	VAL
11	QK	114	VAL
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

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Mol	Chain	Res	Type
14	QN	26	ARG
14	QN	29	ARG
14	QN	41	ARG
14	QN	43	CYS
14	QN	44	LEU
15	QO	3	ILE
15	QO	8	LYS
15	QO	26	GLU
15	QO	39	LEU
15	QO	62	GLN
15	QO	65	ARG
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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	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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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	143	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	2	LYS
32	RI	10	GLU
32	RI	27	ARG
32	RI	33	ARG
32	RI	38	LEU
32	RI	40	THR
32	RI	56	LYS
32	RI	57	ARG

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Mol	Chain	Res	Type
32	RI	67	ARG
32	RI	70	GLU
32	RI	85	GLU
32	RI	86	THR
32	RI	88	ILE
32	RI	101	LEU
32	RI	113	ARG
32	RI	118	LYS
32	RI	128	LEU
32	RI	135	GLU
32	RI	138	ILE
32	RI	142	VAL
32	RI	145	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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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	60	ARG
36	RQ	79	LEU
36	RQ	83	MET
36	RQ	89	ASN
36	RQ	90	VAL
36	RQ	91	GLU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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	5	LEU
45	RZ	19	ARG
45	RZ	20	ARG
45	RZ	52	SER

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Mol	Chain	Res	Type
45	RZ	60	GLU
45	RZ	76	LEU
45	RZ	81	ARG
45	RZ	87	ASP
45	RZ	93	ASP
45	RZ	94	GLU
45	RZ	111	VAL
45	RZ	112	ARG
45	RZ	121	HIS
45	RZ	128	VAL
45	RZ	145	GLU
45	RZ	150	LEU
45	RZ	151	HIS
45	RZ	163	LEU
45	RZ	166	SER
45	RZ	168	GLU
45	RZ	174	VAL
45	RZ	182	LYS
45	RZ	183	LEU
46	R0	10	THR
46	R0	11	ARG
46	R0	35	ASN
46	R0	36	ILE
46	R0	64	ASP
46	R0	66	VAL
46	R0	74	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

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Mol	Chain	Res	Type
48	R2	9	GLN
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

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Mol	Chain	Res	Type
51	R5	36	CYS
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
55	R9	1	MET
55	R9	17	ILE
2	XB	5	ILE
2	XB	8	LYS
2	XB	16	HIS
2	XB	23	ARG
2	XB	24	TRP
2	XB	33	TYR

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Mol	Chain	Res	Type
2	XB	36	ARG
2	XB	63	MET
2	XB	67	THR
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	30	LYS
4	XD	50	ARG
4	XD	53	ASP
4	XD	79	PHE
4	XD	86	LYS

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Mol	Chain	Res	Type
4	XD	94	LEU
4	XD	96	LEU
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	73	ASN
5	XE	79	GLU
5	XE	101	ILE
5	XE	153	LYS
6	XF	17	SER
6	XF	21	LEU
6	XF	27	GLN
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

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Mol	Chain	Res	Type
8	XH	10	LEU
8	XH	27	PRO
8	XH	41	ARG
8	XH	52	ASP
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

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Mol	Chain	Res	Type
12	XL	27	LEU
12	XL	41	ARG
12	XL	53	ARG
12	XL	57	LYS
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	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	41	ARG
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

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Mol	Chain	Res	Type
16	XP	59	TRP
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

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Mol	Chain	Res	Type
27	YD	33	LEU
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

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Mol	Chain	Res	Type
28	YE	33	VAL
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

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Mol	Chain	Res	Type
29	YF	108	LYS
29	YF	117	ARG
29	YF	124	LEU
29	YF	127	GLU
29	YF	145	GLU
29	YF	164	ARG
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	167	GLU
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

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Mol	Chain	Res	Type
31	YH	37	VAL
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	143	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	2	LYS
32	YI	9	LEU
32	YI	12	LEU
32	YI	25	TYR
32	YI	27	ARG
32	YI	33	ARG
32	YI	38	LEU
32	YI	40	THR
32	YI	56	LYS
32	YI	67	ARG
32	YI	70	GLU
32	YI	81	VAL
32	YI	85	GLU
32	YI	86	THR
32	YI	101	LEU
32	YI	105	HIS
32	YI	112	LYS
32	YI	113	ARG
32	YI	131	LYS
32	YI	135	GLU
32	YI	136	VAL

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Mol	Chain	Res	Type
32	YI	139	GLN
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

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Mol	Chain	Res	Type
35	YP	41	ARG
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	59	ARG
36	YQ	60	ARG
36	YQ	79	LEU
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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	4	ARG
45	YZ	19	ARG
45	YZ	20	ARG
45	YZ	41	LEU
45	YZ	53	ILE
45	YZ	60	GLU
45	YZ	70	LEU
45	YZ	71	VAL
45	YZ	76	LEU
45	YZ	81	ARG
45	YZ	87	ASP
45	YZ	94	GLU
45	YZ	123	ASP
45	YZ	140	ASP
45	YZ	144	LEU

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Mol	Chain	Res	Type
45	YZ	150	LEU
45	YZ	151	HIS
45	YZ	181	GLU
45	YZ	182	LYS
46	Y0	36	ILE
46	Y0	74	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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
55	Y9	1	MET
55	Y9	17	ILE

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (106) 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
7	QG	28	ASN
7	QG	37	ASN
7	QG	86	GLN
7	QG	148	ASN
9	QI	89	ASN
10	QJ	78	ASN
11	QK	117	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

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Mol	Chain	Res	Type
27	RD	44	ASN
27	RD	143	HIS
27	RD	166	GLN
27	RD	198	ASN
28	RE	48	GLN
31	RH	143	GLN
31	RH	147	ASN
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
42	RW	61	ASN
43	RX	55	ASN
43	RX	87	GLN
44	RY	57	GLN
47	R1	56	GLN
48	R2	9	GLN
48	R2	47	ASN
49	R3	19	GLN
49	R3	32	GLN
55	R9	32	HIS
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	37	ASN

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Mol	Chain	Res	Type
7	XG	86	GLN
7	XG	148	ASN
9	XI	89	ASN
10	XJ	78	ASN
11	XK	99	GLN
11	XK	117	ASN
12	XL	9	GLN
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
29	YF	169	ASN
31	YH	143	GLN
31	YH	147	ASN
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
37	YR	3	HIS
39	YT	55	ASN
39	YT	58	ASN
40	YU	94	ASN
41	YV	11	GLN
42	YW	61	ASN
43	YX	55	ASN
43	YX	87	GLN
44	YY	57	GLN
47	Y1	56	GLN
48	Y2	9	GLN
48	Y2	47	ASN
49	Y3	19	GLN
49	Y3	32	GLN
54	Y8	31	HIS
55	Y9	32	HIS

## 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	QA	1499/1522 (98%)	293 (19%)	45 (3%)
1	XA	1498/1522 (98%)	299 (19%)	47 (3%)
22	QV	76/77 (98%)	21 (27%)	1 (1%)
22	XV	76/77 (98%)	21 (27%)	1 (1%)
23	QY	14/17 (82%)	4 (28%)	1 (7%)
23	XY	14/17 (82%)	4 (28%)	1 (7%)
24	QX	7/25 (28%)	4 (57%)	0
24	XX	7/25 (28%)	3 (42%)	2 (28%)
25	RA	2879/2916 (98%)	618 (21%)	67 (2%)
25	YA	2880/2916 (98%)	612 (21%)	64 (2%)
26	RB	119/122 (97%)	24 (20%)	2 (1%)
26	YB	119/122 (97%)	29 (24%)	1 (0%)
56	Z6	1/3 (33%)	0	0
56	Z8	1/3 (33%)	0	0
All	All	9190/9364 (98%)	1932 (21%)	232 (2%)

All (1932) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	QA	6	G
1	QA	7	G
1	QA	32	A
1	QA	39	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	79	G
1	QA	80	G
1	QA	90	C
1	QA	91	C
1	QA	95	G
1	QA	101	A
1	QA	116	A
1	QA	120	A
1	QA	121	C
1	QA	144	G
1	QA	146	G

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Mol	Chain	Res	Type
1	QA	147	G
1	QA	163	C
1	QA	172	A
1	QA	173	U
1	QA	174	C
1	QA	182	U
1	QA	190	G
1	QA	191(A)	G
1	QA	195	A
1	QA	197	A
1	QA	209	U
1	QA	216	G
1	QA	231	G
1	QA	244	U
1	QA	247	G
1	QA	251	G
1	QA	267	C
1	QA	270	A
1	QA	281	G
1	QA	289	G
1	QA	316	G
1	QA	321	A
1	QA	328	C
1	QA	329	A
1	QA	332	G
1	QA	344	A
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	356	A
1	QA	363	A
1	QA	367	U
1	QA	373	A
1	QA	384	G
1	QA	388	G
1	QA	389	A
1	QA	390	C
1	QA	397	A
1	QA	398	C

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Mol	Chain	Res	Type
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	430	A
1	QA	435	C
1	QA	440	A
1	QA	442	C
1	QA	452	A
1	QA	465	A
1	QA	466	C
1	QA	467	G
1	QA	482	A
1	QA	485	G
1	QA	486	U
1	QA	496	A
1	QA	497	U
1	QA	498	A
1	QA	505	G
1	QA	509	A
1	QA	510	A
1	QA	511	C
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	545	C
1	QA	547	A
1	QA	559	A
1	QA	561	U
1	QA	565	U

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Mol	Chain	Res	Type
1	QA	568	G
1	QA	572	A
1	QA	573	A
1	QA	576	G
1	QA	577	G
1	QA	579	G
1	QA	596	C
1	QA	614	A
1	QA	618	C
1	QA	623	C
1	QA	630	G
1	QA	631	G
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	731	G
1	QA	748	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	813	U
1	QA	817	C
1	QA	819	A
1	QA	821	G
1	QA	828	A
1	QA	841	U
1	QA	843	U
1	QA	848	C
1	QA	859	A
1	QA	870	U

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Mol	Chain	Res	Type
1	QA	871	U
1	QA	872	A
1	QA	885	G
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	1001	G
1	QA	1002	G
1	QA	1004	A
1	QA	1006	C
1	QA	1008	C
1	QA	1009	G
1	QA	1020	U
1	QA	1021	G
1	QA	1024	G
1	QA	1025	U
1	QA	1028	C
1	QA	1029	G
1	QA	1032(A)	G
1	QA	1036	G

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Mol	Chain	Res	Type
1	QA	1040	U
1	QA	1054	C
1	QA	1055	A
1	QA	1064	G
1	QA	1065	U
1	QA	1066	C
1	QA	1094	G
1	QA	1095	U
1	QA	1101	A
1	QA	1123	A
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	1163	C
1	QA	1171	G
1	QA	1178	G
1	QA	1181	G
1	QA	1182	G
1	QA	1183	A
1	QA	1185	G
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	1225	A
1	QA	1238	A

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Mol	Chain	Res	Type
1	QA	1241	G
1	QA	1256	A
1	QA	1257	U
1	QA	1258	G
1	QA	1260	C
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	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	1305	G
1	QA	1312	G
1	QA	1319	A
1	QA	1320	C
1	QA	1321	C
1	QA	1322	C
1	QA	1323	G
1	QA	1331	G
1	QA	1332	A
1	QA	1334	G
1	QA	1335	C
1	QA	1336	C
1	QA	1337	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	1368	G
1	QA	1370	G

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Mol	Chain	Res	Type
1	QA	1397	C
1	QA	1419	G
1	QA	1442	G
1	QA	1446	A
1	QA	1447	G
1	QA	1452	C
1	QA	1453	G
1	QA	1454	G
1	QA	1469	G
1	QA	1492	A
1	QA	1499	A
1	QA	1503	A
1	QA	1504	G
1	QA	1506	U
1	QA	1517	G
1	QA	1519	A
1	QA	1520	G
1	QA	1529	G
1	QA	1530	G
22	QV	4	G
22	QV	5	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	42	G
22	QV	47	U
22	QV	48	C
22	QV	49	G
22	QV	52	G
22	QV	53	G
22	QV	54	U
22	QV	67	C
22	QV	75	C
22	QV	76	A
23	QY	31	G
23	QY	33	U

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Mol	Chain	Res	Type
23	QY	36	G
23	QY	42	G
24	QX	3	G
24	QX	4	C
24	QX	7	G
24	QX	8	A
25	RA	9	U
25	RA	14	A
25	RA	15	G
25	RA	28	A
25	RA	34	C
25	RA	46	C
25	RA	49	A
25	RA	51	G
25	RA	55	G
25	RA	72	U
25	RA	74	A
25	RA	75	G
25	RA	96	G
25	RA	97	C
25	RA	101	G
25	RA	102	G
25	RA	103	A
25	RA	118	A
25	RA	120	U
25	RA	131	G
25	RA	138	G
25	RA	140	A
25	RA	161	U
25	RA	177	G
25	RA	196	A
25	RA	199	A
25	RA	206	U
25	RA	215	G
25	RA	216	A
25	RA	221	A
25	RA	222	A
25	RA	223	A
25	RA	228	A
25	RA	229	A
25	RA	230	U
25	RA	232	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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	268	C
25	RA	269	U
25	RA	270(L)	U
25	RA	270(M)	U
25	RA	270(P)	C
25	RA	270(T)	G
25	RA	271(B)	G
25	RA	271(C)	U
25	RA	271	G
25	RA	275	G
25	RA	276	A
25	RA	277	C
25	RA	278	A
25	RA	299	A
25	RA	305	U
25	RA	311	A
25	RA	316	C
25	RA	323	G
25	RA	324	A
25	RA	327	G
25	RA	329	G
25	RA	330	A
25	RA	333	G
25	RA	342	G
25	RA	346	A
25	RA	352	G
25	RA	364	C
25	RA	371	A
25	RA	372	G
25	RA	373	U
25	RA	386	G
25	RA	391	G
25	RA	395	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	RA	396	G
25	RA	405	U
25	RA	411	G
25	RA	412	A
25	RA	428	A
25	RA	442	G
25	RA	444	C
25	RA	448	U
25	RA	454	A
25	RA	455	C
25	RA	457	A
25	RA	470	A
25	RA	481	G
25	RA	483	A
25	RA	504	U
25	RA	505	A
25	RA	509	C
25	RA	512	G
25	RA	513	A
25	RA	527	C
25	RA	528	A
25	RA	529	A
25	RA	531	C
25	RA	532	A
25	RA	533	G
25	RA	537	C
25	RA	539	G
25	RA	540	G
25	RA	546	C
25	RA	547	A
25	RA	554	U
25	RA	556	G
25	RA	563	G
25	RA	573	G
25	RA	574	C
25	RA	575	A
25	RA	586	A
25	RA	588	U
25	RA	603	A
25	RA	604	G
25	RA	607	U
25	RA	614	U

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Mol	Chain	Res	Type
25	RA	615	G
25	RA	616	A
25	RA	617	G
25	RA	621	A
25	RA	624	C
25	RA	626	U
25	RA	627	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	654	A
25	RA	654(A)	G
25	RA	654(B)	C
25	RA	668	G
25	RA	669	G
25	RA	686	G
25	RA	702	G
25	RA	705	A
25	RA	717	G
25	RA	722	A
25	RA	726	G
25	RA	730	C
25	RA	747	U
25	RA	753	C
25	RA	764	A
25	RA	765	G
25	RA	776	G
25	RA	782	A
25	RA	784	A
25	RA	785	G
25	RA	790	C
25	RA	791	C
25	RA	792	G
25	RA	805	G
25	RA	812	C
25	RA	818	G
25	RA	819	A
25	RA	827	U

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Mol	Chain	Res	Type
25	RA	828	U
25	RA	846	C
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
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	897	C
25	RA	899	A
25	RA	900	A
25	RA	901	A
25	RA	904	C
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	959	A
25	RA	961	C
25	RA	974	G
25	RA	974(A)	C
25	RA	975	G
25	RA	980	A
25	RA	983	A
25	RA	990	A
25	RA	991	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	RA	996	A
25	RA	1003	G
25	RA	1005	C
25	RA	1011	G
25	RA	1012	U
25	RA	1013	C
25	RA	1015	G
25	RA	1016	G
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	1044	G
25	RA	1045	A
25	RA	1046	A
25	RA	1050	A
25	RA	1055	G
25	RA	1057	A
25	RA	1059	G
25	RA	1060	U
25	RA	1061	U
25	RA	1065	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	1091	G
25	RA	1093	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	RA	1095	A
25	RA	1096	A
25	RA	1099	G
25	RA	1104	C
25	RA	1110	G
25	RA	1111	A
25	RA	1112	G
25	RA	1129	A
25	RA	1131	G
25	RA	1135	C
25	RA	1136	G
25	RA	1142	U
25	RA	1142(A)	A
25	RA	1151	G
25	RA	1170	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	1195	G
25	RA	1204	A
25	RA	1205	U
25	RA	1210	A
25	RA	1211	U
25	RA	1220	A
25	RA	1238	G
25	RA	1248	G
25	RA	1252	G
25	RA	1253	A
25	RA	1256	G
25	RA	1265	A
25	RA	1271	G
25	RA	1272	A
25	RA	1273	U
25	RA	1300	U
25	RA	1301	A
25	RA	1303	G
25	RA	1306	C
25	RA	1312	U

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Mol	Chain	Res	Type
25	RA	1313	U
25	RA	1314	C
25	RA	1319	G
25	RA	1321	A
25	RA	1329	U
25	RA	1332	G
25	RA	1349	A
25	RA	1365	A
25	RA	1368	G
25	RA	1370	C
25	RA	1379	A
25	RA	1380	G
25	RA	1384	A
25	RA	1385	G
25	RA	1386	C
25	RA	1395	A
25	RA	1407	C
25	RA	1408	C
25	RA	1411	C
25	RA	1412	A
25	RA	1416	G
25	RA	1419	A
25	RA	1420	U
25	RA	1421	G
25	RA	1427	A
25	RA	1428	C
25	RA	1444(A)	A
25	RA	1445	C
25	RA	1448	G
25	RA	1449	A
25	RA	1449(A)	G
25	RA	1455	G
25	RA	1458	C
25	RA	1459	G
25	RA	1460	A
25	RA	1461	G
25	RA	1467	C
25	RA	1471	A
25	RA	1482	U
25	RA	1483	G
25	RA	1485	G
25	RA	1493	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	RA	1497	U
25	RA	1503	U
25	RA	1505	C
25	RA	1506	C
25	RA	1507	A
25	RA	1508	A
25	RA	1510	A
25	RA	1511	A
25	RA	1513	C
25	RA	1514	U
25	RA	1515	C
25	RA	1520	U
25	RA	1522	G
25	RA	1525	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	1569	A
25	RA	1578	U
25	RA	1579	A
25	RA	1581	G
25	RA	1585	C
25	RA	1586	A
25	RA	1591	G
25	RA	1593	G
25	RA	1598	C
25	RA	1608	A
25	RA	1609	A
25	RA	1616	A
25	RA	1617	C
25	RA	1618	A
25	RA	1640	C
25	RA	1647	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	RA	1648	C
25	RA	1654	A
25	RA	1667	G
25	RA	1674	G
25	RA	1675	C
25	RA	1686	C
25	RA	1694	C
25	RA	1695	G
25	RA	1725	G
25	RA	1729	A
25	RA	1730	U
25	RA	1731	G
25	RA	1733	G
25	RA	1742	C
25	RA	1743	G
25	RA	1753	G
25	RA	1754	C
25	RA	1756	G
25	RA	1762	A
25	RA	1763	G
25	RA	1764	G
25	RA	1769	G
25	RA	1773	A
25	RA	1780	A
25	RA	1782	C
25	RA	1791	A
25	RA	1799	G
25	RA	1800	C
25	RA	1801	G
25	RA	1816	G
25	RA	1820	U
25	RA	1829	A
25	RA	1835	G
25	RA	1847	A
25	RA	1848	A
25	RA	1850	G
25	RA	1858	G
25	RA	1869	G
25	RA	1870	C
25	RA	1872	A
25	RA	1878	G
25	RA	1882	C

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Mol	Chain	Res	Type
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	1913	A
25	RA	1927	A
25	RA	1930	G
25	RA	1931	U
25	RA	1937	A
25	RA	1938	A
25	RA	1939	U
25	RA	1955	U
25	RA	1963	U
25	RA	1964	G
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	1991	U
25	RA	1992	G
25	RA	1993	U
25	RA	2023	G
25	RA	2031	A
25	RA	2032	G
25	RA	2033	A
25	RA	2043	C
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	2069	G
25	RA	2093	G
25	RA	2096	U
25	RA	2099	U

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Mol	Chain	Res	Type
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
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	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	2198	A
25	RA	2199	A
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	2287	A
25	RA	2288	A
25	RA	2300	G

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Mol	Chain	Res	Type
25	RA	2301	C
25	RA	2305	A
25	RA	2307	G
25	RA	2308	G
25	RA	2310	A
25	RA	2312	U
25	RA	2319	G
25	RA	2320	A
25	RA	2325	G
25	RA	2326	C
25	RA	2342	C
25	RA	2345	G
25	RA	2346	A
25	RA	2347	C
25	RA	2350	C
25	RA	2372	G
25	RA	2382	G
25	RA	2383	G
25	RA	2385	C
25	RA	2394	C
25	RA	2397	G
25	RA	2398	U
25	RA	2402	C
25	RA	2403	C
25	RA	2406	U
25	RA	2423	U
25	RA	2424	C
25	RA	2425	A
25	RA	2429	G
25	RA	2430	A
25	RA	2434	A
25	RA	2435	A
25	RA	2439	A
25	RA	2440	C
25	RA	2441	C
25	RA	2445	G
25	RA	2448	A
25	RA	2469	A
25	RA	2470	G
25	RA	2475	C
25	RA	2476	A
25	RA	2481	G

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Mol	Chain	Res	Type
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	2519	U
25	RA	2529	G
25	RA	2542	A
25	RA	2543	G
25	RA	2554	U
25	RA	2558	C
25	RA	2567	G
25	RA	2569	G
25	RA	2573	C
25	RA	2578	G
25	RA	2582	G
25	RA	2602	A
25	RA	2609	U
25	RA	2610	C
25	RA	2611	U
25	RA	2612	C
25	RA	2614	A
25	RA	2623	G
25	RA	2629	A
25	RA	2646	C
25	RA	2655	G
25	RA	2665	A
25	RA	2673	G
25	RA	2689	U
25	RA	2690	C
25	RA	2702	U
25	RA	2703	C
25	RA	2707	G
25	RA	2712	U
25	RA	2712(A)	A
25	RA	2713	A
25	RA	2714	G
25	RA	2724	C

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Mol	Chain	Res	Type
25	RA	2726	U
25	RA	2733	A
25	RA	2734	A
25	RA	2739	U
25	RA	2748	A
25	RA	2752	C
25	RA	2758	A
25	RA	2761	G
25	RA	2764	A
25	RA	2765	A
25	RA	2770	G
25	RA	2777	G
25	RA	2778	A
25	RA	2779	U
25	RA	2780	G
25	RA	2790	A
25	RA	2791	C
25	RA	2797	U
25	RA	2807	G
25	RA	2810	A
25	RA	2818	G
25	RA	2820	A
25	RA	2821	A
25	RA	2833	G
25	RA	2834	G
25	RA	2835	A
25	RA	2846	G
25	RA	2849	U
25	RA	2867	G
25	RA	2868	A
25	RA	2872	G
25	RA	2873	A
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	13	A
26	RB	15	A
26	RB	16	G
26	RB	19	G

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Mol	Chain	Res	Type
26	RB	21	G
26	RB	22	U
26	RB	25	A
26	RB	26	A
26	RB	27	C
26	RB	32	C
26	RB	33	G
26	RB	40	U
26	RB	42	C
26	RB	45	A
26	RB	52	A
26	RB	53	A
26	RB	56	G
26	RB	67	G
26	RB	73	A
26	RB	81	G
26	RB	101	A
26	RB	109	G
1	XA	6	G
1	XA	32	A
1	XA	39	G
1	XA	47	C
1	XA	48	C
1	XA	50	A
1	XA	51	A
1	XA	61	G
1	XA	64	G
1	XA	65	U
1	XA	66	G
1	XA	78	G
1	XA	79	G
1	XA	81	G
1	XA	89	U
1	XA	90	C
1	XA	91	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(A)	G

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Mol	Chain	Res	Type
1	XA	130	A
1	XA	144	G
1	XA	147	G
1	XA	163	C
1	XA	172	A
1	XA	174	C
1	XA	182	U
1	XA	190	G
1	XA	191(A)	G
1	XA	195	A
1	XA	197	A
1	XA	201	C
1	XA	209	U
1	XA	216	G
1	XA	222	U
1	XA	243	A
1	XA	244	U
1	XA	245	C
1	XA	247	G
1	XA	251	G
1	XA	262	A
1	XA	267	C
1	XA	281	G
1	XA	289	G
1	XA	315	A
1	XA	316	G
1	XA	318	G
1	XA	321	A
1	XA	328	C
1	XA	329	A
1	XA	330	C
1	XA	332	G
1	XA	345	C
1	XA	346	G
1	XA	347	G
1	XA	348	G
1	XA	349	A
1	XA	352	C
1	XA	353	A
1	XA	354	G
1	XA	356	A
1	XA	367	U

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Mol	Chain	Res	Type
1	XA	373	A
1	XA	382	A
1	XA	384	G
1	XA	388	G
1	XA	390	C
1	XA	397	A
1	XA	398	C
1	XA	406	G
1	XA	411	A
1	XA	412	A
1	XA	413	G
1	XA	414	A
1	XA	422	C
1	XA	423	G
1	XA	424	G
1	XA	429	U
1	XA	430	A
1	XA	442	C
1	XA	465	A
1	XA	466	C
1	XA	467	G
1	XA	482	A
1	XA	485	G
1	XA	486	U
1	XA	496	A
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	521	G
1	XA	527	G
1	XA	531	U
1	XA	532	A
1	XA	533	A
1	XA	545	C
1	XA	547	A
1	XA	548	G
1	XA	559	A
1	XA	561	U
1	XA	562	C

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Mol	Chain	Res	Type
1	XA	564	C
1	XA	568	G
1	XA	572	A
1	XA	573	A
1	XA	576	G
1	XA	577	G
1	XA	579	G
1	XA	595	G
1	XA	596	C
1	XA	607	A
1	XA	617	G
1	XA	618	C
1	XA	630	G
1	XA	631	G
1	XA	653	A
1	XA	665	A
1	XA	666	G
1	XA	687	A
1	XA	688	G
1	XA	701	C
1	XA	702	A
1	XA	704	A
1	XA	721	G
1	XA	723	U
1	XA	731	G
1	XA	748	C
1	XA	749	C
1	XA	752	G
1	XA	753	A
1	XA	754	C
1	XA	755	G
1	XA	777	A
1	XA	792	A
1	XA	793	U
1	XA	794	A
1	XA	813	U
1	XA	815	A
1	XA	816	A
1	XA	817	C
1	XA	819	A
1	XA	821	G
1	XA	828	A

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Mol	Chain	Res	Type
1	XA	841	U
1	XA	843	U
1	XA	848	C
1	XA	859	A
1	XA	871	U
1	XA	872	A
1	XA	874	G
1	XA	902	G
1	XA	914	A
1	XA	920	U
1	XA	927	G
1	XA	934	C
1	XA	935	A
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	981	U
1	XA	983	A
1	XA	991	U
1	XA	992	U
1	XA	993	G
1	XA	1001	G
1	XA	1004	A
1	XA	1005	A
1	XA	1006	C
1	XA	1008	C
1	XA	1021	G
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	1053	G

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Mol	Chain	Res	Type
1	XA	1054	C
1	XA	1066	C
1	XA	1085	U
1	XA	1094	G
1	XA	1095	U
1	XA	1096	C
1	XA	1101	A
1	XA	1104	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	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
1	XA	1183	A
1	XA	1184	G
1	XA	1187	G
1	XA	1188	A
1	XA	1190	G
1	XA	1196	U
1	XA	1197	G
1	XA	1200	C
1	XA	1201	A
1	XA	1202	G
1	XA	1211	U
1	XA	1212	U
1	XA	1213	A

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Mol	Chain	Res	Type
1	XA	1214	C
1	XA	1225	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	1273	G
1	XA	1280	A
1	XA	1281	U
1	XA	1282	C
1	XA	1286	A
1	XA	1287	A
1	XA	1297	C
1	XA	1298	C
1	XA	1299	A
1	XA	1300	G
1	XA	1301	U
1	XA	1302	U
1	XA	1305	G
1	XA	1317	C
1	XA	1320	C
1	XA	1321	C
1	XA	1322	C
1	XA	1323	G
1	XA	1324	A
1	XA	1331	G
1	XA	1334	G
1	XA	1335	C
1	XA	1336	C
1	XA	1337	G
1	XA	1347	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	1370	G

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Mol	Chain	Res	Type
1	XA	1397	C
1	XA	1398	A
1	XA	1406	U
1	XA	1419	G
1	XA	1442	G
1	XA	1446	A
1	XA	1447	G
1	XA	1452	C
1	XA	1453	G
1	XA	1454	G
1	XA	1487	G
1	XA	1492	A
1	XA	1497	G
1	XA	1499	A
1	XA	1502	A
1	XA	1503	A
1	XA	1504	G
1	XA	1505	G
1	XA	1506	U
1	XA	1517	G
1	XA	1520	G
1	XA	1529	G
1	XA	1530	G
22	XV	4	G
22	XV	5	G
22	XV	8	U
22	XV	9	G
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	31	G
22	XV	42	G
22	XV	47	U
22	XV	48	C
22	XV	49	G
22	XV	52	G
22	XV	54	U
22	XV	67	C

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Mol	Chain	Res	Type
22	XV	75	C
22	XV	76	A
23	XY	31	G
23	XY	33	U
23	XY	36	G
23	XY	42	G
24	XX	4	C
24	XX	7	G
24	XX	8	A
25	YA	9	U
25	YA	15	G
25	YA	27	G
25	YA	34	C
25	YA	35	G
25	YA	46	C
25	YA	55	G
25	YA	63	U
25	YA	72	U
25	YA	74	A
25	YA	75	G
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	125	G
25	YA	161	U
25	YA	162	U
25	YA	181	A
25	YA	188	G
25	YA	196	A
25	YA	199	A
25	YA	214	G
25	YA	215	G
25	YA	216	A
25	YA	221	A
25	YA	222	A
25	YA	223	A
25	YA	227	A
25	YA	228	A

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Mol	Chain	Res	Type
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	250	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	271(A)	C
25	YA	271(B)	G
25	YA	271(C)	U
25	YA	271	G
25	YA	274	G
25	YA	275	G
25	YA	276	A
25	YA	278	A
25	YA	279	C
25	YA	285	C
25	YA	287	C
25	YA	299	A
25	YA	305	U
25	YA	311	A
25	YA	323	G
25	YA	324	A
25	YA	329	G
25	YA	330	A
25	YA	332	A
25	YA	333	G
25	YA	342	G
25	YA	352	G
25	YA	363	G
25	YA	364	C
25	YA	371	A
25	YA	372	G
25	YA	373	U

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Mol	Chain	Res	Type
25	YA	386	G
25	YA	387	U
25	YA	395	U
25	YA	396	G
25	YA	405	U
25	YA	406	G
25	YA	411	G
25	YA	412	A
25	YA	428	A
25	YA	443	A
25	YA	444	C
25	YA	448	U
25	YA	454	A
25	YA	457	A
25	YA	470	A
25	YA	481	G
25	YA	483	A
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	531	C
25	YA	532	A
25	YA	533	G
25	YA	537	C
25	YA	539	G
25	YA	540	G
25	YA	546	C
25	YA	547	A
25	YA	549	G
25	YA	556	G
25	YA	563	G
25	YA	573	G
25	YA	575	A
25	YA	577	G
25	YA	586	A
25	YA	587	C
25	YA	588	U
25	YA	603	A
25	YA	607	U

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Mol	Chain	Res	Type
25	YA	613	U
25	YA	614	U
25	YA	615	G
25	YA	617	G
25	YA	622	G
25	YA	624	C
25	YA	625	G
25	YA	626	U
25	YA	627	A
25	YA	637	A
25	YA	638	G
25	YA	645	C
25	YA	646	A
25	YA	649	G
25	YA	650	C
25	YA	651	G
25	YA	654	A
25	YA	654(A)	G
25	YA	654(B)	C
25	YA	657	U
25	YA	668	G
25	YA	669	G
25	YA	686	G
25	YA	702	G
25	YA	717	G
25	YA	722	A
25	YA	730	C
25	YA	734	A
25	YA	747	U
25	YA	753	C
25	YA	764	A
25	YA	775	G
25	YA	776	G
25	YA	782	A
25	YA	784	A
25	YA	785	G
25	YA	789	A
25	YA	790	C
25	YA	791	C
25	YA	792	G
25	YA	805	G
25	YA	812	C

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Mol	Chain	Res	Type
25	YA	818	G
25	YA	819	A
25	YA	827	U
25	YA	828	U
25	YA	831	G
25	YA	847	U
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	872	A
25	YA	881	G
25	YA	882	G
25	YA	884	C
25	YA	885	C
25	YA	886	C
25	YA	888	C
25	YA	889	C
25	YA	896	A
25	YA	899	A
25	YA	900	A
25	YA	901	A
25	YA	902	C
25	YA	907	U
25	YA	910	A
25	YA	915	C
25	YA	917	A
25	YA	932	G
25	YA	941	A
25	YA	945	A
25	YA	946	G
25	YA	959	A
25	YA	961	C
25	YA	974	G
25	YA	974(A)	C
25	YA	975	G
25	YA	980	A
25	YA	983	A
25	YA	991	C

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Mol	Chain	Res	Type
25	YA	996	A
25	YA	1003	G
25	YA	1005	C
25	YA	1010	A
25	YA	1011	G
25	YA	1012	U
25	YA	1013	C
25	YA	1014	U
25	YA	1016	G
25	YA	1020	A
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
25	YA	1046	A
25	YA	1050	A
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	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

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Mol	Chain	Res	Type
25	YA	1096	A
25	YA	1097	U
25	YA	1099	G
25	YA	1103	A
25	YA	1104	C
25	YA	1105	U
25	YA	1110	G
25	YA	1111	A
25	YA	1122	G
25	YA	1130	U
25	YA	1131	G
25	YA	1135	C
25	YA	1136	G
25	YA	1142	U
25	YA	1142(A)	A
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	1180	C
25	YA	1195	G
25	YA	1204	A
25	YA	1205	U
25	YA	1211	U
25	YA	1219	G
25	YA	1220	A
25	YA	1238	G
25	YA	1244	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	1282	U
25	YA	1300	U
25	YA	1301	A
25	YA	1302	A
25	YA	1321	A

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Mol	Chain	Res	Type
25	YA	1329	U
25	YA	1349	A
25	YA	1352	U
25	YA	1365	A
25	YA	1368	G
25	YA	1379	A
25	YA	1384	A
25	YA	1385	G
25	YA	1386	C
25	YA	1389	G
25	YA	1391	U
25	YA	1395	A
25	YA	1407	C
25	YA	1411	C
25	YA	1415	U
25	YA	1416	G
25	YA	1419	A
25	YA	1420	U
25	YA	1421	G
25	YA	1428	C
25	YA	1429	G
25	YA	1444(A)	A
25	YA	1448	G
25	YA	1449	A
25	YA	1449(A)	G
25	YA	1455	G
25	YA	1458	C
25	YA	1459	G
25	YA	1460	A
25	YA	1461	G
25	YA	1467	C
25	YA	1471	A
25	YA	1474	C
25	YA	1477	A
25	YA	1482	U
25	YA	1483	G
25	YA	1485	G
25	YA	1493	C
25	YA	1497	U
25	YA	1505	C
25	YA	1506	C
25	YA	1507	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	YA	1508	A
25	YA	1510	A
25	YA	1511	A
25	YA	1513	C
25	YA	1514	U
25	YA	1515	C
25	YA	1520	U
25	YA	1522	G
25	YA	1534	G
25	YA	1535	U
25	YA	1536	A
25	YA	1537	C
25	YA	1543	A
25	YA	1544	C
25	YA	1545	A
25	YA	1547	C
25	YA	1554	A
25	YA	1558	A
25	YA	1559	G
25	YA	1569	A
25	YA	1578	U
25	YA	1579	A
25	YA	1581	G
25	YA	1585	C
25	YA	1586	A
25	YA	1592	C
25	YA	1597	A
25	YA	1598	C
25	YA	1608	A
25	YA	1609	A
25	YA	1617	C
25	YA	1618	A
25	YA	1640	C
25	YA	1647	G
25	YA	1648	C
25	YA	1654	A
25	YA	1667	G
25	YA	1668	A
25	YA	1669	A
25	YA	1674	G
25	YA	1695	G
25	YA	1698	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	YA	1699	G
25	YA	1700	A
25	YA	1701	A
25	YA	1703	G
25	YA	1725	G
25	YA	1729	A
25	YA	1731	G
25	YA	1733	G
25	YA	1734	C
25	YA	1742	C
25	YA	1743	G
25	YA	1750	G
25	YA	1754	C
25	YA	1756	G
25	YA	1762	A
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	1816	G
25	YA	1819	A
25	YA	1820	U
25	YA	1829	A
25	YA	1835	G
25	YA	1847	A
25	YA	1848	A
25	YA	1858	G
25	YA	1869	G
25	YA	1872	A
25	YA	1878	G
25	YA	1882	C
25	YA	1884	A
25	YA	1889	A
25	YA	1896	G
25	YA	1903	G
25	YA	1906	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	YA	1913	A
25	YA	1923	U
25	YA	1927	A
25	YA	1930	G
25	YA	1931	U
25	YA	1939	U
25	YA	1955	U
25	YA	1956	U
25	YA	1960	A
25	YA	1963	U
25	YA	1967	C
25	YA	1969	A
25	YA	1970	A
25	YA	1971	A
25	YA	1972	A
25	YA	1982	C
25	YA	1991	U
25	YA	1992	G
25	YA	1993	U
25	YA	2020	A
25	YA	2023	G
25	YA	2031	A
25	YA	2033	A
25	YA	2039	C
25	YA	2043	C
25	YA	2049	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	2088	G
25	YA	2093	G
25	YA	2099	U
25	YA	2100	G
25	YA	2111	C
25	YA	2113	U
25	YA	2114	A
25	YA	2115	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	YA	2116	G
25	YA	2117	A
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	2146	C
25	YA	2148	G
25	YA	2158	A
25	YA	2166	G
25	YA	2168	G
25	YA	2173	A
25	YA	2176	A
25	YA	2190	G
25	YA	2192	G
25	YA	2193	G
25	YA	2198	A
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	2243	U
25	YA	2246	G
25	YA	2275	C
25	YA	2283	C
25	YA	2287	A
25	YA	2288	A
25	YA	2294	C
25	YA	2307	G
25	YA	2308	G
25	YA	2311	A
25	YA	2319	G
25	YA	2320	A
25	YA	2325	G
25	YA	2334	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	YA	2335	A
25	YA	2336	A
25	YA	2345	G
25	YA	2346	A
25	YA	2347	C
25	YA	2350	C
25	YA	2357	U
25	YA	2372	G
25	YA	2377	A
25	YA	2382	G
25	YA	2383	G
25	YA	2385	C
25	YA	2394	C
25	YA	2402	C
25	YA	2403	C
25	YA	2405	G
25	YA	2406	U
25	YA	2410	G
25	YA	2423	U
25	YA	2424	C
25	YA	2425	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	2448	A
25	YA	2450	A
25	YA	2469	A
25	YA	2470	G
25	YA	2471	C
25	YA	2474	C
25	YA	2475	C
25	YA	2476	A
25	YA	2482	G
25	YA	2494	G
25	YA	2498	C
25	YA	2502	G
25	YA	2505	G
25	YA	2506	U
25	YA	2507	C

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Mol	Chain	Res	Type
25	YA	2518	A
25	YA	2519	U
25	YA	2525	G
25	YA	2529	G
25	YA	2542	A
25	YA	2554	U
25	YA	2558	C
25	YA	2566	A
25	YA	2567	G
25	YA	2569	G
25	YA	2573	C
25	YA	2599	G
25	YA	2602	A
25	YA	2609	U
25	YA	2611	U
25	YA	2612	C
25	YA	2623	G
25	YA	2629	A
25	YA	2632	A
25	YA	2637	U
25	YA	2646	C
25	YA	2655	G
25	YA	2656	U
25	YA	2665	A
25	YA	2666	C
25	YA	2673	G
25	YA	2682	U
25	YA	2689	U
25	YA	2690	C
25	YA	2702	U
25	YA	2703	C
25	YA	2707	G
25	YA	2712	U
25	YA	2712(A)	A
25	YA	2713	A
25	YA	2714	G
25	YA	2718	G
25	YA	2724	C
25	YA	2726	U
25	YA	2733	A
25	YA	2734	A
25	YA	2744	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	YA	2752	C
25	YA	2758	A
25	YA	2761	G
25	YA	2764	A
25	YA	2765	A
25	YA	2766	G
25	YA	2777	G
25	YA	2778	A
25	YA	2779	U
25	YA	2789	C
25	YA	2790	A
25	YA	2791	C
25	YA	2797	U
25	YA	2807	G
25	YA	2808	U
25	YA	2818	G
25	YA	2820	A
25	YA	2821	A
25	YA	2830	G
25	YA	2833	G
25	YA	2834	G
25	YA	2835	A
25	YA	2845	G
25	YA	2847	U
25	YA	2848	G
25	YA	2849	U
25	YA	2867	G
25	YA	2868	A
25	YA	2872	G
25	YA	2873	A
25	YA	2880	C
25	YA	2892	A
25	YA	2894	G
26	YB	8	U
26	YB	9	G
26	YB	13	A
26	YB	15	A
26	YB	16	G
26	YB	19	G
26	YB	21	G
26	YB	25	A
26	YB	26	A

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Mol	Chain	Res	Type
26	YB	27	C
26	YB	31	C
26	YB	33	G
26	YB	40	U
26	YB	41	U
26	YB	42	C
26	YB	44	G
26	YB	45	A
26	YB	47	C
26	YB	52	A
26	YB	56	G
26	YB	67	G
26	YB	73	A
26	YB	81	G
26	YB	88	C
26	YB	89	G
26	YB	96	G
26	YB	101	A
26	YB	105	G
26	YB	109	G

All (232) 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	119	A
1	QA	181	G
1	QA	189	U
1	QA	190	G
1	QA	243	A
1	QA	250	A
1	QA	266	G
1	QA	328	C
1	QA	410	G
1	QA	412	A
1	QA	428	G
1	QA	481	G
1	QA	484	G
1	QA	485	G

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Mol	Chain	Res	Type
1	QA	509	A
1	QA	533	A
1	QA	560	U
1	QA	595	G
1	QA	687	A
1	QA	703	G
1	QA	753	A
1	QA	792	A
1	QA	812	C
1	QA	913	A
1	QA	934	C
1	QA	960	U
1	QA	992	U
1	QA	1027	C
1	QA	1064	G
1	QA	1065	U
1	QA	1200	C
1	QA	1201	A
1	QA	1285	A
1	QA	1297	C
1	QA	1331	G
1	QA	1336	C
1	QA	1347	G
1	QA	1446	A
1	QA	1498	U
1	QA	1503	A
1	QA	1528	U
22	QV	53	G
23	QY	30	C
25	RA	27	G
25	RA	74	A
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	227	A
25	RA	229	A
25	RA	241	A
25	RA	242	G
25	RA	271(B)	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	RA	271(C)	U
25	RA	277	C
25	RA	345	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	704	G
25	RA	752	A
25	RA	846	C
25	RA	856	C
25	RA	859	G
25	RA	974(A)	C
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	1141	U
25	RA	1178	C
25	RA	1204	A
25	RA	1210	A
25	RA	1312	U
25	RA	1427	A
25	RA	1558	A
25	RA	1653	G
25	RA	1694	C
25	RA	1799	G
25	RA	1819	A
25	RA	1929	G
25	RA	1930	G
25	RA	1992	G
25	RA	2060	A
25	RA	2126	A
25	RA	2198	A
25	RA	2238	G
25	RA	2405	G
25	RA	2439	A

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Mol	Chain	Res	Type
25	RA	2481	G
25	RA	2518	A
25	RA	2566	A
25	RA	2610	C
25	RA	2689	U
25	RA	2712	U
25	RA	2723	C
25	RA	2726	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
1	XA	64	G
1	XA	78	G
1	XA	89	U
1	XA	115	G
1	XA	181	G
1	XA	190	G
1	XA	243	A
1	XA	244	U
1	XA	250	A
1	XA	266	G
1	XA	328	C
1	XA	345	C
1	XA	372	C
1	XA	410	G
1	XA	412	A
1	XA	429	U
1	XA	481	G
1	XA	484	G
1	XA	485	G
1	XA	509	A
1	XA	530	G
1	XA	560	U
1	XA	575	G
1	XA	595	G
1	XA	687	A
1	XA	703	G

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Mol	Chain	Res	Type
1	XA	753	A
1	XA	792	A
1	XA	812	C
1	XA	815	A
1	XA	913	A
1	XA	960	U
1	XA	991	U
1	XA	992	U
1	XA	1027	C
1	XA	1065	U
1	XA	1200	C
1	XA	1285	A
1	XA	1297	C
1	XA	1298	C
1	XA	1336	C
1	XA	1347	G
1	XA	1446	A
1	XA	1498	U
1	XA	1503	A
22	XV	53	G
23	XY	30	C
24	XX	3	G
24	XX	6	C
25	YA	74	A
25	YA	99	U
25	YA	102	G
25	YA	196	A
25	YA	221	A
25	YA	222	A
25	YA	227	A
25	YA	229	A
25	YA	241	A
25	YA	242	G
25	YA	271(B)	G
25	YA	278	A
25	YA	372	G
25	YA	404	C
25	YA	503	A
25	YA	508	G
25	YA	587	C
25	YA	637	A
25	YA	653	A

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Mol	Chain	Res	Type
25	YA	654	A
25	YA	669	G
25	YA	752	A
25	YA	764	A
25	YA	846	C
25	YA	856	C
25	YA	859	G
25	YA	974(A)	C
25	YA	1012	U
25	YA	1022	G
25	YA	1026	U
25	YA	1045	A
25	YA	1078	U
25	YA	1085	A
25	YA	1109	C
25	YA	1130	U
25	YA	1141	U
25	YA	1178	C
25	YA	1204	A
25	YA	1210	A
25	YA	1558	A
25	YA	1653	G
25	YA	1694	C
25	YA	1698	A
25	YA	1799	G
25	YA	1819	A
25	YA	1929	G
25	YA	1930	G
25	YA	1955	U
25	YA	1992	G
25	YA	2126	A
25	YA	2405	G
25	YA	2439	A
25	YA	2481	G
25	YA	2506	U
25	YA	2566	A
25	YA	2610	C
25	YA	2655	G
25	YA	2681	C
25	YA	2689	U
25	YA	2712	U
25	YA	2751	G

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Mol	Chain	Res	Type
25	YA	2776	A
25	YA	2832	U
25	YA	2867	G
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$
23	1MG	QY	37	23	16,26,27	2.92	3 (18%)	19,39,42	1.46	3 (15%)
23	1MG	XY	37	23	16,26,27	2.86	3 (18%)	19,39,42	1.42	2 (10%)
56	PPU	Z6	76	25,56	30,40,41	2.58	5 (16%)	37,57,60	3.25	11 (29%)
56	PPU	Z8	76	25,56	30,40,41	2.57	6 (20%)	37,57,60	3.24	11 (29%)

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
23	1MG	QY	37	23	-	0/3/25/26	0/3/3/3
23	1MG	XY	37	23	-	0/3/25/26	0/3/3/3
56	PPU	Z6	76	25,56	-	0/21/43/44	0/4/4/4
56	PPU	Z8	76	25,56	-	0/21/43/44	0/4/4/4

All (17) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	Z6	76	PPU	C9-N6	-5.62	1.32	1.45
56	Z8	76	PPU	C9-N6	-5.61	1.32	1.45
56	Z6	76	PPU	C10-N6	-5.30	1.32	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	Z8	76	PPU	C10-N6	-5.30	1.32	1.45
56	Z8	76	PPU	C5-N7	-2.00	1.32	1.39
23	XY	37	1MG	C6-C5	2.34	1.45	1.41
23	QY	37	1MG	C6-C5	2.79	1.46	1.41
56	Z6	76	PPU	O4'-C1'	2.81	1.44	1.41
56	Z8	76	PPU	O4'-C1'	2.85	1.44	1.41
56	Z8	76	PPU	C-N3'	5.44	1.46	1.34
56	Z6	76	PPU	C-N3'	5.47	1.46	1.34
23	XY	37	1MG	C2-N2	6.64	1.47	1.33
23	QY	37	1MG	C2-N2	6.69	1.47	1.33
23	XY	37	1MG	C4-N3	8.69	1.49	1.35
23	QY	37	1MG	C4-N3	8.79	1.49	1.35
56	Z8	76	PPU	O-C	9.34	1.41	1.23
56	Z6	76	PPU	O-C	9.42	1.41	1.23

All (27) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	Z6	76	PPU	C2'-C1'-N9	-10.33	98.50	114.29
56	Z8	76	PPU	C2'-C1'-N9	-10.32	98.52	114.29
56	Z8	76	PPU	N3-C2-N1	-9.79	121.40	128.89
56	Z6	76	PPU	N3-C2-N1	-9.73	121.45	128.89
56	Z6	76	PPU	C3'-N3'-C	-8.25	110.18	123.18
56	Z8	76	PPU	C3'-N3'-C	-8.25	110.19	123.18
56	Z6	76	PPU	C4'-O4'-C1'	-4.00	105.32	109.72
56	Z8	76	PPU	C4'-O4'-C1'	-3.95	105.38	109.72
56	Z6	76	PPU	C4-C5-N7	-3.89	105.90	109.48
56	Z8	76	PPU	C4-C5-N7	-3.78	106.01	109.48
23	XY	37	1MG	N3-C2-N1	-3.39	117.77	123.96
23	QY	37	1MG	N3-C2-N1	-3.37	117.82	123.96
56	Z6	76	PPU	CM-OC-CZ	-3.18	110.08	117.51
56	Z8	76	PPU	CM-OC-CZ	-3.13	110.18	117.51
56	Z6	76	PPU	O4'-C1'-N9	-2.77	102.31	108.10
56	Z8	76	PPU	O4'-C1'-N9	-2.74	102.36	108.10
56	Z6	76	PPU	C4'-C3'-N3'	-2.74	107.89	113.61
56	Z8	76	PPU	C4'-C3'-N3'	-2.65	108.08	113.61
23	QY	37	1MG	C4-C5-N7	-2.23	107.43	109.48
56	Z8	76	PPU	CA-C-N3'	2.05	121.71	115.94
56	Z6	76	PPU	CA-C-N3'	2.06	121.74	115.94
23	XY	37	1MG	N2-C2-N1	3.52	123.36	118.46
23	QY	37	1MG	N2-C2-N1	4.17	124.27	118.46
56	Z8	76	PPU	C2'-C3'-N3'	4.60	125.02	113.18

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	Z6	76	PPU	C2'-C3'-N3'	4.64	125.11	113.18
56	Z6	76	PPU	C2-N1-C6	4.83	121.70	111.43
56	Z8	76	PPU	C2-N1-C6	4.85	121.76	111.43

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

3 monomers are involved in 13 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
23	XY	37	1MG	1	0
56	Z6	76	PPU	5	0
56	Z8	76	PPU	7	0

## 5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 5.6 Ligand geometry [i](#)

Of 682 ligands modelled in this entry, 680 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
58	PAR	QA	1670	-	45,45,45	1.30	7 (15%)	59,67,67	1.41	7 (11%)
58	PAR	XA	1675	-	45,45,45	1.34	7 (15%)	59,67,67	1.34	5 (8%)

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
58	PAR	QA	1670	-	-	0/18/94/94	0/4/4/4
58	PAR	XA	1675	-	-	0/18/94/94	0/4/4/4

All (14) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
58	QA	1670	PAR	C14-C24	2.00	1.56	1.52
58	XA	1675	PAR	C31-C21	2.01	1.56	1.53
58	QA	1670	PAR	C31-C21	2.12	1.56	1.53
58	QA	1670	PAR	C11-C21	2.16	1.56	1.52
58	XA	1675	PAR	C14-C24	2.19	1.56	1.52
58	QA	1670	PAR	O51-C11	2.28	1.47	1.41
58	XA	1675	PAR	O51-C11	2.63	1.48	1.41
58	XA	1675	PAR	C64-C54	2.63	1.58	1.52
58	XA	1675	PAR	C11-C21	2.75	1.57	1.52
58	QA	1670	PAR	C64-C54	2.75	1.59	1.52
58	XA	1675	PAR	O54-C14	2.86	1.49	1.41
58	QA	1670	PAR	O54-C14	2.91	1.49	1.41
58	XA	1675	PAR	C52-C42	2.93	1.58	1.52
58	QA	1670	PAR	C52-C42	3.02	1.58	1.52

All (12) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
58	QA	1670	PAR	O11-C42-C32	-2.96	101.76	108.92
58	QA	1670	PAR	O54-C54-C44	-2.05	105.83	109.68
58	XA	1675	PAR	C11-O51-C51	2.56	118.72	113.75
58	XA	1675	PAR	O54-C54-C64	2.70	111.37	106.10
58	QA	1670	PAR	O54-C54-C64	2.82	111.60	106.10
58	QA	1670	PAR	O11-C42-C52	3.05	115.45	107.49
58	XA	1675	PAR	O52-C13-C23	3.52	115.08	107.75
58	QA	1670	PAR	O33-C14-C24	3.64	114.69	107.96
58	QA	1670	PAR	C14-O54-C54	3.82	121.16	113.75
58	QA	1670	PAR	O52-C13-C23	3.93	115.92	107.75
58	XA	1675	PAR	C14-O54-C54	4.33	122.16	113.75
58	XA	1675	PAR	O33-C14-C24	4.48	116.26	107.96

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

2 monomers are involved in 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
58	QA	1670	PAR	3	0
58	XA	1675	PAR	1	0

## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

## 6 Fit of model and data

### 6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
1	QA	1500/1522 (98%)	1.23	292 (19%) 1 1	27, 67, 148, 352	0
1	XA	1500/1522 (98%)	1.34	304 (20%) 1 0	18, 55, 149, 326	0
2	QB	237/256 (92%)	1.08	47 (19%) 1 0	54, 126, 215, 288	0
2	XB	237/256 (92%)	0.74	23 (9%) 10 3	43, 102, 177, 293	0
3	QC	205/239 (85%)	0.72	27 (13%) 4 2	56, 108, 175, 255	0
3	XC	205/239 (85%)	0.50	10 (4%) 33 14	30, 78, 132, 181	0
4	QD	208/209 (99%)	1.28	54 (25%) 1 0	41, 79, 136, 185	0
4	XD	208/209 (99%)	0.94	30 (14%) 3 1	30, 74, 134, 231	0
5	QE	151/162 (93%)	0.86	20 (13%) 4 2	42, 85, 148, 260	0
5	XE	151/162 (93%)	0.67	13 (8%) 13 4	23, 61, 121, 196	0
6	QF	101/101 (100%)	0.37	0 100 100	30, 74, 112, 155	0
6	XF	101/101 (100%)	0.50	6 (5%) 26 10	26, 69, 110, 146	0
7	QG	155/156 (99%)	0.92	24 (15%) 3 1	46, 97, 158, 302	0
7	XG	155/156 (99%)	0.76	18 (11%) 6 2	35, 82, 149, 230	0
8	QH	138/138 (100%)	0.78	11 (7%) 15 5	39, 83, 130, 174	0
8	XH	138/138 (100%)	0.77	13 (9%) 11 4	34, 68, 117, 169	0
9	QI	127/128 (99%)	2.36	61 (48%) 0 0	48, 117, 170, 243	0
9	XI	127/128 (99%)	1.30	36 (28%) 1 0	33, 91, 152, 203	0
10	QJ	99/105 (94%)	2.61	53 (53%) 0 0	53, 140, 243, 283	0
10	XJ	99/105 (94%)	1.94	44 (44%) 0 0	21, 100, 169, 213	0
11	QK	119/129 (92%)	0.98	15 (12%) 5 2	42, 77, 149, 228	0
11	XK	119/129 (92%)	1.28	25 (21%) 1 0	28, 70, 134, 196	0
12	QL	125/132 (94%)	1.24	30 (24%) 1 0	35, 69, 140, 262	0
12	XL	125/132 (94%)	0.88	13 (10%) 8 3	22, 51, 113, 282	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å <sup>2</sup> )	Q<0.9
13	QM	121/126 (96%)	2.15	46 (38%)	0	0	43, 108, 185, 410	0
13	XM	121/126 (96%)	1.42	30 (24%)	1	0	36, 86, 141, 273	0
14	QN	60/61 (98%)	2.14	28 (46%)	0	0	59, 101, 150, 166	0
14	XN	60/61 (98%)	1.20	16 (26%)	1	0	36, 67, 127, 143	0
15	QO	88/89 (98%)	0.79	10 (11%)	7	2	32, 78, 150, 180	0
15	XO	88/89 (98%)	0.83	13 (14%)	3	1	27, 62, 111, 129	0
16	QP	84/88 (95%)	1.12	15 (17%)	2	1	38, 71, 115, 186	0
16	XP	84/88 (95%)	1.43	25 (29%)	1	0	39, 73, 119, 211	0
17	QQ	100/105 (95%)	0.91	12 (12%)	6	2	44, 79, 131, 161	0
17	XQ	100/105 (95%)	1.40	25 (25%)	1	0	35, 75, 127, 166	0
18	QR	70/88 (79%)	0.58	2 (2%)	55	32	28, 73, 141, 149	0
18	XR	70/88 (79%)	0.42	3 (4%)	39	18	27, 66, 118, 171	0
19	QS	84/93 (90%)	2.67	54 (64%)	0	0	80, 119, 195, 275	0
19	XS	84/93 (90%)	1.51	24 (28%)	1	0	47, 88, 168, 219	0
20	QT	99/106 (93%)	1.59	33 (33%)	0	0	37, 82, 140, 220	0
20	XT	99/106 (93%)	1.85	44 (44%)	0	0	28, 86, 149, 177	0
21	QU	25/27 (92%)	5.80	24 (96%)	0	0	45, 98, 150, 185	0
21	XU	25/27 (92%)	3.22	17 (68%)	0	0	43, 69, 139, 153	0
22	QV	77/77 (100%)	1.00	13 (16%)	2	1	27, 73, 146, 212	0
22	XV	77/77 (100%)	0.77	8 (10%)	8	3	17, 59, 103, 207	0
23	QY	14/17 (82%)	1.49	3 (21%)	1	0	69, 116, 169, 189	0
23	XY	14/17 (82%)	1.58	3 (21%)	1	0	41, 102, 143, 157	0
24	QX	8/25 (32%)	1.28	2 (25%)	1	0	49, 58, 151, 164	0
24	XX	8/25 (32%)	2.24	2 (25%)	1	0	32, 38, 89, 104	0
25	RA	2882/2916 (98%)	1.18	366 (12%)	5	2	13, 44, 212, 472	0
25	YA	2883/2916 (98%)	1.04	250 (8%)	13	4	7, 35, 201, 461	0
26	RB	120/122 (98%)	1.04	18 (15%)	3	1	43, 69, 105, 120	0
26	YB	120/122 (98%)	0.42	0	100	100	29, 51, 71, 110	0
27	RD	272/276 (98%)	0.57	11 (4%)	42	21	9, 42, 81, 176	0
27	YD	272/276 (98%)	0.56	11 (4%)	42	21	5, 35, 71, 188	0
28	RE	205/206 (99%)	0.79	15 (7%)	18	7	11, 56, 123, 335	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
28	YE	205/206 (99%)	0.66	10 (4%) 33 14	2, 52, 123, 250	0
29	RF	202/210 (96%)	0.54	11 (5%) 29 12	15, 62, 132, 185	0
29	YF	202/210 (96%)	0.53	8 (3%) 42 21	8, 45, 121, 194	0
30	RG	181/182 (99%)	3.26	114 (62%) 0 0	79, 156, 284, 386	0
30	YG	181/182 (99%)	1.58	61 (33%) 0 0	30, 89, 155, 309	0
31	RH	170/180 (94%)	2.80	108 (63%) 0 0	79, 145, 235, 306	0
31	YH	170/180 (94%)	0.85	13 (7%) 17 6	31, 79, 122, 167	0
32	RI	146/148 (98%)	0.45	9 (6%) 24 9	25, 87, 178, 297	0
32	YI	146/148 (98%)	0.55	10 (6%) 20 7	22, 83, 152, 183	0
33	RN	138/140 (98%)	0.43	3 (2%) 65 44	26, 64, 124, 179	0
33	YN	138/140 (98%)	0.43	2 (1%) 78 61	16, 54, 108, 166	0
34	RO	122/122 (100%)	0.49	3 (2%) 61 39	22, 55, 103, 142	0
34	YO	122/122 (100%)	0.59	2 (1%) 74 56	16, 48, 78, 126	0
35	RP	150/150 (100%)	1.23	38 (25%) 1 0	18, 68, 154, 247	0
35	YP	150/150 (100%)	0.85	18 (12%) 6 2	9, 53, 126, 253	0
36	RQ	141/141 (100%)	1.28	31 (21%) 1 0	28, 67, 128, 178	0
36	YQ	141/141 (100%)	0.55	9 (6%) 23 8	14, 47, 124, 154	0
37	RR	118/118 (100%)	0.65	10 (8%) 13 4	18, 48, 81, 170	0
37	YR	118/118 (100%)	0.59	6 (5%) 32 13	20, 46, 85, 137	0
38	RS	111/112 (99%)	1.10	22 (19%) 1 0	38, 76, 131, 184	0
38	YS	111/112 (99%)	0.65	3 (2%) 58 36	28, 58, 106, 195	0
39	RT	137/146 (93%)	0.89	14 (10%) 9 3	29, 67, 161, 259	0
39	YT	137/146 (93%)	0.79	13 (9%) 10 3	27, 61, 152, 303	0
40	RU	117/118 (99%)	1.01	19 (16%) 3 1	20, 54, 114, 221	0
40	YU	117/118 (99%)	0.67	4 (3%) 49 25	19, 39, 97, 221	0
41	RV	101/101 (100%)	0.63	4 (3%) 42 21	21, 77, 140, 320	0
41	YV	101/101 (100%)	0.58	4 (3%) 42 21	13, 63, 124, 304	0
42	RW	113/113 (100%)	0.37	4 (3%) 48 24	19, 41, 99, 220	0
42	YW	113/113 (100%)	0.17	1 (0%) 85 73	15, 41, 95, 193	0
43	RX	92/96 (95%)	0.50	0 100 100	26, 53, 87, 135	0
43	YX	92/96 (95%)	0.47	2 (2%) 65 44	12, 39, 76, 116	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
44	RY	102/110 (92%)	1.42	24 (23%) 1 0	40, 99, 177, 285	0
44	YY	102/110 (92%)	0.90	12 (11%) 6 2	31, 73, 155, 210	0
45	RZ	183/206 (88%)	1.16	33 (18%) 2 1	41, 93, 178, 292	0
45	YZ	183/206 (88%)	0.67	16 (8%) 13 4	32, 71, 179, 271	0
46	R0	82/85 (96%)	0.67	6 (7%) 18 7	18, 49, 71, 179	0
46	Y0	82/85 (96%)	0.50	7 (8%) 13 4	11, 34, 60, 87	0
47	R1	97/98 (98%)	0.84	6 (6%) 24 9	21, 51, 160, 335	0
47	Y1	97/98 (98%)	0.87	11 (11%) 7 2	16, 49, 139, 210	0
48	R2	69/72 (95%)	0.39	0 100 100	28, 69, 143, 169	0
48	Y2	69/72 (95%)	0.65	3 (4%) 39 18	19, 59, 119, 177	0
49	R3	59/60 (98%)	0.67	3 (5%) 32 13	31, 71, 112, 169	0
49	Y3	59/60 (98%)	0.40	2 (3%) 49 25	22, 49, 91, 198	0
50	R4	71/71 (100%)	3.11	35 (49%) 0 0	107, 211, 311, 396	0
50	Y4	71/71 (100%)	2.51	33 (46%) 0 0	66, 156, 274, 384	0
51	R5	59/60 (98%)	0.94	7 (11%) 6 2	8, 49, 223, 238	0
51	Y5	59/60 (98%)	0.77	7 (11%) 6 2	11, 49, 223, 335	0
52	R6	49/54 (90%)	5.70	39 (79%) 0 0	86, 175, 268, 291	0
52	Y6	49/54 (90%)	4.75	39 (79%) 0 0	76, 163, 229, 312	0
53	R7	49/49 (100%)	0.53	4 (8%) 14 5	16, 29, 87, 168	0
53	Y7	49/49 (100%)	0.38	3 (6%) 25 10	8, 23, 87, 176	0
54	R8	64/65 (98%)	1.50	17 (26%) 1 0	20, 53, 102, 208	0
54	Y8	64/65 (98%)	1.21	11 (17%) 2 1	16, 44, 97, 214	0
55	R9	37/37 (100%)	8.50	37 (100%) 0 0	82, 138, 203, 344	0
55	Y9	37/37 (100%)	6.09	35 (94%) 0 0	57, 119, 223, 246	0
56	Z6	2/3 (66%)	1.50	0 100 100	33, 33, 33, 47	0
56	Z8	2/3 (66%)	1.79	1 (50%) 0 0	24, 24, 24, 36	0
All	All	20873/21492 (97%)	1.12	3239 (15%) 3 1	2, 61, 174, 472	0

All (3239) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
25	YA	2117	A	24.6
25	YA	1061	U	20.8

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Mol	Chain	Res	Type	RSRZ
25	YA	2112	G	20.7
13	QM	7	VAL	20.6
25	YA	2136	C	19.5
25	YA	2116	G	19.3
25	YA	2135	A	19.1
25	RA	2116	G	18.2
25	RA	1088	A	18.2
25	RA	1057	A	18.0
55	R9	1	MET	17.7
25	YA	1060	U	17.4
25	RA	1096	A	17.4
25	YA	2801	A	17.4
55	R9	37	GLY	17.2
25	RA	1089	G	17.2
55	R9	36	GLN	16.9
25	RA	2174	C	16.4
25	RA	1061	U	16.1
25	RA	1065	U	16.1
55	R9	34	GLN	15.7
25	RA	2175	C	15.7
25	RA	1093	G	15.5
25	YA	2175	C	15.4
25	RA	2173	A	15.4
25	RA	1070	A	15.2
25	RA	2119	A	15.1
25	RA	1060	U	15.0
25	YA	2174	C	14.7
52	R6	46	HIS	14.7
25	RA	1064	C	14.6
50	R4	71	ARG	14.6
25	YA	2118	U	14.3
52	Y6	13	CYS	14.2
25	YA	2168	G	14.2
12	QL	129	ALA	14.0
52	R6	42	TRP	13.8
25	RA	1063	G	13.7
25	RA	1095	A	13.7
55	R9	23	VAL	13.6
25	RA	1084	A	13.4
25	YA	2169	A	13.3
31	RH	43	VAL	13.3
55	Y9	1	MET	13.2

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Mol	Chain	Res	Type	RSRZ
25	YA	2114	A	13.2
25	RA	1094	U	13.2
25	RA	1068	G	13.2
25	YA	2119	A	13.1
50	R4	67	TYR	13.0
21	XU	26	LYS	12.8
25	RA	1058	G	12.8
52	R6	23	THR	12.8
25	YA	2170	A	12.8
50	R4	69	LYS	12.6
25	RA	1066	U	12.6
25	YA	2795	G	12.5
25	YA	2129	C	12.5
25	YA	1075	C	12.5
50	R4	1	MET	12.5
11	QK	129	SER	12.5
52	R6	13	CYS	12.4
52	R6	40	CYS	12.3
25	YA	2798	C	12.3
25	YA	2178	C	12.3
13	QM	6	GLY	12.2
25	RA	1054	A	12.2
50	Y4	71	ARG	12.0
55	R9	24	TYR	12.0
25	RA	1056	G	12.0
25	RA	1059	G	11.9
21	QU	26	LYS	11.9
25	YA	1088	A	11.9
52	Y6	12	GLU	11.9
25	YA	1076	C	11.7
25	RA	1097	U	11.6
25	RA	1071	G	11.5
14	XN	2	ALA	11.5
25	YA	2159	G	11.5
45	YZ	113	ALA	11.5
31	RH	3	ARG	11.5
25	RA	1103	A	11.4
55	R9	25	VAL	11.4
30	RG	155	MET	11.3
25	RA	2125	G	11.2
25	YA	2799	A	11.1
25	YA	1069	A	11.0

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Mol	Chain	Res	Type	RSRZ
25	RA	1087	G	10.9
55	R9	11	CYS	10.9
25	YA	2130	U	10.9
25	RA	2170	A	10.9
1	QA	1000	A	10.9
50	R4	70	GLY	10.9
25	YA	2160	G	10.8
25	YA	2161	C	10.8
1	QA	1129	C	10.8
25	YA	1096	A	10.8
21	QU	10	ARG	10.7
25	RA	2121	G	10.7
55	R9	19	ARG	10.6
25	RA	2128	C	10.6
25	YA	2122	U	10.6
55	Y9	4	ARG	10.5
25	YA	2125	G	10.5
55	Y9	34	GLN	10.5
25	RA	2148	G	10.5
1	XA	91	C	10.4
25	RA	2114	A	10.4
50	R4	68	ARG	10.4
30	RG	154	GLY	10.3
52	Y6	42	TRP	10.3
30	RG	137	GLU	10.3
55	R9	18	ARG	10.3
50	R4	66	SER	10.2
25	YA	2803	C	10.2
28	RE	204	ALA	10.2
55	Y9	36	GLN	10.1
55	R9	35	ARG	10.1
25	RA	1062	G	10.1
25	RA	1067	A	10.1
1	QA	1036	G	10.0
50	Y4	68	ARG	10.0
25	YA	2894	G	10.0
30	RG	2	PRO	10.0
1	XA	1451	A	10.0
25	RA	1098	A	10.0
52	R6	39	TYR	10.0
25	RA	2118	U	10.0
55	Y9	37	GLY	9.9

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Mol	Chain	Res	Type	RSRZ
1	XA	1032(A)	G	9.9
25	RA	1055	G	9.8
25	RA	2176	A	9.8
13	QM	102	ARG	9.8
55	R9	22	ARG	9.8
1	XA	90	C	9.7
52	R6	43	CYS	9.7
25	RA	2138	C	9.7
50	Y4	67	TYR	9.7
25	RA	2135	A	9.7
25	YA	2127	G	9.6
30	RG	12	TYR	9.6
50	Y4	69	LYS	9.5
25	RA	2136	C	9.4
40	YU	118	GLY	9.4
25	RA	2123	G	9.3
55	R9	26	ILE	9.3
52	Y6	53	LYS	9.3
55	Y9	29	ASN	9.3
55	R9	15	LYS	9.3
30	RG	72	ARG	9.3
52	R6	24	GLU	9.3
25	YA	2120	G	9.3
25	RA	2137	C	9.3
25	RA	1069	A	9.3
55	Y9	3	VAL	9.2
52	R6	14	THR	9.2
45	RZ	113	ALA	9.2
25	RA	2894	G	9.2
25	RA	2117	A	9.2
25	YA	2123	G	9.1
1	QA	1001	G	9.1
25	RA	1099	G	9.1
25	RA	1092	C	9.1
25	YA	2173	A	9.1
55	R9	4	ARG	9.0
52	R6	49	HIS	9.0
25	YA	2162	G	9.0
25	YA	2151	G	9.0
55	R9	16	VAL	9.0
25	RA	2147	G	8.9
55	R9	14	CYS	8.8

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Mol	Chain	Res	Type	RSRZ
25	RA	2159	G	8.8
1	QA	1026	G	8.8
55	R9	6	SER	8.8
52	R6	20	ASN	8.8
25	YA	2121	G	8.8
55	Y9	6	SER	8.7
25	RA	1074	G	8.7
31	YH	2	SER	8.7
30	RG	100	TRP	8.7
25	RA	2124	G	8.6
55	R9	20	HIS	8.6
25	YA	2133	G	8.6
25	RA	2797	U	8.6
52	R6	38	LYS	8.6
25	YA	2108	C	8.5
25	YA	2802	G	8.5
55	Y9	5	ALA	8.5
25	YA	1058	G	8.5
55	Y9	22	ARG	8.4
25	RA	2129	C	8.4
1	XA	64	G	8.4
25	YA	2797	U	8.3
17	QQ	101	ARG	8.3
1	XA	1000	A	8.3
25	YA	2137	C	8.3
31	RH	63	SER	8.3
30	RG	97	ASP	8.3
52	R6	6	ARG	8.3
30	RG	108	ASN	8.2
55	R9	3	VAL	8.2
30	RG	142	PRO	8.2
25	RA	2801	A	8.2
30	RG	107	LEU	8.2
1	QA	1032(B)	G	8.2
52	Y6	43	CYS	8.2
19	QS	27	GLU	8.1
9	QI	110	GLU	8.1
52	Y6	20	ASN	8.1
2	QB	4	GLU	8.1
50	R4	6	HIS	8.1
25	RA	1053	C	8.1
25	YA	2115	G	8.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
25	RA	2168	G	8.0
55	R9	5	ALA	8.0
11	XK	129	SER	8.0
20	XT	106	ALA	8.0
52	R6	45	LYS	8.0
9	QI	124	GLN	7.9
21	QU	17	THR	7.8
55	R9	17	ILE	7.8
25	YA	1063	G	7.8
25	YA	2149	G	7.8
52	Y6	49	HIS	7.8
25	YA	1097	U	7.8
25	RA	2160	G	7.8
31	RH	52	VAL	7.8
25	YA	2145	C	7.7
13	XM	6	GLY	7.7
25	RA	2798	C	7.7
1	QA	1451	A	7.7
14	QN	31	ARG	7.7
25	RA	1085	A	7.7
8	XH	1	MET	7.7
25	RA	1075	C	7.7
1	XA	999	U	7.6
25	YA	2148	G	7.6
9	QI	66	ARG	7.6
31	YH	3	ARG	7.6
25	RA	2162	G	7.6
52	Y6	22	ALA	7.6
10	QJ	33	GLN	7.6
50	Y4	70	GLY	7.6
25	YA	1064	C	7.6
7	XG	5	ARG	7.6
25	YA	1062	G	7.6
25	YA	1070	A	7.6
55	Y9	23	VAL	7.6
13	QM	8	GLU	7.6
52	R6	37	ARG	7.6
52	R6	12	GLU	7.6
28	RE	205	ALA	7.6
25	YA	2147	G	7.6
25	RA	2799	A	7.5
25	RA	1102	C	7.5

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Mol	Chain	Res	Type	RSRZ
25	YA	1074	G	7.5
1	XA	89	U	7.5
31	RH	35	VAL	7.5
25	RA	2172	U	7.5
21	QU	15	ARG	7.5
25	YA	1057	A	7.5
1	XA	80	G	7.5
52	R6	26	ASN	7.5
19	QS	79	THR	7.4
52	Y6	40	CYS	7.4
25	YA	1059	G	7.4
52	Y6	37	ARG	7.4
55	Y9	32	HIS	7.4
20	XT	9	ASN	7.4
7	QG	32	ARG	7.3
1	QA	1032	A	7.3
25	YA	2164	C	7.3
1	XA	92	G	7.3
21	XU	25	LYS	7.3
52	R6	11	LEU	7.3
25	YA	2134	A	7.3
25	YA	2167	U	7.3
14	QN	2	ALA	7.3
12	XL	129	ALA	7.2
55	Y9	7	VAL	7.2
25	YA	2141	G	7.2
36	RQ	141	GLN	7.2
52	Y6	24	GLU	7.2
1	XA	1001	G	7.2
25	YA	2176	A	7.2
52	R6	22	ALA	7.2
25	YA	2128	C	7.1
25	YA	2111	C	7.1
1	QA	1002	G	7.1
25	RA	2110	G	7.1
25	RA	1086	A	7.1
40	YU	117	GLN	7.1
8	QH	1	MET	7.1
50	R4	56	VAL	7.1
41	RV	36	PRO	7.1
52	R6	25	LYS	7.1
10	QJ	64	GLU	7.1

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Mol	Chain	Res	Type	RSRZ
50	Y4	66	SER	7.1
30	RG	35	GLU	7.0
30	RG	157	ILE	7.0
25	YA	2113	U	7.0
1	QA	1033	G	7.0
25	RA	1083	U	7.0
13	QM	101	GLN	7.0
55	R9	12	ASP	7.0
7	QG	82	GLY	7.0
1	XA	184	G	7.0
13	XM	100	GLY	6.9
10	QJ	8	LEU	6.9
25	RA	1049	C	6.9
7	QG	81	GLY	6.9
52	Y6	46	HIS	6.9
13	QM	103	THR	6.9
25	RA	1107	G	6.9
25	RA	2120	G	6.9
39	YT	2	ASN	6.8
39	RT	2	ASN	6.8
21	QU	14	TRP	6.8
25	YA	2146	C	6.8
52	Y6	39	TYR	6.8
45	RZ	93	ASP	6.8
25	RA	1108	U	6.8
21	QU	5	ASP	6.8
10	QJ	6	ILE	6.8
13	XM	7	VAL	6.8
54	R8	65	GLU	6.8
52	Y6	23	THR	6.8
25	YA	2150	U	6.8
41	YV	36	PRO	6.8
1	QA	1027	C	6.8
30	YG	116	ASP	6.8
25	YA	2139	C	6.8
1	QA	1034	G	6.8
25	RA	1104	C	6.7
25	YA	1084	A	6.7
47	R1	98	LEU	6.7
1	QA	1041	A	6.7
55	Y9	21	GLY	6.7
25	RA	1082	U	6.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
25	RA	1100	C	6.7
55	R9	2	LYS	6.7
12	QL	127	GLU	6.6
25	RA	2127	G	6.6
10	QJ	5	ARG	6.6
25	RA	2149	G	6.6
19	QS	71	LEU	6.6
25	RA	1072	C	6.6
25	RA	1105	U	6.6
54	R8	64	TYR	6.6
31	RH	33	LEU	6.6
25	RA	2164	C	6.6
7	XG	32	ARG	6.6
10	QJ	45	ARG	6.6
25	YA	2166	G	6.5
25	YA	2177	C	6.5
25	YA	2104	G	6.5
30	RG	69	ALA	6.5
31	RH	24	VAL	6.5
25	RA	2122	U	6.5
2	XB	6	THR	6.5
1	XA	1032	A	6.5
4	XD	3	ARG	6.5
21	QU	2	GLY	6.5
52	Y6	26	ASN	6.4
21	QU	25	LYS	6.4
31	RH	25	LYS	6.4
40	RU	118	GLY	6.4
10	QJ	29	ARG	6.4
30	RG	64	THR	6.4
1	QA	999	U	6.4
9	XI	8	GLY	6.4
30	RG	58	GLN	6.4
30	RG	136	ARG	6.4
55	Y9	35	ARG	6.4
25	RA	279	C	6.4
1	XA	69	G	6.4
30	RG	41	GLN	6.4
52	R6	41	PRO	6.3
52	R6	7	ILE	6.3
30	RG	4	ASP	6.3
52	Y6	38	LYS	6.3

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Mol	Chain	Res	Type	RSRZ
45	YZ	162	GLU	6.3
24	XX	8	A	6.3
30	RG	96	ARG	6.3
31	RH	4	ILE	6.3
30	RG	39	ILE	6.3
25	RA	2178	C	6.3
30	RG	36	LYS	6.3
1	XA	1129	C	6.3
25	RA	1106	G	6.3
4	QD	24	GLU	6.3
19	QS	2	PRO	6.3
21	QU	16	GLY	6.3
39	YT	1	MET	6.3
30	RG	93	THR	6.2
55	R9	33	LYS	6.2
25	YA	2109	U	6.2
25	RA	1109	C	6.2
31	RH	10	PRO	6.2
1	XA	183	G	6.2
25	YA	2131	G	6.2
1	XA	1032(B)	G	6.2
10	XJ	69	ASN	6.2
31	RH	2	SER	6.2
25	RA	2112	G	6.2
25	YA	2163	C	6.2
21	QU	9	ARG	6.2
52	Y6	11	LEU	6.2
55	Y9	30	PRO	6.2
25	YA	2171	A	6.2
14	QN	25	VAL	6.1
11	XK	11	LYS	6.1
25	YA	1071	G	6.1
20	XT	72	LEU	6.1
30	RG	34	LEU	6.1
21	QU	18	TYR	6.1
20	QT	104	LEU	6.1
25	RA	1536	A	6.1
25	YA	1077	A	6.1
1	XA	88	C	6.1
25	YA	1087	G	6.0
45	RZ	114	GLY	6.0
25	YA	1066	U	6.0

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Mol	Chain	Res	Type	RSRZ
13	QM	104	ARG	6.0
52	R6	50	ARG	6.0
52	Y6	18	ARG	6.0
30	RG	9	ARG	6.0
1	XA	1026	G	6.0
20	QT	106	ALA	6.0
55	Y9	25	VAL	6.0
1	XA	220	G	6.0
20	XT	18	GLN	6.0
1	XA	102	G	6.0
31	RH	42	ARG	6.0
25	YA	2165	G	6.0
10	QJ	4	ILE	6.0
38	RS	37	ALA	6.0
9	QI	70	LYS	6.0
55	Y9	31	LYS	6.0
1	QA	1029	G	6.0
25	RA	1052	C	5.9
25	YA	2105	C	5.9
25	YA	2172	U	5.9
2	XB	4	GLU	5.9
25	YA	899	A	5.9
39	RT	115	ARG	5.9
25	YA	2110	G	5.9
31	RH	141	VAL	5.9
10	QJ	98	ILE	5.9
25	YA	2107	C	5.9
9	QI	125	TYR	5.9
1	XA	1025	U	5.8
25	YA	1078	U	5.8
1	XA	79	G	5.8
20	QT	102	GLY	5.8
31	RH	82	GLY	5.8
21	QU	6	ARG	5.8
19	QS	39	THR	5.8
25	YA	1065	U	5.8
9	QI	9	ARG	5.8
25	YA	2138	C	5.8
25	RA	2171	A	5.8
30	RG	74	LYS	5.8
45	RZ	175	VAL	5.8
25	RA	889	C	5.8

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	XA	73	G	5.8
55	Y9	12	ASP	5.8
13	QM	2	ALA	5.8
17	XQ	17	LYS	5.8
1	XA	1024	G	5.8
1	XA	1027	C	5.8
30	YG	2	PRO	5.8
55	Y9	24	TYR	5.8
30	RG	33	ARG	5.8
1	QA	984	C	5.8
25	RA	2161	C	5.7
19	QS	67	VAL	5.7
1	XA	223	U	5.7
25	RA	2111	C	5.7
35	YP	13	ASN	5.7
9	QI	127	LYS	5.7
21	QU	21	TYR	5.7
52	R6	29	ASN	5.7
25	RA	2115	G	5.7
25	RA	2802	G	5.7
2	QB	217	ARG	5.7
20	XT	75	ASN	5.7
25	YA	2101	G	5.7
50	Y4	49	PHE	5.7
21	QU	24	ARG	5.7
25	YA	1073	A	5.7
30	YG	26	GLN	5.7
1	QA	1032(A)	G	5.7
1	QA	1222	G	5.7
1	XA	78	G	5.7
55	R9	9	ARG	5.7
9	QI	117	HIS	5.7
36	YQ	141	GLN	5.7
30	RG	135	LEU	5.7
25	RA	1026	U	5.7
47	Y1	98	LEU	5.7
52	R6	9	LEU	5.6
25	RA	890	A	5.6
30	RG	152	LEU	5.6
23	QY	31	G	5.6
25	RA	2146	C	5.6
25	YA	897	C	5.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	XA	81	G	5.6
1	XA	181	G	5.6
7	QG	4	ARG	5.6
21	XU	15	ARG	5.6
30	RG	65	GLY	5.6
32	YI	113	ARG	5.6
35	RP	150	ALA	5.6
19	QS	38	SER	5.6
25	YA	2804	C	5.6
25	YA	2126	A	5.6
21	QU	23	PRO	5.6
31	RH	41	MET	5.5
1	QA	1224	G	5.5
7	QG	5	ARG	5.5
1	QA	1223	C	5.5
50	Y4	32	TYR	5.5
25	YA	1086	A	5.5
55	R9	7	VAL	5.5
9	QI	128	ARG	5.5
21	QU	7	ARG	5.5
25	RA	280	C	5.5
55	Y9	18	ARG	5.5
1	QA	1039	C	5.5
1	QA	1131	G	5.5
52	Y6	5	VAL	5.5
12	XL	128	ALA	5.5
1	QA	983	A	5.4
23	XY	32	U	5.4
30	RG	8	LYS	5.4
25	RA	2145	C	5.4
30	RG	13	GLU	5.4
55	Y9	16	VAL	5.4
25	RA	2169	A	5.4
50	R4	58	ARG	5.4
13	XM	102	ARG	5.4
51	R5	54	GLY	5.4
25	RA	859	G	5.4
25	YA	2154	G	5.4
30	RG	117	PHE	5.4
55	Y9	2	LYS	5.4
1	QA	1040	U	5.4
9	QI	65	VAL	5.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
3	XC	193	TYR	5.4
30	YG	90	LEU	5.3
12	XL	19	ARG	5.3
10	QJ	59	SER	5.3
1	QA	1450	U	5.3
20	XT	68	LYS	5.3
30	RG	159	VAL	5.3
4	QD	7	PRO	5.3
13	QM	97	PRO	5.3
20	XT	73	HIS	5.3
55	Y9	28	GLU	5.3
1	QA	1006	C	5.3
31	RH	5	GLY	5.3
55	R9	30	PRO	5.3
36	RQ	33	GLY	5.3
19	QS	80	TYR	5.3
9	QI	53	VAL	5.3
19	XS	11	VAL	5.3
25	RA	1078	U	5.3
52	R6	5	VAL	5.3
55	R9	27	CYS	5.3
25	YA	2140	C	5.2
1	XA	68	G	5.2
25	YA	2179	C	5.2
1	XA	195	A	5.2
35	RP	132	LYS	5.2
50	R4	23	GLU	5.2
50	R4	55	ARG	5.2
4	QD	8	VAL	5.2
3	QC	193	TYR	5.2
10	XJ	5	ARG	5.2
25	RA	1051	G	5.2
5	QE	125	SER	5.2
25	RA	11	G	5.2
4	QD	32	ALA	5.1
10	QJ	55	LYS	5.1
21	QU	8	THR	5.1
30	RG	160	VAL	5.1
7	XG	156	TRP	5.1
25	RA	2893	G	5.1
1	XA	152	A	5.1
1	QA	1042	G	5.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
25	RA	2133	G	5.1
10	QJ	74	ILE	5.1
19	XS	39	THR	5.1
25	RA	362	U	5.1
21	XU	10	ARG	5.1
1	QA	1004	A	5.1
1	XA	208	U	5.1
9	QI	69	GLY	5.1
21	QU	22	ARG	5.1
25	RA	2179	C	5.1
52	Y6	6	ARG	5.1
25	RA	2154	G	5.1
4	QD	84	LYS	5.1
25	YA	2892	A	5.1
45	RZ	78	LYS	5.1
17	XQ	66	SER	5.1
13	QM	3	ARG	5.1
32	YI	65	ALA	5.1
25	YA	2157	G	5.1
25	RA	902	C	5.1
50	Y4	1	MET	5.1
54	Y8	65	GLU	5.1
1	QA	196	A	5.1
25	RA	916	G	5.0
9	QI	16	ARG	5.0
10	XJ	8	LEU	5.0
1	XA	1042	G	5.0
1	XA	1450	U	5.0
1	XA	194	C	5.0
31	RH	67	LEU	5.0
1	XA	1043	C	5.0
2	XB	217	ARG	5.0
30	RG	156	ASP	5.0
25	YA	898	C	5.0
1	XA	210	U	5.0
10	QJ	47	PHE	5.0
25	YA	1079	C	5.0
12	QL	32	PHE	5.0
25	RA	1077	A	5.0
36	RQ	136	ALA	5.0
25	YA	2106	G	5.0
1	QA	1096	C	4.9

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	XA	454	C	4.9
30	RG	43	LEU	4.9
35	RP	109	GLY	4.9
13	QM	88	ARG	4.9
1	QA	977	A	4.9
25	RA	2134	A	4.9
10	QJ	72	VAL	4.9
30	RG	87	PRO	4.9
1	QA	1003	G	4.9
25	YA	2152	G	4.9
31	RH	157	TYR	4.9
9	XI	106	ALA	4.9
30	RG	103	LEU	4.9
35	RP	13	ASN	4.9
11	QK	11	LYS	4.9
20	XT	79	ARG	4.9
30	YG	157	ILE	4.9
27	YD	26	LYS	4.9
25	YA	1089	G	4.9
30	YG	142	PRO	4.9
2	XB	240	GLN	4.9
4	QD	20	TYR	4.9
20	QT	66	ALA	4.9
30	RG	133	LEU	4.9
25	RA	919	G	4.9
13	XM	101	GLN	4.9
18	XR	88	LYS	4.9
16	QP	29	ASP	4.9
1	XA	457	C	4.9
30	RG	17	PRO	4.9
40	RU	91	ASP	4.9
10	QJ	10	GLY	4.9
1	XA	456	C	4.9
25	RA	1076	C	4.9
25	YA	1106	G	4.9
9	QI	64	THR	4.9
30	RG	171	ALA	4.8
5	QE	81	GLU	4.8
11	XK	25	TYR	4.8
20	XT	70	SER	4.8
10	QJ	70	ARG	4.8
30	RG	118	ARG	4.8

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Mol	Chain	Res	Type	RSRZ
20	XT	64	ASP	4.8
13	QM	85	GLY	4.8
30	YG	89	GLY	4.8
31	RH	18	GLU	4.8
2	QB	6	THR	4.8
10	QJ	85	LEU	4.8
30	RG	91	ARG	4.8
1	QA	1225	A	4.8
30	RG	101	ILE	4.8
25	YA	1068	G	4.8
25	YA	1107	G	4.8
1	XA	1286	A	4.8
17	XQ	97	SER	4.8
25	YA	2893	G	4.8
25	YA	1082	U	4.8
31	RH	169	VAL	4.8
35	RP	149	GLU	4.8
50	Y4	60	GLN	4.8
25	YA	2132	U	4.8
31	RH	49	VAL	4.8
19	QS	74	PHE	4.7
11	QK	128	ALA	4.7
14	QN	6	LEU	4.7
9	XI	117	HIS	4.7
25	RA	2126	A	4.7
1	XA	1224	G	4.7
30	RG	57	ALA	4.7
30	RG	172	LEU	4.7
29	YF	133	ASN	4.7
7	XG	85	TYR	4.7
1	QA	1005	A	4.7
31	RH	161	GLY	4.7
25	YA	1026	U	4.7
25	YA	2144	U	4.7
35	RP	108	LYS	4.7
10	QJ	71	LEU	4.7
11	QK	117	ASN	4.7
53	R7	49	ARG	4.7
30	RG	176	LEU	4.7
40	RU	90	VAL	4.7
14	QN	61	TRP	4.7
30	RG	85	GLY	4.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
31	RH	89	ILE	4.7
12	QL	128	ALA	4.7
16	XP	69	THR	4.7
21	QU	12	LYS	4.7
1	XA	87	A	4.7
10	QJ	54	PHE	4.6
2	QB	231	GLU	4.6
25	RA	878	A	4.6
31	RH	109	PHE	4.6
10	QJ	46	ARG	4.6
31	RH	37	VAL	4.6
1	QA	1019	C	4.6
9	XI	17	VAL	4.6
12	QL	19	ARG	4.6
20	QT	9	ASN	4.6
2	QB	165	VAL	4.6
9	XI	66	ARG	4.6
31	RH	170	ARG	4.6
30	RG	29	TRP	4.6
36	RQ	80	GLU	4.6
25	YA	2102	U	4.6
52	Y6	44	ARG	4.6
9	QI	27	THR	4.6
52	Y6	9	LEU	4.6
31	RH	34	GLU	4.6
44	RY	86	ARG	4.6
36	RQ	63	LYS	4.6
4	QD	23	GLY	4.6
9	QI	36	TYR	4.6
25	RA	281	G	4.6
50	R4	32	TYR	4.6
13	QM	16	ASP	4.6
13	XM	99	ARG	4.6
23	XY	31	G	4.6
30	RG	138	GLN	4.6
25	RA	2139	C	4.6
45	RZ	2	GLU	4.6
1	XA	185	A	4.6
1	XA	63	C	4.5
19	QS	78	ARG	4.5
20	XT	17	ARG	4.5
26	RB	60	C	4.5

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Mol	Chain	Res	Type	RSRZ
38	RS	31	SER	4.5
52	Y6	45	LYS	4.5
13	QM	4	ILE	4.5
25	RA	229	A	4.5
24	XX	7	G	4.5
20	QT	68	LYS	4.5
31	RH	55	PRO	4.5
7	QG	33	ASP	4.5
25	RA	1073	A	4.5
17	XQ	65	ILE	4.5
52	Y6	48	VAL	4.5
50	R4	11	PRO	4.5
55	Y9	9	ARG	4.5
16	XP	68	ASP	4.5
31	RH	9	ILE	4.5
45	RZ	96	VAL	4.5
1	XA	103	C	4.5
25	RA	2412	A	4.5
25	RA	1047	G	4.5
30	RG	131	TYR	4.5
1	QA	1286	A	4.5
18	QR	88	LYS	4.5
26	RB	41	U	4.5
38	RS	36	TYR	4.5
20	QT	75	ASN	4.5
50	R4	33	VAL	4.5
19	XS	35	SER	4.5
25	YA	1095	A	4.5
31	RH	50	VAL	4.5
35	YP	70	GLN	4.5
50	R4	49	PHE	4.4
10	XJ	10	GLY	4.4
19	QS	70	LYS	4.4
13	QM	83	ASP	4.4
19	XS	69	HIS	4.4
1	QA	1035	A	4.4
1	QA	1094	G	4.4
1	XA	93	U	4.4
55	R9	10	ILE	4.4
10	XJ	71	LEU	4.4
20	XT	65	LYS	4.4
13	QM	43	THR	4.4

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Mol	Chain	Res	Type	RSRZ
50	Y4	37	SER	4.4
30	RG	66	GLN	4.4
31	RH	51	ARG	4.4
25	YA	2188	C	4.4
25	RA	1110	G	4.4
25	YA	2181	G	4.4
31	RH	64	LEU	4.4
25	RA	2155	G	4.4
19	QS	69	HIS	4.4
30	RG	75	LYS	4.4
53	Y7	49	ARG	4.4
32	RI	83	ALA	4.4
1	QA	974	A	4.4
21	QU	11	GLY	4.4
55	R9	32	HIS	4.4
1	QA	1221	G	4.4
21	XU	6	ARG	4.4
1	QA	962	C	4.4
1	XA	221	C	4.4
25	RA	1079	C	4.4
2	QB	187	LEU	4.4
10	QJ	83	GLU	4.4
1	XA	1002	G	4.4
9	QI	126	SER	4.4
44	RY	58	GLY	4.4
10	XJ	45	ARG	4.4
25	RA	1101	U	4.3
30	YG	87	PRO	4.3
1	QA	220	G	4.3
30	RG	111	LEU	4.3
1	QA	963	G	4.3
1	XA	1220	G	4.3
25	YA	1093	G	4.3
25	YA	2189	U	4.3
19	QS	6	LYS	4.3
8	QH	115	SER	4.3
50	Y4	56	VAL	4.3
30	YG	46	ALA	4.3
51	R5	53	ALA	4.3
9	QI	121	ARG	4.3
10	XJ	39	PRO	4.3
14	QN	46	GLU	4.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	XA	1029	G	4.3
41	YV	45	THR	4.3
2	QB	133	LYS	4.3
1	QA	994	A	4.3
9	XI	105	ASP	4.3
14	QN	35	ARG	4.3
13	QM	106	ASN	4.3
52	Y6	14	THR	4.3
1	QA	1220	G	4.3
41	YV	42	GLY	4.3
49	Y3	60	GLU	4.3
19	QS	77	THR	4.3
31	RH	71	LEU	4.3
39	RT	1	MET	4.3
30	RG	84	LYS	4.3
1	QA	1028	C	4.3
39	RT	112	ARG	4.2
1	XA	196	A	4.2
25	RA	918	A	4.2
4	QD	42	GLN	4.2
53	R7	48	LYS	4.2
7	QG	41	ARG	4.2
1	XA	101	A	4.2
54	Y8	64	TYR	4.2
1	QA	1048	G	4.2
25	RA	2629	A	4.2
45	RZ	69	THR	4.2
10	XJ	38	ILE	4.2
30	RG	109	VAL	4.2
1	XA	1028(A)	C	4.2
25	RA	2794	C	4.2
2	QB	143	GLU	4.2
8	XH	2	LEU	4.2
25	RA	2150	U	4.2
25	YA	2158	A	4.2
11	XK	30	VAL	4.2
52	R6	21	TYR	4.2
25	YA	2477	C	4.2
30	RG	90	LEU	4.2
30	YG	155	MET	4.2
25	YA	1110	G	4.2
25	YA	2182	G	4.2

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Mol	Chain	Res	Type	RSRZ
31	RH	36	PRO	4.2
25	RA	899	A	4.2
25	RA	917	A	4.2
25	YA	2143	C	4.2
36	RQ	25	ASP	4.2
50	R4	34	GLU	4.2
31	RH	45	VAL	4.1
25	YA	1177	A	4.1
36	YQ	140	ALA	4.1
36	YQ	80	GLU	4.1
30	RG	88	ILE	4.1
55	Y9	17	ILE	4.1
4	XD	7	PRO	4.1
25	YA	2156	G	4.1
19	QS	3	ARG	4.1
19	QS	64	GLU	4.1
38	RS	32	LEU	4.1
45	YZ	167	PRO	4.1
19	QS	75	ALA	4.1
30	RG	21	ARG	4.1
1	QA	1202	G	4.1
7	XG	81	GLY	4.1
1	XA	143	A	4.1
1	XA	222	U	4.1
30	RG	53	LEU	4.1
25	YA	2794	C	4.1
4	QD	33	MET	4.1
10	QJ	28	ARG	4.1
54	R8	39	LYS	4.1
30	RG	68	PRO	4.1
36	RQ	140	ALA	4.1
1	QA	221	C	4.1
9	XI	126	SER	4.1
9	QI	10	ARG	4.1
52	Y6	21	TYR	4.1
19	QS	52	TYR	4.1
25	RA	270(M)	U	4.1
1	QA	1234	C	4.1
1	QA	1321	C	4.1
8	XH	115	SER	4.1
9	QI	14	VAL	4.1
25	RA	1125	G	4.1

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Mol	Chain	Res	Type	RSRZ
7	QG	2	ALA	4.1
25	YA	1105	U	4.1
12	QL	64	TYR	4.1
16	XP	1	MET	4.1
1	XA	171	A	4.1
1	XA	389	A	4.1
1	XA	1397	C	4.1
10	QJ	9	ARG	4.1
25	RA	2163	C	4.1
1	QA	1049	U	4.0
44	RY	91	GLU	4.0
9	QI	95	LYS	4.0
20	XT	14	LYS	4.0
30	RG	115	ARG	4.0
10	XJ	40	LEU	4.0
1	XA	455	C	4.0
25	YA	1109	C	4.0
19	XS	2	PRO	4.0
1	XA	162	A	4.0
26	RB	59	A	4.0
30	RG	28	VAL	4.0
25	RA	2803	C	4.0
1	XA	66	G	4.0
11	XK	124	LYS	4.0
21	QU	3	LYS	4.0
1	QA	1226	C	4.0
1	QA	1020	U	4.0
1	XA	65	U	4.0
7	QG	45	ASP	4.0
1	XA	631	G	4.0
1	QA	1116	C	4.0
25	YA	1847	A	4.0
25	RA	2166	G	4.0
28	RE	69	LYS	4.0
30	RG	143	GLU	4.0
1	QA	978	A	4.0
30	RG	180	PHE	4.0
9	QI	7	THR	4.0
13	QM	121	LYS	4.0
31	RH	70	THR	4.0
50	Y4	18	CYS	4.0
1	QA	1124	G	4.0

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Mol	Chain	Res	Type	RSRZ
5	QE	80	ILE	4.0
3	QC	190	ARG	4.0
17	QQ	97	SER	4.0
35	RP	79	ARG	4.0
25	RA	2156	G	4.0
25	RA	2751	G	4.0
31	RH	123	PHE	4.0
9	QI	123	PRO	4.0
25	RA	2165	G	4.0
55	R9	29	ASN	4.0
8	XH	4	ASP	4.0
38	RS	33	LYS	3.9
30	YG	39	ILE	3.9
1	QA	466	C	3.9
19	QS	40	ILE	3.9
30	RG	94	LEU	3.9
10	QJ	7	LYS	3.9
4	XD	42	GLN	3.9
9	QI	75	ASP	3.9
50	R4	51	ASP	3.9
10	XJ	24	VAL	3.9
25	YA	1072	C	3.9
1	QA	1092	A	3.9
25	RA	1044	G	3.9
5	QE	82	VAL	3.9
52	R6	34	LEU	3.9
13	XM	3	ARG	3.9
12	XL	127	GLU	3.9
25	RA	2158	A	3.9
10	XJ	34	VAL	3.9
8	QH	2	LEU	3.9
19	XS	12	ASP	3.9
13	QM	10	PRO	3.9
1	XA	1223	C	3.9
1	XA	1222	G	3.9
7	XG	34	GLY	3.9
19	XS	27	GLU	3.9
2	QB	233	SER	3.9
9	QI	17	VAL	3.9
3	XC	190	ARG	3.9
25	RA	2411	A	3.9
31	RH	48	GLY	3.9

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
31	RH	111	HIS	3.9
2	XB	48	MET	3.9
32	RI	59	ALA	3.9
35	YP	71	VAL	3.9
11	XK	29	ILE	3.9
55	Y9	26	ILE	3.9
1	QA	1051	C	3.9
35	RP	139	LYS	3.9
7	XG	4	ARG	3.9
10	QJ	43	ARG	3.9
13	QM	15	VAL	3.9
38	YS	2	ALA	3.9
1	XA	1094	G	3.9
25	RA	1091	G	3.9
55	Y9	10	ILE	3.9
47	Y1	97	LEU	3.9
51	Y5	2	ALA	3.9
19	QS	35	SER	3.9
30	RG	77	ILE	3.9
1	QA	112	G	3.9
11	XK	12	ARG	3.9
15	QO	2	PRO	3.9
10	QJ	99	LYS	3.9
25	RA	2140	C	3.9
54	R8	41	ILE	3.9
31	RH	59	ARG	3.9
10	QJ	34	VAL	3.8
1	QA	1117	G	3.8
9	QI	52	ALA	3.8
21	XU	14	TRP	3.8
1	QA	88	C	3.8
14	QN	39	LEU	3.8
30	RG	153	ARG	3.8
31	RH	38	SER	3.8
30	YG	34	LEU	3.8
52	Y6	41	PRO	3.8
1	QA	1093	A	3.8
13	XM	8	GLU	3.8
31	RH	32	GLU	3.8
1	QA	1214	C	3.8
3	QC	127	ARG	3.8
50	R4	65	ASP	3.8

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Mol	Chain	Res	Type	RSRZ
7	QG	36	LYS	3.8
44	RY	92	ASN	3.8
10	QJ	65	LEU	3.8
19	QS	15	LEU	3.8
9	XI	15	ALA	3.8
10	XJ	95	GLU	3.8
14	QN	38	GLY	3.8
1	QA	1050	G	3.8
1	QA	959	A	3.8
1	XA	172	A	3.8
14	QN	9	LYS	3.8
30	YG	54	GLU	3.8
31	RH	53	GLU	3.8
22	XV	20	U	3.8
25	RA	1113	U	3.8
4	XD	167	GLY	3.8
13	XM	43	THR	3.8
17	XQ	45	HIS	3.8
2	XB	165	VAL	3.8
31	RH	95	ARG	3.8
36	RQ	104	PHE	3.8
30	YG	135	LEU	3.8
25	RA	2795	G	3.8
5	QE	94	ALA	3.8
31	RH	94	TYR	3.8
1	QA	961	U	3.8
25	YA	2180	U	3.8
5	QE	24	ARG	3.8
30	YG	42	GLY	3.8
10	XJ	54	PHE	3.8
12	QL	23	LYS	3.8
17	QQ	100	LYS	3.8
19	XS	67	VAL	3.8
13	XM	103	THR	3.8
25	YA	1536	A	3.8
2	XB	133	LYS	3.8
1	QA	1025	U	3.8
22	QV	9	G	3.8
25	RA	1460	A	3.8
7	QG	34	GLY	3.8
30	RG	11	TYR	3.8
30	RG	40	ASN	3.8

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
30	RG	99	MET	3.8
40	RU	66	ASN	3.8
51	Y5	52	TYR	3.8
52	Y6	52	VAL	3.8
25	RA	879	G	3.7
27	YD	33	LEU	3.7
35	YP	108	LYS	3.7
1	QA	89	U	3.7
9	QI	8	GLY	3.7
25	YA	1094	U	3.7
10	XJ	72	VAL	3.7
2	XB	96	ARG	3.7
1	XA	197	A	3.7
1	XA	983	A	3.7
19	XS	38	SER	3.7
1	XA	224	C	3.7
30	RG	113	ARG	3.7
31	RH	54	ARG	3.7
31	RH	21	PRO	3.7
20	QT	70	SER	3.7
13	QM	42	ALA	3.7
25	RA	920	G	3.7
13	QM	19	LEU	3.7
1	QA	1130	A	3.7
1	XA	977	A	3.7
50	R4	39	CYS	3.7
52	R6	44	ARG	3.7
3	QC	198	VAL	3.7
1	XA	353	A	3.7
1	QA	1128	C	3.7
12	QL	28	LYS	3.7
14	XN	60	SER	3.7
21	XU	9	ARG	3.7
8	XH	116	LYS	3.7
11	XK	90	GLY	3.7
39	RT	37	GLY	3.7
54	Y8	34	TRP	3.7
31	RH	155	SER	3.7
52	R6	18	ARG	3.7
1	QA	1283	G	3.7
10	XJ	6	ILE	3.7
55	R9	31	LYS	3.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
55	Y9	33	LYS	3.7
36	RQ	105	GLU	3.7
39	YT	115	ARG	3.7
10	QJ	73	ASP	3.7
17	QQ	65	ILE	3.7
25	RA	2177	C	3.7
25	RA	2804	C	3.7
26	RB	5	C	3.7
30	RG	116	ASP	3.7
38	RS	35	ILE	3.7
20	XT	11	SER	3.7
25	RA	896	A	3.7
12	XL	28	LYS	3.7
1	QA	951	G	3.7
30	YG	88	ILE	3.7
19	XS	71	LEU	3.6
9	QI	102	LEU	3.6
25	RA	1090	U	3.6
30	RG	158	ALA	3.6
1	QA	1201	A	3.6
13	QM	39	ILE	3.6
17	QQ	71	PHE	3.6
31	RH	88	LEU	3.6
9	XI	124	GLN	3.6
31	RH	125	VAL	3.6
17	XQ	99	SER	3.6
1	QA	1053	G	3.6
10	QJ	62	HIS	3.6
11	XK	87	THR	3.6
19	QS	76	PRO	3.6
25	YA	2190	G	3.6
1	XA	1236	A	3.6
21	XU	5	ASP	3.6
4	QD	18	LYS	3.6
25	RA	270(L)	U	3.6
16	XP	6	LEU	3.6
17	XQ	93	GLN	3.6
25	YA	1176	G	3.6
1	XA	1028(B)	C	3.6
25	RA	546	C	3.6
46	R0	2	ALA	3.6
5	QE	45	PHE	3.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
5	XE	133	TYR	3.6
34	RO	1	MET	3.6
30	RG	92	VAL	3.6
32	RI	86	THR	3.6
4	QD	25	ARG	3.6
10	XJ	33	GLN	3.6
14	QN	29	ARG	3.6
54	R8	29	LYS	3.6
1	QA	993	G	3.6
9	QI	5	TYR	3.6
50	Y4	31	ILE	3.6
10	XJ	28	ARG	3.6
17	XQ	63	ARG	3.6
52	R6	27	LYS	3.6
54	Y8	29	LYS	3.6
25	RA	654	A	3.6
25	RA	2765	A	3.6
25	YA	1528	A	3.6
10	XJ	21	GLN	3.6
50	R4	9	LEU	3.6
55	R9	28	GLU	3.6
1	QA	1018	C	3.6
1	QA	1037	C	3.6
1	XA	1362(A)	C	3.6
13	XM	2	ALA	3.6
25	YA	1104	C	3.6
1	XA	1003	G	3.6
10	QJ	36	GLY	3.6
1	XA	1006	C	3.6
30	RG	82	LEU	3.6
38	RS	13	ARG	3.6
40	RU	92	ARG	3.6
1	QA	430	A	3.6
1	QA	81	G	3.6
2	XB	16	HIS	3.6
13	QM	5	ALA	3.6
10	XJ	43	ARG	3.5
52	R6	36	LEU	3.5
35	RP	87	ASP	3.5
2	QB	240	GLN	3.5
25	RA	2833	G	3.5
55	R9	21	GLY	3.5

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Mol	Chain	Res	Type	RSRZ
20	XT	8	ARG	3.5
22	QV	47	U	3.5
50	Y4	40	HIS	3.5
25	RA	2101	G	3.5
25	RA	2189	U	3.5
20	QT	79	ARG	3.5
25	YA	2100	G	3.5
25	YA	2153	G	3.5
25	RA	860	U	3.5
1	QA	1007	C	3.5
4	QD	73	ARG	3.5
25	YA	277	C	3.5
44	RY	52	SER	3.5
20	QT	60	GLU	3.5
25	RA	1111	A	3.5
8	QH	116	LYS	3.5
1	QA	1235	U	3.5
9	QI	111	ARG	3.5
45	YZ	130	PRO	3.5
1	QA	1353	G	3.5
44	RY	55	TYR	3.5
4	QD	83	SER	3.5
44	RY	89	PHE	3.5
45	RZ	149	SER	3.5
52	Y6	7	ILE	3.5
4	QD	13	ARG	3.5
4	XD	156	GLU	3.5
1	QA	1249	C	3.5
1	QA	1269	A	3.5
44	RY	87	LYS	3.5
16	XP	71	ARG	3.5
51	Y5	54	GLY	3.5
30	RG	37	VAL	3.5
1	XA	177	C	3.5
1	XA	351	G	3.5
2	QB	33	TYR	3.5
50	R4	29	PRO	3.5
10	QJ	66	ARG	3.5
39	RT	95	ARG	3.5
5	QE	20	GLN	3.5
30	RG	182	LYS	3.5
35	RP	30	THR	3.5

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Mol	Chain	Res	Type	RSRZ
25	RA	2474	C	3.5
25	RA	862	G	3.5
30	RG	46	ALA	3.5
31	RH	19	VAL	3.5
1	QA	1236	A	3.5
1	XA	151	A	3.5
1	XA	949	A	3.5
9	QI	62	TYR	3.5
30	RG	112	PRO	3.4
25	RA	2791	C	3.4
25	YA	273	G	3.4
25	YA	2793	G	3.4
36	RQ	6	ARG	3.4
25	RA	12	U	3.4
10	QJ	40	LEU	3.4
25	RA	2790	A	3.4
11	XK	28	THR	3.4
20	XT	25	ARG	3.4
4	QD	28	SER	3.4
42	YW	113	LYS	3.4
1	QA	1024	G	3.4
19	QS	36	ARG	3.4
20	QT	83	ARG	3.4
25	RA	2268	A	3.4
30	YG	97	ASP	3.4
1	QA	960	U	3.4
20	QT	101	GLY	3.4
1	XA	95	G	3.4
25	YA	11	G	3.4
30	RG	54	GLU	3.4
2	XB	214	ILE	3.4
10	XJ	98	ILE	3.4
20	QT	103	GLY	3.4
19	QS	13	ASP	3.4
16	QP	76	GLN	3.4
1	XA	1016	A	3.4
25	YA	1848	A	3.4
1	XA	42	G	3.4
1	XA	951	G	3.4
25	RA	864	G	3.4
25	RA	2190	G	3.4
42	RW	113	LYS	3.4

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Mol	Chain	Res	Type	RSRZ
19	QS	5	LEU	3.4
22	QV	8	U	3.4
45	RZ	50	GLN	3.4
3	QC	194	GLY	3.4
5	QE	154	GLY	3.4
25	RA	901	A	3.4
28	RE	187	ALA	3.4
1	XA	1221	G	3.4
31	RH	158	HIS	3.4
45	RZ	176	PRO	3.4
21	XU	21	TYR	3.4
1	XA	1046	A	3.4
25	RA	1046	A	3.4
1	XA	144	G	3.4
1	XA	180	U	3.4
3	QC	2	GLY	3.4
1	QA	1284	C	3.4
1	XA	1018	C	3.4
55	Y9	19	ARG	3.4
13	XM	122	LYS	3.4
53	Y7	48	LYS	3.4
1	XA	134	A	3.4
25	RA	2733	A	3.4
25	YA	1048	A	3.4
50	R4	47	GLN	3.4
9	QI	13	ALA	3.4
1	QA	1043	C	3.4
1	QA	1322	C	3.4
1	XA	191	G	3.4
1	XA	610	G	3.4
30	RG	62	LEU	3.4
16	XP	41	PRO	3.4
2	QB	229	VAL	3.4
31	RH	76	VAL	3.4
19	QS	61	TYR	3.4
1	XA	263	A	3.4
44	RY	79	CYS	3.3
1	QA	1047	G	3.3
1	QA	1200	C	3.3
1	XA	1028	C	3.3
20	XT	105	SER	3.3
6	XF	64	GLN	3.3

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Mol	Chain	Res	Type	RSRZ
21	QU	4	GLY	3.3
25	RA	2630	G	3.3
50	Y4	15	ILE	3.3
10	QJ	12	ASP	3.3
2	QB	41	ILE	3.3
19	XS	78	ARG	3.3
25	YA	229	A	3.3
10	QJ	39	PRO	3.3
35	RP	27	HIS	3.3
37	RR	91	GLN	3.3
13	XM	53	VAL	3.3
32	YI	84	GLY	3.3
35	RP	76	LYS	3.3
4	QD	40	PRO	3.3
29	YF	200	GLU	3.3
28	YE	187	ALA	3.3
10	XJ	55	LYS	3.3
1	QA	947	G	3.3
1	QA	1323	G	3.3
35	YP	69	GLY	3.3
28	YE	56	PRO	3.3
38	RS	93	LYS	3.3
5	QE	130	ASN	3.3
17	XQ	71	PHE	3.3
1	QA	113	G	3.3
1	XA	105	G	3.3
19	QS	37	ARG	3.3
35	RP	64	LYS	3.3
4	QD	6	GLY	3.3
1	XA	998(A)	C	3.3
1	XA	727	G	3.3
19	XS	34	TRP	3.3
1	XA	978	A	3.3
19	QS	47	HIS	3.3
20	QT	29	LYS	3.3
25	RA	887	A	3.3
1	QA	985	C	3.3
1	XA	186(A)	C	3.3
1	XA	1364	U	3.3
9	QI	28	VAL	3.3
32	YI	61	ARG	3.3
47	Y1	36	GLY	3.3

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Mol	Chain	Res	Type	RSRZ
52	Y6	19	ARG	3.3
20	XT	85	MET	3.3
22	QV	49	G	3.3
25	RA	2793	G	3.3
44	RY	57	GLN	3.3
50	R4	25	TYR	3.3
4	QD	69	GLY	3.3
13	XM	4	ILE	3.3
25	RA	1018	C	3.3
31	YH	5	GLY	3.3
3	QC	6	HIS	3.3
7	QG	108	ALA	3.3
19	XS	76	PRO	3.3
19	XS	77	THR	3.3
31	RH	73	ALA	3.3
1	QA	428	G	3.3
20	XT	101	GLY	3.3
25	RA	273(A)	G	3.3
25	RA	2104	G	3.3
50	Y4	39	CYS	3.3
1	QA	315	A	3.3
1	XA	1322	C	3.3
10	XJ	13	HIS	3.3
40	RU	117	GLN	3.3
20	XT	69	GLY	3.3
35	RP	75	ILE	3.3
25	YA	1545(A)	A	3.2
1	XA	186	C	3.2
1	XA	754	C	3.2
37	RR	5	LYS	3.2
20	QT	88	VAL	3.2
31	RH	74	ASN	3.2
20	QT	56	MET	3.2
54	R8	37	SER	3.2
55	R9	13	LYS	3.2
1	XA	950	U	3.2
4	QD	145	GLU	3.2
31	RH	145	ALA	3.2
54	R8	35	GLN	3.2
1	XA	1036	G	3.2
16	XP	13	HIS	3.2
25	RA	2108	C	3.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
25	RA	2345	G	3.2
25	YA	2861	G	3.2
55	Y9	20	HIS	3.2
3	XC	15	THR	3.2
9	QI	85	LEU	3.2
31	RH	8	PRO	3.2
52	Y6	10	LEU	3.2
15	QO	26	GLU	3.2
45	RZ	55	HIS	3.2
4	XD	84	LYS	3.2
54	R8	46	ARG	3.2
1	XA	153	C	3.2
20	XT	60	GLU	3.2
12	QL	63	GLY	3.2
30	YG	37	VAL	3.2
1	XA	173	U	3.2
12	QL	94	PRO	3.2
1	XA	315	A	3.2
1	XA	1004	A	3.2
25	YA	2142	C	3.2
26	RB	28	C	3.2
13	XM	54	VAL	3.2
1	QA	310	G	3.2
4	QD	115	ARG	3.2
54	Y8	35	GLN	3.2
17	XQ	98	LEU	3.2
25	RA	1154	G	3.2
4	QD	35	ARG	3.2
14	XN	18	VAL	3.2
44	RY	50	ARG	3.2
1	QA	1288	A	3.2
1	XA	453	A	3.2
1	XA	1041	A	3.2
25	RA	2188	C	3.2
25	YA	2155	G	3.2
1	QA	1240	U	3.2
4	XD	23	GLY	3.2
30	YG	161	THR	3.2
52	Y6	30	THR	3.2
3	QC	17	ASP	3.2
1	QA	1149	C	3.2
1	QA	1324	A	3.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	QA	1363	A	3.2
2	QB	19	HIS	3.2
25	RA	2892	A	3.2
4	QD	30	LYS	3.2
2	XB	188	ALA	3.2
4	XD	154	ASN	3.2
16	XP	80	PHE	3.2
25	RA	361	G	3.2
1	XA	149	A	3.2
1	XA	466	C	3.2
26	RB	6	C	3.2
3	QC	186	PHE	3.2
5	XE	129	ILE	3.2
16	XP	19	ILE	3.2
4	QD	4	TYR	3.2
16	XP	76	GLN	3.2
27	RD	40	THR	3.2
31	RH	30	LYS	3.2
44	YY	102	CYS	3.2
1	QA	266	G	3.2
22	QV	12	G	3.2
25	RA	2157	G	3.2
25	RA	2523	G	3.2
50	R4	57	GLU	3.2
10	XJ	93	GLY	3.2
35	RP	71	VAL	3.2
30	YG	69	ALA	3.2
36	RQ	31	ASP	3.2
1	XA	1047	G	3.2
19	XS	70	LYS	3.2
20	QT	72	LEU	3.2
31	RH	72	ILE	3.2
39	RT	116	ALA	3.2
1	QA	1115	C	3.1
1	QA	171	A	3.1
1	QA	1067	A	3.1
36	RQ	21	THR	3.1
1	QA	1232	U	3.1
2	QB	163	PHE	3.1
25	RA	2144	U	3.1
38	RS	29	PHE	3.1
9	QI	83	ARG	3.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
14	QN	34	TYR	3.1
19	QS	53	ASN	3.1
52	Y6	15	GLU	3.1
1	XA	218	C	3.1
2	QB	70	PHE	3.1
2	QB	80	ILE	3.1
1	XA	313	A	3.1
4	QD	21	LEU	3.1
17	XQ	83	ASP	3.1
30	YG	93	THR	3.1
25	RA	900	A	3.1
47	Y1	95	LEU	3.1
54	R8	61	LEU	3.1
9	QI	106	ALA	3.1
10	XJ	59	SER	3.1
4	XD	24	GLU	3.1
16	XP	83	GLU	3.1
32	RI	54	GLN	3.1
13	QM	120	LYS	3.1
31	RH	106	THR	3.1
36	RQ	88	GLY	3.1
1	QA	176	C	3.1
1	XA	115	G	3.1
25	RA	2747	G	3.1
25	YA	2124	G	3.1
26	RB	31	C	3.1
25	RA	1444(A)	A	3.1
12	XL	23	LYS	3.1
9	XI	20	ARG	3.1
20	XT	24	LEU	3.1
1	QA	1242	C	3.1
10	QJ	80	LYS	3.1
1	QA	1302	U	3.1
1	XA	269	C	3.1
1	XA	380	G	3.1
1	XA	1048	G	3.1
1	XA	1234	C	3.1
48	Y2	11	GLU	3.1
25	RA	1114	G	3.1
45	YZ	142	SER	3.1
25	RA	1469	A	3.1
14	XN	5	ALA	3.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
52	Y6	25	LYS	3.1
1	XA	345	C	3.1
2	XB	11	LEU	3.1
5	XE	125	SER	3.1
46	R0	54	GLY	3.1
25	RA	2372	G	3.1
1	XA	51	A	3.1
25	RA	861	A	3.1
36	RQ	89	ASN	3.1
16	XP	75	ARG	3.1
45	YZ	121	HIS	3.1
9	QI	47	LEU	3.1
32	RI	144	VAL	3.1
46	Y0	57	PHE	3.1
31	RH	85	LYS	3.1
45	RZ	92	SER	3.1
1	QA	1090	U	3.1
1	XA	1049	U	3.1
1	XA	43	C	3.1
1	XA	984	C	3.1
37	RR	2	ARG	3.1
1	QA	409	G	3.1
1	XA	388	G	3.1
25	YA	1888	G	3.1
44	YY	99	CYS	3.1
3	QC	7	PRO	3.1
52	R6	30	THR	3.1
19	QS	16	LEU	3.1
30	YG	139	LEU	3.1
31	YH	155	SER	3.1
1	QA	998(A)	C	3.1
28	RE	143	ASN	3.1
11	XK	31	THR	3.1
26	RB	58	A	3.1
30	RG	162	THR	3.1
30	YG	129	GLY	3.1
31	RH	108	GLY	3.1
40	RU	69	CYS	3.1
1	XA	1034	G	3.1
10	XJ	70	ARG	3.1
25	RA	1449(A)	G	3.1
4	QD	80	GLU	3.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
45	RZ	155	LEU	3.1
14	QN	7	ILE	3.1
15	XO	88	ARG	3.1
14	QN	32	SER	3.1
31	RH	110	SER	3.1
25	RA	1863	G	3.1
14	QN	26	ARG	3.1
31	RH	6	ARG	3.1
13	QM	100	GLY	3.1
1	XA	1321	C	3.0
7	QG	113	GLU	3.0
25	YA	271(A)	C	3.0
30	RG	165	THR	3.0
9	QI	11	LYS	3.0
2	XB	15	VAL	3.0
25	RA	1045	A	3.0
30	YG	172	LEU	3.0
1	QA	1091	U	3.0
25	RA	226	G	3.0
25	RA	2109	U	3.0
25	YA	1108	U	3.0
30	RG	129	GLY	3.0
1	XA	142	G	3.0
1	XA	1233	G	3.0
11	XK	81	ASP	3.0
12	QL	31	PRO	3.0
8	XH	3	THR	3.0
4	XD	168	ARG	3.0
8	QH	104	ARG	3.0
30	RG	175	LEU	3.0
32	YI	25	TYR	3.0
10	XJ	9	ARG	3.0
44	RY	2	ARG	3.0
25	RA	1034	G	3.0
30	YG	80	PHE	3.0
1	XA	186(B)	C	3.0
17	QQ	66	SER	3.0
1	XA	1085	U	3.0
7	XG	33	ASP	3.0
25	RA	2141	G	3.0
28	RE	79	ARG	3.0
46	R0	11	ARG	3.0

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Mol	Chain	Res	Type	RSRZ
4	QD	112	VAL	3.0
9	XI	65	VAL	3.0
23	QY	32	U	3.0
1	XA	729	A	3.0
25	RA	2757	A	3.0
30	YG	137	GLU	3.0
35	RP	35	HIS	3.0
1	XA	106	C	3.0
1	XA	354	G	3.0
2	QB	234	PRO	3.0
8	XH	127	LEU	3.0
19	QS	10	PHE	3.0
25	RA	10	G	3.0
10	XJ	66	ARG	3.0
36	RQ	133	ARG	3.0
10	XJ	80	LYS	3.0
25	YA	1054	A	3.0
31	YH	134	SER	3.0
54	R8	34	TRP	3.0
30	RG	95	ARG	3.0
25	RA	1448	G	3.0
1	QA	1095	U	3.0
12	XL	91	LYS	3.0
50	Y4	52	THR	3.0
31	RH	87	LEU	3.0
50	Y4	55	ARG	3.0
45	RZ	169	GLU	3.0
1	XA	219	C	3.0
1	QA	222	U	3.0
30	RG	178	PHE	3.0
1	QA	79	G	3.0
14	QN	30	ALA	3.0
25	RA	2153	G	3.0
28	RE	1	MET	3.0
30	YG	154	GLY	3.0
51	Y5	58	LEU	3.0
1	QA	1097	C	3.0
1	XA	74	C	3.0
1	XA	99	C	3.0
51	R5	2	ALA	3.0
1	QA	309	G	3.0
25	RA	1190	G	3.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
25	YA	1047	G	3.0
44	YY	55	TYR	3.0
4	QD	45	GLN	3.0
14	XN	57	ARG	3.0
25	RA	863	A	3.0
10	XJ	7	LYS	3.0
47	Y1	96	LYS	3.0
1	XA	170	U	3.0
45	YZ	160	GLY	3.0
10	QJ	37	PRO	2.9
12	QL	62	SER	2.9
31	RH	112	PRO	2.9
49	R3	2	PRO	2.9
20	QT	64	ASP	2.9
25	RA	1470	G	2.9
30	YG	74	LYS	2.9
25	RA	402	A	2.9
36	RQ	83	MET	2.9
2	QB	5	ILE	2.9
37	RR	118	GLU	2.9
45	RZ	121	HIS	2.9
9	XI	9	ARG	2.9
15	QO	88	ARG	2.9
25	YA	270(Z)	U	2.9
1	XA	369	C	2.9
19	XS	15	LEU	2.9
50	R4	60	GLN	2.9
4	XD	2	GLY	2.9
30	RG	63	ILE	2.9
38	RS	60	GLY	2.9
1	XA	477	G	2.9
15	XO	64	ARG	2.9
1	QA	1280	A	2.9
25	RA	1050	A	2.9
1	QA	950	U	2.9
20	XT	104	LEU	2.9
45	YZ	155	LEU	2.9
19	QS	11	VAL	2.9
25	RA	1121	C	2.9
25	YA	1464	C	2.9
50	Y4	34	GLU	2.9
3	QC	184	TYR	2.9

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	QA	1358	U	2.9
1	XA	349	A	2.9
26	RB	61	G	2.9
7	XG	3	ARG	2.9
30	RG	24	GLY	2.9
55	Y9	27	CYS	2.9
25	YA	270(D)	C	2.9
30	YG	100	TRP	2.9
14	QN	56	VAL	2.9
19	QS	41	VAL	2.9
47	R1	47	GLN	2.9
9	QI	105	ASP	2.9
1	XA	104	G	2.9
1	XA	1017	G	2.9
1	XA	1033	G	2.9
25	YA	2792	G	2.9
10	XJ	16	LEU	2.9
19	XS	52	TYR	2.9
25	RA	267	C	2.9
25	RA	1124	C	2.9
31	RH	7	LEU	2.9
40	RU	76	TYR	2.9
35	RP	16	ARG	2.9
20	XT	21	LYS	2.9
40	RU	2	PRO	2.9
21	XU	2	GLY	2.9
30	RG	42	GLY	2.9
19	QS	12	ASP	2.9
4	QD	49	ARG	2.9
15	QO	68	ARG	2.9
25	RA	1048	A	2.9
1	QA	218	C	2.9
1	QA	1038	C	2.9
1	XA	366	C	2.9
14	XN	15	LYS	2.9
13	XM	97	PRO	2.9
16	QP	10	GLY	2.9
3	QC	154	SER	2.9
17	XQ	44	ALA	2.9
35	RP	70	GLN	2.9
19	QS	4	SER	2.9
7	QG	26	PHE	2.9

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	XA	192	U	2.9
9	QI	93	ARG	2.9
16	QP	9	PHE	2.9
20	XT	62	LEU	2.9
30	RG	141	PHE	2.9
39	RT	93	ARG	2.9
2	XB	12	GLU	2.9
39	YT	21	GLU	2.9
1	XA	179	A	2.9
19	QS	82	GLY	2.9
25	YA	2103	C	2.9
3	QC	196	LEU	2.9
4	XD	97	LEU	2.9
12	XL	89	ARG	2.9
17	XQ	101	ARG	2.9
20	QT	25	ARG	2.9
51	Y5	55	ARG	2.9
1	QA	1278	U	2.9
10	QJ	101	VAL	2.9
15	XO	61	GLY	2.9
16	QP	48	TRP	2.9
45	YZ	120	ILE	2.9
16	XP	67	THR	2.9
20	XT	67	ALA	2.9
30	RG	151	ALA	2.9
26	RB	29	A	2.9
1	XA	176	C	2.9
26	RB	4	C	2.9
1	XA	113	G	2.9
10	QJ	68	HIS	2.9
9	QI	31	GLN	2.9
15	XO	68	ARG	2.9
50	Y4	12	ALA	2.9
25	YA	270(B)	A	2.9
37	RR	6	SER	2.9
13	XM	88	ARG	2.9
20	XT	58	LYS	2.8
1	QA	1370	G	2.8
4	XD	181	MET	2.8
25	RA	270(O)	U	2.8
25	RA	1122	G	2.8
7	XG	52	GLU	2.8

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Mol	Chain	Res	Type	RSRZ
52	R6	48	VAL	2.8
13	XM	104	ARG	2.8
31	RH	132	ARG	2.8
15	QO	89	GLY	2.8
25	YA	1085	A	2.8
25	YA	1103	A	2.8
1	XA	193	C	2.8
1	XA	578	C	2.8
1	XA	979	C	2.8
45	YZ	159	PRO	2.8
1	QA	95	G	2.8
19	XS	37	ARG	2.8
25	RA	2382	G	2.8
38	RS	30	ARG	2.8
44	RY	102	CYS	2.8
9	QI	119	ALA	2.8
38	RS	55	ALA	2.8
25	YA	896	A	2.8
17	QQ	63	ARG	2.8
52	R6	19	ARG	2.8
40	RU	62	ILE	2.8
1	XA	428	G	2.8
19	QS	28	LYS	2.8
44	YY	2	ARG	2.8
2	QB	232	PRO	2.8
1	XA	59	A	2.8
1	XA	262	A	2.8
25	YA	2476	A	2.8
5	XE	135	THR	2.8
14	XN	6	LEU	2.8
14	QN	17	LYS	2.8
44	RY	88	LYS	2.8
47	R1	26	ARG	2.8
1	QA	64	G	2.8
3	QC	167	TRP	2.8
9	QI	29	ASN	2.8
10	XJ	37	PRO	2.8
25	RA	2722	G	2.8
25	YA	273(A)	G	2.8
30	RG	132	ASN	2.8
12	XL	7	ILE	2.8
45	RZ	115	GLY	2.8

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
50	Y4	25	TYR	2.8
25	RA	2107	C	2.8
51	R5	55	ARG	2.8
32	RI	53	ALA	2.8
54	R8	40	GLU	2.8
9	QI	81	ILE	2.8
41	YV	101	GLY	2.8
20	XT	74	LYS	2.8
50	Y4	59	PHE	2.8
1	QA	146	G	2.8
1	QA	1068	G	2.8
1	QA	1127	G	2.8
25	RA	1388	G	2.8
1	QA	173	U	2.8
1	QA	197	A	2.8
25	YA	889	C	2.8
25	YA	2402	C	2.8
45	YZ	166	SER	2.8
5	QE	47	LYS	2.8
11	XK	42	TRP	2.8
9	QI	18	PHE	2.8
16	XP	12	LYS	2.8
21	QU	20	LYS	2.8
30	YG	131	TYR	2.8
1	QA	1212	U	2.8
3	QC	165	THR	2.8
1	XA	357	G	2.8
25	RA	2290	G	2.8
25	RA	2543	G	2.8
1	QA	417	C	2.8
5	XE	64	ARG	2.8
35	YP	16	ARG	2.8
39	YT	56	GLY	2.8
31	RH	60	ARG	2.8
31	RH	142	GLY	2.8
1	XA	232	G	2.8
1	XA	1365	G	2.8
14	XN	61	TRP	2.8
25	RA	2805	G	2.8
27	YD	237	GLU	2.8
22	XV	21	A	2.8
52	R6	32	ASN	2.8

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
9	XI	31	GLN	2.8
35	YP	118	GLY	2.8
1	XA	992	U	2.8
1	QA	311	C	2.8
50	R4	61	ARG	2.8
1	QA	42	G	2.8
1	QA	1387	G	2.8
1	XA	190	G	2.8
1	XA	657	G	2.8
18	XR	63	GLN	2.8
25	YA	878	A	2.8
25	YA	2805	G	2.8
38	RS	38	GLN	2.8
5	QE	129	ILE	2.7
16	QP	19	ILE	2.7
16	QP	80	PHE	2.7
44	RY	22	GLY	2.7
8	QH	4	ASP	2.7
36	YQ	136	ALA	2.7
25	RA	366	C	2.7
31	RH	105	LEU	2.7
1	QA	313	A	2.7
1	QA	1289	A	2.7
1	QA	46	G	2.7
1	QA	1108	G	2.7
1	QA	1233	G	2.7
30	YG	84	LYS	2.7
14	QN	57	ARG	2.7
20	XT	83	ARG	2.7
14	XN	30	ALA	2.7
25	RA	1019	U	2.7
25	RA	2167	U	2.7
28	YE	204	ALA	2.7
7	QG	38	LEU	2.7
10	XJ	57	LYS	2.7
12	QL	115	LYS	2.7
4	QD	50	ARG	2.7
39	YT	51	ARG	2.7
25	RA	2477	C	2.7
25	YA	1463	C	2.7
30	YG	160	VAL	2.7
31	RH	26	VAL	2.7

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Mol	Chain	Res	Type	RSRZ
31	RH	44	VAL	2.7
1	QA	426	G	2.7
1	QA	570	G	2.7
22	QV	46	G	2.7
1	QA	1125	U	2.7
4	QD	46	LYS	2.7
2	QB	144	ARG	2.7
20	QT	86	ARG	2.7
20	XT	23	ARG	2.7
30	RG	26	GLN	2.7
2	QB	31	TYR	2.7
30	RG	146	TYR	2.7
9	QI	109	VAL	2.7
10	XJ	17	ASP	2.7
1	XA	201	C	2.7
1	XA	355	C	2.7
3	QC	177	THR	2.7
31	YH	135	GLY	2.7
31	YH	161	GLY	2.7
35	RP	118	GLY	2.7
51	R5	50	GLY	2.7
10	XJ	64	GLU	2.7
1	QA	1156	G	2.7
1	XA	993	G	2.7
1	XA	1031	G	2.7
1	XA	1353	G	2.7
25	RA	273	G	2.7
34	RO	30	ALA	2.7
4	QD	209	ARG	2.7
9	QI	68	GLY	2.7
16	XP	15	PRO	2.7
20	QT	22	ARG	2.7
47	Y1	35	THR	2.7
9	XI	110	GLU	2.7
12	QL	52	LEU	2.7
35	RP	135	LEU	2.7
1	QA	223	U	2.7
1	QA	1261	A	2.7
25	RA	1081	U	2.7
55	Y9	14	CYS	2.7
1	QA	939	G	2.7
30	YG	73	ALA	2.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
40	RU	58	ARG	2.7
1	XA	848	C	2.7
50	Y4	20	ASN	2.7
25	RA	1508	A	2.7
13	QM	90	LEU	2.7
1	XA	1050	G	2.7
17	XQ	69	LYS	2.7
20	QT	21	LYS	2.7
35	RP	38	GLN	2.7
9	XI	125	TYR	2.7
30	YG	28	VAL	2.7
1	QA	1326	C	2.7
1	XA	1039	C	2.7
1	XA	1219	U	2.7
39	YT	135	ALA	2.7
2	QB	14	GLY	2.7
1	QA	55	A	2.7
1	XA	728	A	2.7
20	QT	85	MET	2.7
39	YT	133	GLU	2.7
25	RA	1847	A	2.7
25	YA	529	A	2.7
30	YG	118	ARG	2.7
4	QD	152	SER	2.7
4	XD	38	TYR	2.7
31	RH	163	TYR	2.7
1	QA	190	G	2.7
11	XK	15	ALA	2.7
27	RD	35	LYS	2.7
25	RA	2113	U	2.7
40	RU	65	ILE	2.7
45	RZ	146	ILE	2.7
28	YE	79	ARG	2.7
1	QA	1268	A	2.7
4	QD	12	CYS	2.7
36	RQ	112	GLU	2.7
40	RU	60	LEU	2.7
55	R9	8	LYS	2.7
4	QD	3	ARG	2.7
13	QM	14	ARG	2.7
1	QA	427	U	2.7
1	QA	1443	G	2.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
25	RA	1500	G	2.7
17	XQ	16	GLN	2.7
19	QS	51	VAL	2.7
52	Y6	47	THR	2.7
1	XA	356	A	2.6
19	QS	26	GLY	2.6
9	XI	121	ARG	2.6
21	XU	3	LYS	2.6
28	RE	56	PRO	2.6
44	YY	82	PRO	2.6
1	XA	1023	G	2.6
4	XD	118	ARG	2.6
16	XP	28	ARG	2.6
22	XV	15	G	2.6
25	RA	1957	C	2.6
25	RA	2100	G	2.6
4	QD	125	HIS	2.6
5	XE	89	ILE	2.6
28	RE	10	GLY	2.6
1	XA	1093	A	2.6
1	XA	1201	A	2.6
45	YZ	148	ASP	2.6
1	QA	82	U	2.6
4	QD	157	LEU	2.6
4	XD	135	LEU	2.6
27	RD	237	GLU	2.6
31	RH	23	ARG	2.6
35	RP	65	ARG	2.6
50	R4	40	HIS	2.6
25	RA	1215	G	2.6
3	QC	195	VAL	2.6
36	RQ	102	VAL	2.6
13	XM	106	ASN	2.6
1	QA	195	A	2.6
3	XC	179	ARG	2.6
12	QL	73	GLU	2.6
15	QO	15	PHE	2.6
20	QT	62	LEU	2.6
30	RG	16	ARG	2.6
3	QC	160	ALA	2.6
15	QO	30	ALA	2.6
29	RF	166	ALA	2.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
41	RV	12	TYR	2.6
12	XL	13	LYS	2.6
16	XP	35	LYS	2.6
25	YA	270(L)	U	2.6
25	YA	362	U	2.6
1	QA	366	C	2.6
1	QA	1314	C	2.6
1	XA	178	C	2.6
25	YA	1049	C	2.6
30	RG	70	VAL	2.6
44	RY	3	VAL	2.6
13	QM	50	GLU	2.6
30	RG	80	PHE	2.6
49	R3	48	GLU	2.6
1	QA	44	G	2.6
22	QV	64	G	2.6
25	RA	818	G	2.6
40	RU	97	ASP	2.6
1	QA	1357	A	2.6
1	XA	393	A	2.6
20	XT	29	LYS	2.6
22	QV	21	A	2.6
25	YA	1508	A	2.6
1	QA	1348	U	2.6
1	XA	114	U	2.6
31	RH	97	ARG	2.6
25	RA	2142	C	2.6
25	YA	1467	C	2.6
11	XK	20	TYR	2.6
11	XK	127	LYS	2.6
9	XI	75	ASP	2.6
27	RD	156	ALA	2.6
46	Y0	56	ASP	2.6
1	QA	1023	G	2.6
15	XO	60	VAL	2.6
26	RB	54	G	2.6
25	YA	1545	A	2.6
10	QJ	25	GLU	2.6
26	RB	55	U	2.6
35	RP	32	THR	2.6
27	RD	33	LEU	2.6
49	R3	60	GLU	2.6

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Mol	Chain	Res	Type	RSRZ
15	XO	62	GLN	2.6
16	XP	82	GLN	2.6
20	XT	81	LYS	2.6
1	QA	150	C	2.6
1	QA	948	C	2.6
1	QA	1244	C	2.6
29	RF	171	PRO	2.6
2	XB	7	VAL	2.6
13	QM	45	VAL	2.6
1	QA	925	G	2.6
1	XA	140	A	2.6
1	XA	476	G	2.6
1	XA	1306	A	2.6
11	QK	31	THR	2.6
13	QM	96	LEU	2.6
51	Y5	59	GLU	2.6
25	RA	30	G	2.6
25	RA	1191	G	2.6
25	YA	1929	G	2.6
25	YA	2406	U	2.6
25	YA	2790	A	2.6
30	RG	124	SER	2.6
20	XT	63	ILE	2.6
31	YH	152	ARG	2.6
47	Y1	21	ARG	2.6
16	XP	48	TRP	2.6
1	QA	194	C	2.6
36	RQ	1	MET	2.6
4	QD	10	ARG	2.6
13	QM	87	TYR	2.6
37	YR	19	ALA	2.6
1	XA	130	A	2.6
8	XH	126	LYS	2.6
25	RA	101	G	2.6
25	YA	890	A	2.6
30	YG	38	VAL	2.6
1	XA	970	C	2.6
11	XK	22	HIS	2.6
25	RA	1751	C	2.6
12	QL	51	ALA	2.6
13	QM	105	THR	2.6
5	XE	128	PRO	2.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
28	RE	41	LYS	2.6
33	RN	84	LYS	2.6
45	RZ	177	PRO	2.6
9	QI	12	GLU	2.6
10	QJ	88	LEU	2.6
25	RA	953	A	2.6
25	YA	887	A	2.6
24	QX	7	G	2.6
25	RA	2182	G	2.6
26	RB	56	G	2.6
30	YG	72	ARG	2.6
1	XA	67	C	2.6
25	RA	2381	C	2.6
38	YS	33	LYS	2.6
35	RP	119	GLU	2.6
54	Y8	61	LEU	2.5
40	YU	75	ASN	2.5
52	Y6	29	ASN	2.5
44	RY	18	GLY	2.5
1	QA	727	G	2.5
1	QA	1031	G	2.5
1	XA	1305	G	2.5
2	QB	15	VAL	2.5
4	XD	4	TYR	2.5
25	RA	1461	G	2.5
31	RH	164	TYR	2.5
2	XB	187	LEU	2.5
20	XT	53	LEU	2.5
36	RQ	59	ARG	2.5
42	RW	92	ARG	2.5
2	XB	160	ASP	2.5
5	XE	130	ASN	2.5
21	XU	19	GLY	2.5
44	YY	103	GLY	2.5
1	XA	1005	A	2.5
1	XA	1151	A	2.5
5	XE	122	GLU	2.5
10	XJ	101	VAL	2.5
17	QQ	44	ALA	2.5
25	RA	654(U)	A	2.5
31	RH	124	GLU	2.5
36	RQ	65	PHE	2.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
31	RH	122	THR	2.5
46	R0	10	THR	2.5
50	R4	38	LYS	2.5
1	QA	265	G	2.5
1	QA	1243	C	2.5
4	XD	6	GLY	2.5
11	XK	27	ASN	2.5
25	RA	858	U	2.5
46	Y0	3	HIS	2.5
14	XN	31	ARG	2.5
21	XU	7	ARG	2.5
29	YF	166	ALA	2.5
12	QL	93	LEU	2.5
13	XM	96	LEU	2.5
14	XN	9	LYS	2.5
1	XA	622	A	2.5
7	XG	55	GLY	2.5
14	QN	55	GLY	2.5
15	XO	89	GLY	2.5
25	RA	221	A	2.5
25	RA	223	A	2.5
25	YA	276	A	2.5
1	XA	381	C	2.5
1	XA	1182	G	2.5
22	QV	20	U	2.5
25	RA	2130	U	2.5
25	RA	2766	G	2.5
30	YG	41	GLN	2.5
31	RH	58	GLU	2.5
35	RP	110	TYR	2.5
52	R6	8	LYS	2.5
3	QC	174	PRO	2.5
9	XI	123	PRO	2.5
35	YP	72	PRO	2.5
31	RH	84	SER	2.5
2	QB	12	GLU	2.5
14	QN	4	LYS	2.5
28	RE	54	GLN	2.5
1	XA	234	C	2.5
1	XA	843	U	2.5
1	XA	952	U	2.5
25	YA	270(C)	C	2.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	QA	1231	G	2.5
2	QB	130	ARG	2.5
25	RA	1176	G	2.5
39	RT	129	ARG	2.5
45	RZ	167	PRO	2.5
31	RH	20	ALA	2.5
44	YY	91	GLU	2.5
45	RZ	145	GLU	2.5
1	QA	32	A	2.5
1	XA	611	A	2.5
1	XA	1287	A	2.5
25	YA	330	A	2.5
50	R4	20	ASN	2.5
1	QA	1066	C	2.5
2	QB	96	ARG	2.5
9	QI	30	GLY	2.5
25	RA	1080	C	2.5
1	QA	198	G	2.5
1	QA	1021	G	2.5
1	QA	1181	G	2.5
31	RH	167	GLU	2.5
2	QB	11	LEU	2.5
47	Y1	17	SER	2.5
13	XM	94	ARG	2.5
2	QB	38	GLY	2.5
12	QL	95	GLY	2.5
13	QM	89	GLY	2.5
19	QS	85	LYS	2.5
36	RQ	24	GLY	2.5
47	R1	78	LYS	2.5
1	QA	1303	C	2.5
1	XA	620	C	2.5
17	QQ	35	VAL	2.5
25	RA	654(T)	C	2.5
30	YG	14	GLU	2.5
31	RH	69	ARG	2.5
35	YP	56	SER	2.5
38	RS	27	SER	2.5
1	XA	316	G	2.5
1	XA	1323	G	2.5
1	XA	1331	G	2.5
9	QI	80	GLY	2.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
10	QJ	69	ASN	2.5
25	YA	2523	G	2.5
30	YG	40	ASN	2.5
37	RR	7	GLY	2.5
4	XD	158	ILE	2.5
4	XD	40	PRO	2.5
19	QS	9	VAL	2.5
40	RU	89	GLU	2.5
25	RA	632	A	2.5
25	RA	2665	A	2.5
45	RZ	159	PRO	2.5
2	QB	21	ARG	2.5
7	QG	78	ARG	2.5
10	XJ	46	ARG	2.5
1	QA	1362	C	2.5
1	XA	169	C	2.5
17	QQ	93	GLN	2.5
20	XT	22	ARG	2.5
9	XI	27	THR	2.5
17	XQ	42	TYR	2.5
10	XJ	68	HIS	2.5
31	RH	31	GLY	2.5
51	R5	59	GLU	2.5
1	QA	852	G	2.5
12	QL	27	LEU	2.5
13	QM	11	ARG	2.5
25	RA	1144	G	2.5
25	YA	275	G	2.5
54	R8	48	PHE	2.5
1	QA	1148	U	2.5
13	QM	28	ALA	2.5
21	XU	23	PRO	2.5
1	QA	1183	A	2.5
7	QG	156	TRP	2.5
1	XA	390	C	2.5
2	QB	16	HIS	2.5
4	QD	41	GLY	2.5
9	QI	39	GLY	2.5
16	XP	11	SER	2.5
30	YG	145	THR	2.5
31	YH	63	SER	2.5
2	QB	32	ILE	2.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
7	QG	37	ASN	2.5
14	XN	41	ARG	2.5
30	YG	143	GLU	2.5
30	RG	163	ALA	2.4
35	YP	68	GLN	2.4
1	QA	973	G	2.4
1	QA	1361	G	2.4
1	QA	1405	G	2.4
10	XJ	36	GLY	2.4
25	RA	1525	G	2.4
25	YA	1056	G	2.4
25	YA	1465	G	2.4
3	XC	79	ARG	2.4
13	QM	71	ARG	2.4
16	XP	29	ASP	2.4
19	QS	49	ILE	2.4
19	XS	44	MET	2.4
31	RH	61	HIS	2.4
25	RA	2476	A	2.4
31	RH	152	ARG	2.4
36	RQ	135	ASP	2.4
1	QA	1109	C	2.4
1	XA	314	C	2.4
10	XJ	47	PHE	2.4
25	RA	885	C	2.4
44	RY	47	LYS	2.4
31	RH	96	ALA	2.4
8	QH	18	ARG	2.4
10	XJ	4	ILE	2.4
12	QL	50	SER	2.4
13	QM	65	LYS	2.4
35	RP	117	GLU	2.4
35	YP	64	LYS	2.4
1	QA	1241	G	2.4
1	QA	1271	G	2.4
1	XA	426	G	2.4
1	XA	1304	G	2.4
19	XS	16	LEU	2.4
29	RF	181	LEU	2.4
44	RY	49	VAL	2.4
1	QA	312	C	2.4
1	QA	949	A	2.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	QA	1354	C	2.4
1	XA	373	A	2.4
1	XA	478	A	2.4
2	QB	188	ALA	2.4
25	RA	1387	C	2.4
28	RE	68	ALA	2.4
2	QB	146	GLN	2.4
4	QD	38	TYR	2.4
35	RP	68	GLN	2.4
21	QU	13	ILE	2.4
19	QS	57	HIS	2.4
20	XT	16	HIS	2.4
25	YA	2689	U	2.4
31	RH	65	HIS	2.4
29	RF	136	THR	2.4
31	RH	138	LYS	2.4
35	RP	77	ARG	2.4
44	YY	79	CYS	2.4
1	QA	1030	C	2.4
1	XA	46	G	2.4
1	XA	482	A	2.4
1	XA	1014	A	2.4
3	QC	199	LYS	2.4
46	Y0	41	ARG	2.4
25	RA	2103	C	2.4
25	YA	2896	C	2.4
45	RZ	68	PRO	2.4
45	RZ	83	PRO	2.4
5	QE	119	LEU	2.4
30	YG	107	LEU	2.4
13	QM	122	LYS	2.4
16	QP	84	ALA	2.4
20	QT	26	ASN	2.4
5	XE	81	GLU	2.4
35	RP	81	GLN	2.4
35	RP	136	GLU	2.4
47	R1	93	GLU	2.4
1	QA	728	A	2.4
1	QA	1251	A	2.4
1	XA	1044	A	2.4
14	QN	37	PHE	2.4
25	YA	1529	A	2.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
29	RF	176	LEU	2.4
38	RS	54	LEU	2.4
50	Y4	35	VAL	2.4
53	Y7	1	MET	2.4
19	XS	36	ARG	2.4
46	R0	55	ARG	2.4
30	RG	71	THR	2.4
52	Y6	27	LYS	2.4
1	QA	1364	U	2.4
3	QC	197	GLY	2.4
7	XG	120	ILE	2.4
54	R8	63	PRO	2.4
20	QT	20	LEU	2.4
27	RD	34	VAL	2.4
25	RA	1123	C	2.4
25	RA	2105	C	2.4
28	RE	123	ALA	2.4
1	XA	350	G	2.4
1	XA	731	G	2.4
9	XI	7	THR	2.4
25	RA	1447	G	2.4
2	XB	200	ILE	2.4
31	RH	40	GLU	2.4
10	QJ	44	VAL	2.4
35	RP	18	ARG	2.4
46	R0	53	MET	2.4
4	QD	123	HIS	2.4
1	QA	1287	A	2.4
1	QA	1362(A)	C	2.4
1	QA	1502	A	2.4
1	XA	131	C	2.4
45	RZ	77	ASP	2.4
30	RG	145	THR	2.4
36	RQ	32	TYR	2.4
50	Y4	26	SER	2.4
12	QL	18	VAL	2.4
31	RH	144	VAL	2.4
1	QA	142	G	2.4
1	QA	633	G	2.4
1	QA	976	G	2.4
25	RA	1401	G	2.4
25	RA	1930	G	2.4

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Mol	Chain	Res	Type	RSRZ
25	YA	508	G	2.4
25	YA	1667	G	2.4
4	QD	9	CYS	2.4
35	RP	120	ALA	2.4
12	XL	85	ILE	2.4
13	XM	87	TYR	2.4
14	QN	21	TYR	2.4
19	XS	6	LYS	2.4
30	YG	178	PHE	2.4
31	RH	57	ASP	2.4
50	Y4	2	LYS	2.4
30	RG	31	VAL	2.4
1	XA	174	C	2.4
1	XA	1218	C	2.4
4	QD	29	PRO	2.4
25	RA	2347	C	2.4
25	RA	633	A	2.4
25	RA	2346	A	2.4
40	RU	75	ASN	2.4
1	QA	124	G	2.4
1	QA	388	G	2.4
1	QA	1304	G	2.4
1	XA	730	G	2.4
1	XA	1084	G	2.4
1	XA	1131	G	2.4
4	QD	132	ARG	2.4
11	XK	123	LYS	2.4
12	QL	16	GLU	2.4
10	QJ	38	ILE	2.4
13	QM	27	LYS	2.4
25	YA	1186	G	2.4
26	RB	97	G	2.4
31	RH	83	TYR	2.4
44	YY	37	VAL	2.4
53	R7	46	VAL	2.4
10	QJ	35	SER	2.4
17	XQ	15	MET	2.4
27	RD	241	PRO	2.4
35	YP	67	MET	2.4
1	XA	182	U	2.4
1	XA	726	C	2.4
17	XQ	94	ASN	2.4

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Mol	Chain	Res	Type	RSRZ
28	YE	60	ASN	2.4
1	XA	383	A	2.4
8	XH	130	GLY	2.4
25	RA	222	A	2.4
25	RA	1528	A	2.4
31	YH	60	ARG	2.4
32	RI	56	LYS	2.4
44	RY	16	ALA	2.4
48	Y2	7	ARG	2.4
2	QB	214	ILE	2.4
1	QA	1365	G	2.3
1	XA	1453	G	2.3
4	QD	134	ASP	2.3
19	QS	66	MET	2.3
20	XT	56	MET	2.3
25	RA	2191	G	2.3
20	QT	65	LYS	2.3
27	YD	219	PRO	2.3
3	XC	161	GLU	2.3
47	Y1	26	ARG	2.3
10	QJ	96	ILE	2.3
20	XT	100	ILE	2.3
25	YA	1546	C	2.3
50	R4	22	ILE	2.3
1	QA	143	A	2.3
1	QA	389	A	2.3
1	XA	964	A	2.3
9	XI	28	VAL	2.3
31	RH	131	VAL	2.3
11	QK	99	GLN	2.3
9	XI	10	ARG	2.3
16	QP	27	LYS	2.3
31	RH	62	LYS	2.3
31	RH	160	LYS	2.3
1	QA	1057	G	2.3
1	XA	690	G	2.3
1	XA	942	G	2.3
6	XF	101	ALA	2.3
8	XH	117	GLY	2.3
20	XT	102	GLY	2.3
26	RB	24	G	2.3
1	QA	982	U	2.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	XA	1040	U	2.3
1	XA	1232	U	2.3
6	XF	62	TRP	2.3
31	YH	171	LEU	2.3
35	YP	114	ILE	2.3
8	XH	129	VAL	2.3
25	RA	614	U	2.3
35	YP	115	LEU	2.3
40	YU	90	VAL	2.3
3	XC	127	ARG	2.3
7	XG	56	GLN	2.3
13	XM	23	TYR	2.3
20	QT	57	ARG	2.3
25	RA	894	C	2.3
25	YA	884	C	2.3
25	RA	412	A	2.3
25	YA	2629	A	2.3
36	YQ	91	GLU	2.3
37	RR	69	ASP	2.3
38	YS	111	GLU	2.3
16	QP	15	PRO	2.3
17	QQ	99	SER	2.3
36	YQ	24	GLY	2.3
8	XH	112	LEU	2.3
13	XM	121	LYS	2.3
17	XQ	14	LYS	2.3
1	QA	66	G	2.3
1	QA	1215	G	2.3
1	XA	630	G	2.3
16	XP	72	ARG	2.3
22	XV	17(A)	U	2.3
25	RA	2631	G	2.3
25	YA	892	G	2.3
45	YZ	82	ARG	2.3
1	QA	186(A)	C	2.3
1	XA	307	C	2.3
40	RU	56	ASP	2.3
1	QA	919	A	2.3
1	XA	344	A	2.3
2	XB	10	LEU	2.3
11	XK	89	ALA	2.3
12	XL	125	PRO	2.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
15	XO	75	PRO	2.3
25	RA	819	A	2.3
25	RA	1960	A	2.3
25	YA	1510	A	2.3
30	RG	60	LEU	2.3
39	RT	97	ALA	2.3
37	YR	5	LYS	2.3
38	RS	92	TYR	2.3
54	R8	31	HIS	2.3
25	YA	614	U	2.3
34	RO	81	ASP	2.3
54	R8	38	GLY	2.3
1	XA	310	G	2.3
1	XA	524	G	2.3
1	XA	971	G	2.3
1	QA	418	C	2.3
4	QD	5	ILE	2.3
9	XI	11	LYS	2.3
25	RA	270(H)	C	2.3
25	RA	2467	C	2.3
52	R6	53	LYS	2.3
14	XN	29	ARG	2.3
28	YE	76	ARG	2.3
11	QK	25	TYR	2.3
15	QO	7	GLU	2.3
1	XA	427	U	2.3
4	QD	86	LYS	2.3
10	QJ	63	PHE	2.3
50	Y4	28	LYS	2.3
55	Y9	13	LYS	2.3
11	XK	68	ALA	2.3
14	QN	33	VAL	2.3
30	YG	52	ILE	2.3
30	YG	144	ILE	2.3
39	YT	94	ALA	2.3
1	XA	266	G	2.3
1	XA	988	G	2.3
2	QB	97	TRP	2.3
5	QE	133	TYR	2.3
27	YD	233	HIS	2.3
29	RF	7	TYR	2.3
38	RS	61	ASN	2.3

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Mol	Chain	Res	Type	RSRZ
1	QA	101	A	2.3
1	QA	1213	A	2.3
1	QA	1279	A	2.3
1	XA	116	A	2.3
44	RY	4	LYS	2.3
30	YG	96	ARG	2.3
32	YI	50	ARG	2.3
4	QD	158	ILE	2.3
11	XK	82	VAL	2.3
30	YG	70	VAL	2.3
50	Y4	51	ASP	2.3
12	QL	48	PRO	2.3
2	XB	134	GLU	2.3
3	XC	192	THR	2.3
9	QI	78	LYS	2.3
10	XJ	22	LYS	2.3
1	QA	1325	C	2.3
1	XA	132	C	2.3
1	XA	656	C	2.3
7	XG	78	ARG	2.3
30	RG	177	GLY	2.3
44	YY	84	ARG	2.3
1	QA	1184	G	2.3
1	XA	725	G	2.3
1	QA	1285	A	2.3
9	XI	122	ALA	2.3
19	QS	62	ILE	2.3
25	RA	874	G	2.3
25	YA	2224	G	2.3
54	Y8	41	ILE	2.3
25	RA	2860	A	2.3
8	QH	77	GLU	2.3
9	QI	4	TYR	2.3
4	XD	175	SER	2.3
35	YP	65	ARG	2.3
37	YR	14	SER	2.3
3	QC	175	LEU	2.3
5	QE	19	MET	2.3
9	QI	96	LEU	2.3
33	YN	138	LEU	2.3
1	XA	732	C	2.3
12	QL	55	VAL	2.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
29	YF	173	VAL	2.3
34	YO	30	ALA	2.3
44	YY	49	VAL	2.3
1	QA	68	G	2.3
1	XA	44	G	2.3
1	XA	146	G	2.3
1	XA	260	G	2.3
5	QE	18	ARG	2.3
9	XI	111	ARG	2.3
13	XM	29	ARG	2.3
16	QP	18	ARG	2.3
39	RT	133	GLU	2.3
4	XD	78	LEU	2.3
29	RF	170	LEU	2.3
29	YF	134	GLY	2.3
2	QB	68	ILE	2.3
2	XB	5	ILE	2.3
1	QA	175	C	2.3
5	QE	152	ARG	2.3
25	RA	1499	C	2.3
25	RA	1967	C	2.3
25	RA	2402	C	2.3
30	YG	35	GLU	2.3
11	QK	115	PRO	2.3
36	YQ	138	ASP	2.3
9	QI	6	GLY	2.3
1	QA	485	G	2.3
1	QA	941	G	2.3
14	QN	47	LEU	2.3
20	XT	103	GLY	2.3
25	YA	2522	U	2.3
9	XI	63	ILE	2.3
50	Y4	16	CYS	2.3
19	QS	63	THR	2.3
4	QD	131	ARG	2.2
14	QN	41	ARG	2.2
27	YD	225	ALA	2.2
10	QJ	97	GLU	2.2
1	QA	90	C	2.2
1	QA	400	C	2.2
10	XJ	58	ASP	2.2
2	XB	138	LEU	2.2

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Mol	Chain	Res	Type	RSRZ
11	XK	125	PHE	2.2
16	QP	30	GLY	2.2
25	RA	2143	C	2.2
1	QA	210	U	2.2
1	QA	429	U	2.2
1	XA	97	U	2.2
2	QB	40	HIS	2.2
30	RG	140	ILE	2.2
13	XM	18	ALA	2.2
40	RU	59	ARG	2.2
1	QA	115	G	2.2
1	QA	823	G	2.2
1	XA	122	G	2.2
1	XA	392	G	2.2
1	XA	941	G	2.2
25	RA	1030	G	2.2
25	RA	2542	A	2.2
25	RA	2861	G	2.2
28	RE	60	ASN	2.2
12	QL	17	LYS	2.2
31	RH	77	LYS	2.2
1	QA	634	C	2.2
13	QM	53	VAL	2.2
15	XO	65	ARG	2.2
36	YQ	10	ARG	2.2
39	RT	90	GLN	2.2
25	RA	915	C	2.2
25	RA	2380	C	2.2
50	Y4	6	HIS	2.2
1	XA	1095	U	2.2
13	XM	50	GLU	2.2
17	XQ	61	GLU	2.2
22	XV	60	U	2.2
11	QK	119	CYS	2.2
37	RR	9	LYS	2.2
2	QB	155	LEU	2.2
9	XI	36	TYR	2.2
27	YD	236	GLY	2.2
1	XA	1181	G	2.2
1	XA	1215	G	2.2
2	QB	114	ARG	2.2
16	XP	66	PRO	2.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
25	RA	1959	G	2.2
25	RA	2834	G	2.2
25	YA	921	G	2.2
25	YA	1750	G	2.2
25	YA	2545	G	2.2
29	YF	154	VAL	2.2
31	RH	154	PRO	2.2
9	QI	73	GLN	2.2
37	RR	22	ARG	2.2
45	RZ	73	GLN	2.2
45	RZ	51	ALA	2.2
1	QA	924	C	2.2
1	QA	1028(A)	C	2.2
1	QA	1237	C	2.2
1	XA	370	C	2.2
1	XA	1325	C	2.2
45	RZ	107	THR	2.2
9	QI	19	LEU	2.2
30	YG	65	GLY	2.2
37	RR	8	ARG	2.2
39	YT	100	TYR	2.2
45	RZ	76	LEU	2.2
55	Y9	11	CYS	2.2
1	QA	1170	A	2.2
1	XA	452	A	2.2
1	XA	1350	A	2.2
2	QB	101	MET	2.2
11	XK	13	GLN	2.2
20	QT	18	GLN	2.2
22	QV	59	A	2.2
25	RA	1189	A	2.2
31	RH	148	ILE	2.2
16	QP	7	ALA	2.2
1	QA	331	G	2.2
18	QR	84	LYS	2.2
19	QS	32	LYS	2.2
51	Y5	53	ALA	2.2
22	XV	22	G	2.2
25	RA	1112	G	2.2
25	YA	1950	G	2.2
29	RF	164	ARG	2.2
1	QA	1069	C	2.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	QA	1259	C	2.2
1	XA	150	C	2.2
1	XA	985	C	2.2
25	RA	1467	C	2.2
25	RA	2849	U	2.2
26	RB	49	C	2.2
31	RH	68	THR	2.2
35	RP	26	GLY	2.2
7	QG	109	ASN	2.2
9	XI	81	ILE	2.2
4	QD	147	ALA	2.2
10	QJ	20	ALA	2.2
32	YI	66	GLU	2.2
1	QA	356	A	2.2
1	XA	1251	A	2.2
20	XT	86	ARG	2.2
25	RA	294	A	2.2
25	RA	1010	A	2.2
25	YA	1098	A	2.2
29	YF	196	LEU	2.2
1	XA	117	G	2.2
1	XA	475	G	2.2
9	QI	92	TYR	2.2
22	QV	6	G	2.2
25	RA	1184	G	2.2
25	YA	333	G	2.2
35	YP	57	THR	2.2
25	YA	1547	C	2.2
35	RP	14	LYS	2.2
7	QG	86	GLN	2.2
17	XQ	96	GLU	2.2
32	YI	135	GLU	2.2
50	Y4	47	GLN	2.2
54	Y8	33	ASN	2.2
4	XD	111	ALA	2.2
4	XD	132	ARG	2.2
19	QS	29	ARG	2.2
36	RQ	107	ALA	2.2
53	R7	23	ARG	2.2
13	XM	64	TRP	2.2
32	RI	9	LEU	2.2
1	XA	702	A	2.2

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Mol	Chain	Res	Type	RSRZ
1	XA	1285	A	2.2
3	QC	23	TYR	2.2
25	YA	363(F)	A	2.2
25	YA	2765	A	2.2
1	XA	1091	U	2.2
4	XD	45	GLN	2.2
1	QA	1295	G	2.2
1	QA	1356	G	2.2
5	XE	18	ARG	2.2
25	RA	2473	U	2.2
25	YA	1083	U	2.2
48	Y2	43	GLN	2.2
25	RA	634	C	2.2
25	RA	888	C	2.2
25	RA	1462	C	2.2
25	YA	1852	C	2.2
4	XD	11	LEU	2.2
7	QG	105	VAL	2.2
12	QL	69	TYR	2.2
17	XQ	36	ILE	2.2
30	YG	101	ILE	2.2
31	RH	17	VAL	2.2
4	QD	137	SER	2.2
4	QD	179	GLU	2.2
16	QP	69	THR	2.2
19	QS	44	MET	2.2
30	YG	124	SER	2.2
44	RY	64	GLU	2.2
25	RA	2764	A	2.2
25	YA	1789	A	2.2
19	XS	75	ALA	2.2
20	XT	26	ASN	2.2
52	R6	31	PRO	2.2
3	QC	10	PHE	2.2
6	XF	79	LEU	2.2
7	XG	153	HIS	2.2
17	QQ	98	LEU	2.2
30	YG	156	ASP	2.2
36	RQ	11	LYS	2.2
36	RQ	87	LYS	2.2
54	Y8	48	PHE	2.2
1	QA	538	G	2.2

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Mol	Chain	Res	Type	RSRZ
1	QA	1320	C	2.2
1	QA	1342	C	2.2
1	XA	145	G	2.2
1	XA	805	C	2.2
1	XA	878	G	2.2
22	QV	7	G	2.2
6	XF	3	ARG	2.2
9	XI	120	ARG	2.2
19	QS	81	ARG	2.2
39	RT	3	ARG	2.2
38	RS	52	SER	2.2
5	QE	21	ALA	2.2
12	QL	44	THR	2.2
2	QB	228	GLY	2.2
24	QX	8	A	2.2
25	RA	225	A	2.2
25	RA	1009	A	2.2
25	RA	2541	A	2.2
25	YA	2062	A	2.2
25	YA	2665	A	2.2
33	RN	95	PRO	2.2
36	RQ	29	PHE	2.2
10	QJ	89	ASP	2.2
13	XM	98	VAL	2.2
28	YE	167	VAL	2.2
45	RZ	58	VAL	2.2
50	Y4	30	GLU	2.2
1	QA	934	C	2.2
1	XA	822	C	2.2
1	XA	1037	C	2.2
1	XA	1066	C	2.2
25	RA	2403	C	2.2
25	YA	2691	C	2.2
7	QG	83	ALA	2.2
13	QM	76	ALA	2.2
20	XT	20	LEU	2.2
29	RF	167	ALA	2.2
31	RH	39	PRO	2.2
35	RP	78	PRO	2.2
50	R4	64	GLY	2.2
11	QK	116	HIS	2.2
14	XN	3	ARG	2.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	QA	622	A	2.1
1	XA	1235	U	2.1
13	XM	69	GLU	2.1
25	RA	1545(A)	A	2.1
45	RZ	128	VAL	2.2
13	QM	13	LYS	2.1
36	YQ	1	MET	2.1
1	QA	43	C	2.1
25	RA	34	C	2.1
30	YG	43	LEU	2.1
37	YR	6	SER	2.1
50	R4	44	THR	2.1
54	R8	27	THR	2.1
1	QA	540	G	2.1
1	QA	703	G	2.1
1	XA	973	G	2.1
25	RA	2413	G	2.1
25	YA	270(Y)	G	2.1
25	YA	2543	G	2.1
27	RD	99	ASP	2.1
31	RH	46	GLU	2.1
31	RH	90	LYS	2.1
1	QA	863	U	2.1
25	RA	913	U	2.1
9	QI	33	PHE	2.1
28	YE	54	GLN	2.1
30	YG	133	LEU	2.1
39	YT	112	ARG	2.1
41	RV	101	GLY	2.1
1	QA	1254	C	2.1
1	XA	217	C	2.1
1	XA	233	C	2.1
23	XY	30	C	2.1
25	RA	1463	C	2.1
32	YI	70	GLU	2.1
34	YO	102	VAL	2.1
28	RE	151	TYR	2.1
1	XA	124	G	2.1
8	XH	30	ARG	2.1
11	QK	120	ARG	2.1
12	XL	32	PHE	2.1
14	QN	3	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
25	RA	877	U	2.1
25	RA	1667	G	2.1
25	YA	270(W)	G	2.1
44	RY	48	ALA	2.1
1	XA	994	A	2.1
7	QG	35	LYS	2.1
9	XI	70	LYS	2.1
25	RA	654(V)	A	2.1
25	RA	866	A	2.1
25	YA	412	A	2.1
54	Y8	39	LYS	2.1
15	XO	2	PRO	2.1
31	RH	162	ILE	2.1
1	QA	940	C	2.1
1	QA	972	C	2.1
1	XA	972	C	2.1
1	XA	1118	C	2.1
9	XI	64	THR	2.1
19	QS	83	HIS	2.1
9	XI	104	ARG	2.1
11	QK	49	GLY	2.1
11	QK	90	GLY	2.1
23	QY	33	U	2.1
27	YD	235	GLY	2.1
1	QA	378	G	2.1
1	QA	1079	G	2.1
1	QA	1311	G	2.1
1	XA	96	G	2.1
1	XA	579	G	2.1
4	QD	156	GLU	2.1
5	QE	155	GLU	2.1
9	XI	108	VAL	2.1
22	XV	53	G	2.1
25	RA	1968	G	2.1
25	RA	2544	G	2.1
25	YA	920	G	2.1
25	YA	2211	G	2.1
30	RG	149	VAL	2.1
38	RS	98	VAL	2.1
1	XA	621	A	2.1
1	XA	1280	A	2.1
1	XA	1324	A	2.1

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Mol	Chain	Res	Type	RSRZ
4	XD	137	SER	2.1
26	RB	78	A	2.1
29	YF	178	PRO	2.1
13	QM	92	HIS	2.1
45	RZ	80	ARG	2.1
5	QE	127	ASN	2.1
7	XG	84	ASN	2.1
3	XC	160	ALA	2.1
10	XJ	20	ALA	2.1
16	XP	7	ALA	2.1
19	QS	72	GLY	2.1
9	QI	86	VAL	2.1
11	QK	30	VAL	2.1
20	QT	100	ILE	2.1
30	YG	140	ILE	2.1
50	R4	31	ILE	2.1
13	QM	99	ARG	2.1
15	QO	64	ARG	2.1
33	YN	134	ARG	2.1
49	Y3	29	ARG	2.1
1	QA	1186	G	2.1
8	QH	107	LEU	2.1
20	QT	99	LEU	2.1
25	RA	2524	G	2.1
25	YA	1559	G	2.1
5	XE	134	ALA	2.1
25	RA	1029	A	2.1
39	YT	37	GLY	2.1
45	YZ	164	ALA	2.1
3	QC	104	GLN	2.1
1	XA	311	C	2.1
25	RA	1402	C	2.1
31	YH	125	VAL	2.1
32	YI	10	GLU	2.1
40	RU	63	VAL	2.1
18	XR	54	ARG	2.1
1	XA	982	U	2.1
1	XA	1125	U	2.1
25	RA	1188	U	2.1
25	RA	2779	U	2.1
30	YG	112	PRO	2.1
52	Y6	8	LYS	2.1

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Mol	Chain	Res	Type	RSRZ
54	Y8	3	LYS	2.1
46	Y0	26	TYR	2.1
20	XT	76	ALA	2.1
1	QA	69	G	2.1
1	QA	1087	G	2.1
1	QA	1312	G	2.1
1	QA	1497	G	2.1
1	XA	664	G	2.1
3	QC	162	GLN	2.1
4	XD	8	VAL	2.1
25	RA	266	G	2.1
25	RA	631	A	2.1
25	RA	1948	G	2.1
29	RF	11	VAL	2.1
38	RS	111	GLU	2.1
22	QV	45	G	2.1
25	YA	1046	A	2.1
1	QA	979	C	2.1
14	XN	4	LYS	2.1
25	RA	856	C	2.1
25	RA	1118	C	2.1
25	RA	2755	C	2.1
17	XQ	64	PRO	2.1
25	RA	2519	U	2.1
35	RP	91	PHE	2.1
35	RP	34	GLY	2.1
2	QB	39	ILE	2.1
10	QJ	84	GLN	2.1
27	YD	51	VAL	2.1
30	RG	5	VAL	2.1
30	YG	132	ASN	2.1
32	RI	113	ARG	2.1
42	RW	60	ASN	2.1
44	YY	86	ARG	2.1
46	Y0	55	ARG	2.1
19	XS	40	ILE	2.1
1	QA	199	G	2.1
1	QA	873	A	2.1
1	QA	1046	A	2.1
1	XA	200	G	2.1
8	QH	112	LEU	2.1
25	RA	1385	G	2.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
25	RA	1521	G	2.1
25	YA	1045	A	2.1
30	YG	94	LEU	2.1
35	YP	135	LEU	2.1
1	QA	177	C	2.1
21	XU	18	TYR	2.1
15	QO	17	ARG	2.1
20	QT	73	HIS	2.1
22	XV	1	C	2.1
25	RA	2746	U	2.1
25	YA	2521	C	2.1
56	Z8	74	C	2.1
2	QB	210	SER	2.1
36	RQ	28	ALA	2.1
45	RZ	119	GLU	2.1
12	QL	91	LYS	2.1
20	QT	63	ILE	2.1
27	RD	26	LYS	2.1
33	RN	83	LYS	2.1
4	XD	73	ARG	2.1
15	XO	63	ARG	2.1
1	QA	1319	A	2.1
8	QH	26	VAL	2.1
25	RA	227	A	2.1
25	RA	529	A	2.1
1	QA	67	C	2.1
1	QA	219	C	2.1
1	QA	307	C	2.1
1	QA	1277	C	2.1
1	QA	1347	G	2.1
1	XA	191(D)	U	2.1
1	XA	255	G	2.1
1	XA	991	U	2.1
36	RQ	35	VAL	2.1
25	RA	2368	C	2.1
25	YA	323	G	2.1
25	YA	1462	C	2.1
25	YA	2646	C	2.1
47	R1	42	GLN	2.1
28	YE	127	ASP	2.1
30	RG	120	LEU	2.1
9	QI	104	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
37	YR	2	ARG	2.1
2	XB	202	PRO	2.1
35	RP	74	GLU	2.1
14	QN	49	HIS	2.0
30	YG	31	VAL	2.1
45	YZ	161	VAL	2.1
27	RD	64	ILE	2.0
30	RG	144	ILE	2.0
1	QA	992	U	2.0
25	YA	1749	A	2.0
2	QB	103	THR	2.0
4	XD	131	ARG	2.0
7	XG	45	ASP	2.0
25	RA	1185	C	2.0
25	RA	1881	C	2.0
25	RA	2466	C	2.0
25	RA	2681	C	2.0
25	YA	365	C	2.0
30	RG	161	THR	2.0
47	Y1	34	THR	2.0
1	QA	394	G	2.0
1	QA	971	G	2.0
1	XA	666	G	2.0
25	RA	363	G	2.0
25	RA	1465	G	2.0
25	RA	2131	G	2.0
25	YA	2719	G	2.0
27	YD	35	LYS	2.0
3	XC	2	GLY	2.0
5	XE	22	GLY	2.0
9	XI	62	TYR	2.0
16	XP	70	ALA	2.0
28	YE	123	ALA	2.0
46	Y0	2	ALA	2.0
54	R8	24	ALA	2.0
7	QG	30	ILE	2.0
13	QM	84	ILE	2.0
6	XF	16	GLN	2.0
17	XQ	12	SER	2.0
39	YT	6	LEU	2.0
52	Y6	34	LEU	2.0
1	QA	151	A	2.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	XA	191(F)	U	2.0
25	RA	278	A	2.0
25	RA	895	U	2.0
42	RW	67	ASP	2.0
1	XA	962	C	2.0
10	QJ	76	ASN	2.0
25	RA	865	C	2.0
25	YA	1836	C	2.0
29	RF	200	GLU	2.0
30	RG	27	ASN	2.0
1	QA	410	G	2.0
1	QA	1139	G	2.0
1	XA	198	G	2.0
1	XA	775	G	2.0
7	XG	2	ALA	2.0
16	QP	41	PRO	2.0
19	QS	50	ALA	2.0
31	RH	113	VAL	2.0
25	RA	1031	G	2.0
25	RA	1888	G	2.0
25	RA	2106	G	2.0
25	YA	102	G	2.0
25	YA	1238	G	2.0
38	RS	51	ALA	2.0
4	QD	36	ARG	2.0
9	XI	59	PHE	2.0
10	QJ	21	GLN	2.0
11	XK	91	ARG	2.0
43	YX	65	ARG	2.0
1	QA	1150	U	2.0
4	QD	16	GLY	2.0
12	QL	49	ASN	2.0
15	XO	22	THR	2.0
17	XQ	18	THR	2.0
43	YX	56	THR	2.0
45	YZ	96	VAL	2.0
1	XA	77	C	2.0
25	RA	31	C	2.0
25	RA	1021	A	2.0
25	RA	2646	C	2.0
25	YA	1067	A	2.0
37	YR	42	LYS	2.0

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Mol	Chain	Res	Type	RSRZ
39	RT	35	LYS	2.0
2	QB	145	LEU	2.0
9	XI	19	LEU	2.0
41	RV	18	LEU	2.0
1	QA	730	G	2.0
1	QA	1017	G	2.0
25	YA	1527	G	2.0
25	YA	1828	G	2.0
35	YP	74	GLU	2.0
3	QC	15	THR	2.0
10	XJ	44	VAL	2.0
11	QK	42	TRP	2.0
25	RA	403	U	2.0
25	RA	2102	U	2.0
27	RD	5	LYS	2.0
30	YG	27	ASN	2.0
31	YH	101	ARG	2.0
44	RY	45	VAL	2.0
38	RS	62	LYS	2.0
50	R4	28	LYS	2.0
31	RH	29	PRO	2.0
1	XA	1200	C	2.0
15	XO	51	HIS	2.0
25	YA	1751	C	2.0
19	QS	45	VAL	2.0
21	XU	24	ARG	2.0
36	RQ	132	VAL	2.0
47	Y1	20	ARG	2.0
51	R5	57	VAL	2.0
1	QA	610	G	2.0
1	QA	731	G	2.0
1	QA	942	G	2.0
1	QA	1305	G	2.0
1	XA	851	G	2.0
12	QL	100	ILE	2.0
14	XN	59	ALA	2.0
21	XU	13	ILE	2.0
25	RA	75	G	2.0
25	RA	1238	G	2.0
25	YA	1002	G	2.0
25	YA	1534	G	2.0
27	YD	50	THR	2.0

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Mol	Chain	Res	Type	RSRZ
1	QA	641	U	2.0
2	QB	138	LEU	2.0
25	YA	2688	U	2.0

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

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
56	PPU	Z8	76	37/38	0.88	0.42	-	37,37,37,37	0
56	PPU	Z6	76	37/38	0.89	0.43	-	41,41,41,41	0
23	1MG	QY	37	24/25	0.93	0.27	-	63,63,63,63	0
23	1MG	XY	37	24/25	0.95	0.25	-	45,45,45,45	0

## 6.3 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 6.4 Ligands [i](#)

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
57	MG	RA	3131	1/1	0.85	0.39	20.99	41,41,41,41	0
57	MG	YA	3207	1/1	0.64	0.69	18.24	80,80,80,80	0
57	MG	YA	3020	1/1	0.97	0.37	17.78	7,7,7,7	0
57	MG	YA	3240	1/1	0.93	0.43	15.83	43,43,43,43	0
57	MG	YA	3219	1/1	0.93	0.90	15.33	52,52,52,52	0
57	MG	YA	3050	1/1	0.98	0.33	11.54	9,9,9,9	0
57	MG	YA	3259	1/1	0.80	0.43	10.90	43,43,43,43	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
57	MG	YA	3255	1/1	0.88	0.31	10.13	13,13,13,13	0
57	MG	Y7	101	1/1	0.87	0.40	9.84	38,38,38,38	0
57	MG	RA	3053	1/1	0.97	0.37	7.26	16,16,16,16	0
57	MG	RA	3063	1/1	0.97	0.41	6.46	6,6,6,6	0
57	MG	RA	3230	1/1	0.97	0.32	6.45	18,18,18,18	0
57	MG	RA	3126	1/1	0.91	0.34	6.12	33,33,33,33	0
57	MG	YA	3023	1/1	0.97	0.26	5.75	16,16,16,16	0
57	MG	RA	3099	1/1	0.94	0.34	5.69	24,24,24,24	0
57	MG	YA	3099	1/1	0.95	0.35	5.27	7,7,7,7	0
57	MG	RA	3221	1/1	0.52	0.40	5.08	62,62,62,62	0
57	MG	RA	3204	1/1	0.48	0.37	4.72	82,82,82,82	0
57	MG	RA	3088	1/1	0.88	0.33	4.65	19,19,19,19	0
57	MG	RA	3200	1/1	0.68	0.27	4.55	38,38,38,38	0
57	MG	RA	3005	1/1	0.98	0.37	4.39	13,13,13,13	0
57	MG	QA	1657	1/1	0.60	0.30	4.38	58,58,58,58	0
57	MG	YA	3258	1/1	0.95	0.37	4.16	11,11,11,11	0
57	MG	YA	3015	1/1	0.97	0.32	3.98	8,8,8,8	0
57	MG	RA	3029	1/1	0.98	0.31	3.94	2,2,2,2	0
57	MG	YA	3144	1/1	0.79	0.24	3.93	35,35,35,35	0
57	MG	YA	3100	1/1	0.97	0.31	3.75	13,13,13,13	0
57	MG	YA	3171	1/1	0.87	0.37	3.70	32,32,32,32	0
57	MG	QA	1615	1/1	0.91	0.25	3.68	23,23,23,23	0
57	MG	RA	3238	1/1	0.89	0.32	3.49	32,32,32,32	0
57	MG	RA	3035	1/1	0.95	0.31	3.40	11,11,11,11	0
57	MG	YA	3034	1/1	0.97	0.34	3.29	9,9,9,9	0
57	MG	YA	3027	1/1	0.98	0.28	3.06	0,0,0,0	0
57	MG	RA	3039	1/1	0.97	0.24	2.99	2,2,2,2	0
58	PAR	QA	1670	42/42	0.88	0.39	2.80	56,56,56,56	0
58	PAR	XA	1675	42/42	0.91	0.32	2.64	49,49,49,49	0
57	MG	RA	3060	1/1	0.96	0.29	2.33	8,8,8,8	0
57	MG	RA	3056	1/1	0.93	0.31	2.26	17,17,17,17	0
57	MG	RA	3034	1/1	0.95	0.34	2.21	30,30,30,30	0
57	MG	RA	3220	1/1	0.78	0.27	2.18	56,56,56,56	0
57	MG	RA	3125	1/1	0.98	0.24	2.18	28,28,28,28	0
57	MG	RA	3192	1/1	0.44	0.34	2.06	79,79,79,79	0
57	MG	RA	3076	1/1	0.95	0.25	1.93	15,15,15,15	0
57	MG	XA	1673	1/1	0.88	0.32	1.91	26,26,26,26	0
57	MG	YA	3109	1/1	0.98	0.30	1.88	10,10,10,10	0
57	MG	XA	1667	1/1	0.97	0.32	1.86	32,32,32,32	0
57	MG	RA	3057	1/1	0.97	0.27	1.78	11,11,11,11	0
57	MG	YA	3235	1/1	0.77	0.26	1.77	29,29,29,29	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
57	MG	YA	3261	1/1	0.98	0.29	1.76	8,8,8,8	0
57	MG	RA	3132	1/1	0.95	0.31	1.75	22,22,22,22	0
57	MG	XA	1623	1/1	0.97	0.27	1.73	40,40,40,40	0
57	MG	QA	1631	1/1	0.85	0.52	1.62	46,46,46,46	0
57	MG	YA	3239	1/1	0.87	0.28	1.54	46,46,46,46	0
57	MG	YA	3011	1/1	0.97	0.27	1.47	20,20,20,20	0
57	MG	RA	3219	1/1	0.86	0.27	1.43	63,63,63,63	0
57	MG	YA	3105	1/1	0.12	0.25	1.37	21,21,21,21	0
57	MG	RA	3013	1/1	0.89	0.29	1.33	20,20,20,20	0
57	MG	RA	3226	1/1	0.48	0.27	1.29	48,48,48,48	0
57	MG	RA	3193	1/1	0.84	0.30	1.26	51,51,51,51	0
57	MG	RA	3100	1/1	0.98	0.34	1.11	9,9,9,9	0
57	MG	YA	3211	1/1	0.93	0.27	1.10	14,14,14,14	0
57	MG	RA	3155	1/1	0.76	0.30	1.07	24,24,24,24	0
57	MG	YA	3253	1/1	0.95	0.30	1.05	18,18,18,18	0
57	MG	RA	3229	1/1	0.98	0.29	1.04	5,5,5,5	0
57	MG	YA	3006	1/1	0.98	0.28	0.95	9,9,9,9	0
57	MG	YA	3101	1/1	0.93	0.30	0.94	8,8,8,8	0
57	MG	YA	3026	1/1	0.97	0.29	0.91	8,8,8,8	0
57	MG	RP	201	1/1	0.97	0.29	0.83	30,30,30,30	0
57	MG	RA	3206	1/1	0.96	0.33	0.80	15,15,15,15	0
57	MG	XA	1613	1/1	0.93	0.27	0.76	13,13,13,13	0
57	MG	YA	3044	1/1	0.97	0.29	0.75	7,7,7,7	0
57	MG	YA	3256	1/1	0.99	0.28	0.70	7,7,7,7	0
57	MG	RA	3185	1/1	0.92	0.33	0.67	25,25,25,25	0
57	MG	YA	3009	1/1	0.98	0.27	0.61	12,12,12,12	0
57	MG	RA	3050	1/1	0.74	0.26	0.60	31,31,31,31	0
57	MG	QA	1644	1/1	0.83	0.33	0.55	40,40,40,40	0
57	MG	XA	1640	1/1	0.94	0.29	0.44	31,31,31,31	0
57	MG	RA	3020	1/1	0.97	0.24	0.43	1,1,1,1	0
57	MG	YA	3180	1/1	0.95	0.25	0.41	49,49,49,49	0
57	MG	RA	3157	1/1	0.95	0.23	0.39	49,49,49,49	0
57	MG	YA	3071	1/1	0.84	0.25	0.33	10,10,10,10	0
57	MG	YA	3215	1/1	0.90	0.31	0.29	25,25,25,25	0
57	MG	YA	3049	1/1	0.95	0.28	0.26	14,14,14,14	0
57	MG	RA	3003	1/1	0.97	0.30	0.20	14,14,14,14	0
57	MG	YA	3087	1/1	0.98	0.27	0.18	15,15,15,15	0
57	MG	XA	1646	1/1	0.95	0.25	0.17	45,45,45,45	0
57	MG	RA	3016	1/1	0.98	0.24	0.17	1,1,1,1	0
57	MG	RA	3098	1/1	0.94	0.25	0.16	10,10,10,10	0
59	ZN	XD	301	1/1	0.81	0.36	0.06	45,45,45,45	0
57	MG	YA	3033	1/1	0.94	0.28	0.01	4,4,4,4	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
57	MG	XA	1610	1/1	0.76	0.23	-0.01	42,42,42,42	0
57	MG	RA	3010	1/1	0.87	0.26	-0.01	78,78,78,78	0
57	MG	QA	1604	1/1	0.98	0.25	-0.05	12,12,12,12	0
57	MG	XA	1637	1/1	0.93	0.34	-0.07	24,24,24,24	0
57	MG	YA	3090	1/1	0.97	0.23	-0.13	5,5,5,5	0
57	MG	XA	1658	1/1	0.94	0.24	-0.13	46,46,46,46	0
57	MG	XA	1631	1/1	0.80	0.19	-0.16	35,35,35,35	0
57	MG	RA	3095	1/1	0.98	0.26	-0.17	14,14,14,14	0
57	MG	RA	3160	1/1	0.90	0.21	-0.17	51,51,51,51	0
57	MG	RA	3022	1/1	0.98	0.22	-0.18	16,16,16,16	0
57	MG	XA	1652	1/1	0.84	0.25	-0.20	32,32,32,32	0
57	MG	YA	3184	1/1	0.98	0.20	-0.31	20,20,20,20	0
57	MG	RE	302	1/1	0.97	0.26	-0.33	23,23,23,23	0
57	MG	YA	3002	1/1	0.98	0.27	-0.36	9,9,9,9	0
57	MG	RA	3179	1/1	0.85	0.23	-0.37	15,15,15,15	0
57	MG	RA	3133	1/1	0.93	0.18	-0.46	28,28,28,28	0
59	ZN	XN	101	1/1	0.74	0.23	-0.48	65,65,65,65	0
57	MG	RR	201	1/1	0.98	0.22	-0.49	7,7,7,7	0
57	MG	RD	301	1/1	0.89	0.23	-0.52	41,41,41,41	0
57	MG	XA	1605	1/1	0.97	0.21	-0.59	16,16,16,16	0
57	MG	YA	3047	1/1	0.96	0.28	-0.59	6,6,6,6	0
57	MG	YA	3041	1/1	0.93	0.23	-0.61	5,5,5,5	0
57	MG	RA	3086	1/1	0.91	0.23	-0.64	14,14,14,14	0
57	MG	RA	3032	1/1	0.96	0.26	-0.64	15,15,15,15	0
57	MG	RA	3142	1/1	0.86	0.24	-0.66	39,39,39,39	0
57	MG	YA	3068	1/1	0.94	0.23	-0.66	17,17,17,17	0
57	MG	QA	1611	1/1	0.96	0.25	-0.70	14,14,14,14	0
57	MG	XA	1606	1/1	0.95	0.25	-0.75	17,17,17,17	0
57	MG	RA	3078	1/1	0.95	0.21	-0.75	22,22,22,22	0
57	MG	YA	3032	1/1	0.94	0.21	-0.77	4,4,4,4	0
57	MG	YA	3048	1/1	0.95	0.22	-0.81	10,10,10,10	0
57	MG	RA	3037	1/1	0.98	0.21	-0.81	11,11,11,11	0
57	MG	QA	1617	1/1	0.92	0.16	-0.82	19,19,19,19	0
57	MG	YA	3159	1/1	0.93	0.21	-0.83	18,18,18,18	0
57	MG	RA	3073	1/1	0.96	0.21	-0.83	24,24,24,24	0
57	MG	RR	202	1/1	0.91	0.23	-0.84	19,19,19,19	0
57	MG	RA	3188	1/1	0.84	0.22	-0.85	39,39,39,39	0
57	MG	YA	3036	1/1	0.95	0.22	-0.86	5,5,5,5	0
57	MG	YA	3154	1/1	0.93	0.22	-0.87	9,9,9,9	0
57	MG	RA	3080	1/1	0.95	0.23	-0.91	19,19,19,19	0
57	MG	RA	3036	1/1	0.95	0.21	-0.92	4,4,4,4	0
57	MG	YA	3119	1/1	0.94	0.23	-0.93	31,31,31,31	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
57	MG	YA	3095	1/1	0.96	0.21	-0.97	7,7,7,7	0
57	MG	RA	3119	1/1	0.86	0.24	-0.98	56,56,56,56	0
57	MG	XA	1657	1/1	0.92	0.19	-0.99	31,31,31,31	0
57	MG	YA	3031	1/1	0.98	0.22	-1.03	2,2,2,2	0
57	MG	XA	1622	1/1	0.92	0.16	-1.04	26,26,26,26	0
57	MG	RA	3212	1/1	0.81	0.19	-1.05	42,42,42,42	0
57	MG	YA	3035	1/1	0.97	0.20	-1.09	5,5,5,5	0
57	MG	RA	3027	1/1	0.99	0.23	-1.09	3,3,3,3	0
59	ZN	QD	301	1/1	0.95	0.26	-1.10	47,47,47,47	0
57	MG	YA	3107	1/1	0.87	0.22	-1.10	11,11,11,11	0
57	MG	QA	1654	1/1	0.95	0.11	-1.11	79,79,79,79	0
57	MG	YA	3181	1/1	0.93	0.21	-1.12	34,34,34,34	0
57	MG	XA	1661	1/1	0.88	0.22	-1.13	48,48,48,48	0
57	MG	RA	3041	1/1	0.97	0.21	-1.13	2,2,2,2	0
57	MG	RA	3144	1/1	0.95	0.26	-1.15	17,17,17,17	0
57	MG	YA	3008	1/1	0.91	0.22	-1.16	9,9,9,9	0
57	MG	RA	3184	1/1	0.91	0.24	-1.17	13,13,13,13	0
57	MG	QA	1632	1/1	0.87	0.22	-1.21	35,35,35,35	0
57	MG	YA	3057	1/1	0.99	0.22	-1.27	6,6,6,6	0
57	MG	XA	1668	1/1	0.93	0.33	-1.27	19,19,19,19	0
57	MG	RA	3239	1/1	0.96	0.23	-1.30	19,19,19,19	0
57	MG	YA	3227	1/1	0.90	0.18	-1.31	13,13,13,13	0
57	MG	YA	3037	1/1	0.97	0.19	-1.33	1,1,1,1	0
57	MG	QA	1669	1/1	0.91	0.23	-1.33	45,45,45,45	0
57	MG	RA	3210	1/1	0.83	0.18	-1.34	30,30,30,30	0
57	MG	RA	3121	1/1	0.95	0.20	-1.37	29,29,29,29	0
57	MG	YA	3170	1/1	0.77	0.15	-1.41	38,38,38,38	0
57	MG	YA	3260	1/1	0.97	0.17	-1.45	14,14,14,14	0
57	MG	YA	3114	1/1	0.97	0.19	-1.45	8,8,8,8	0
57	MG	XA	1620	1/1	0.97	0.23	-1.46	17,17,17,17	0
57	MG	YA	3092	1/1	0.99	0.18	-1.47	30,30,30,30	0
57	MG	YA	3042	1/1	0.98	0.19	-1.47	19,19,19,19	0
57	MG	QA	1620	1/1	0.87	0.17	-1.47	28,28,28,28	0
57	MG	XA	1653	1/1	0.79	0.15	-1.50	60,60,60,60	0
59	ZN	QN	101	1/1	0.91	0.12	-1.51	80,80,80,80	0
57	MG	YA	3197	1/1	0.96	0.13	-1.52	44,44,44,44	0
57	MG	RA	3064	1/1	0.94	0.24	-1.54	5,5,5,5	0
57	MG	YA	3178	1/1	0.94	0.19	-1.54	35,35,35,35	0
57	MG	RA	3122	1/1	0.96	0.15	-1.55	29,29,29,29	0
57	MG	YA	3129	1/1	0.89	0.19	-1.59	27,27,27,27	0
57	MG	YA	3025	1/1	0.96	0.19	-1.59	8,8,8,8	0
57	MG	YA	3072	1/1	0.89	0.23	-1.61	17,17,17,17	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
57	MG	RA	3163	1/1	0.88	0.16	-1.61	38,38,38,38	0
57	MG	QA	1618	1/1	0.89	0.19	-1.61	42,42,42,42	0
57	MG	RA	3171	1/1	0.86	0.18	-1.65	33,33,33,33	0
57	MG	YA	3246	1/1	0.94	0.24	-1.68	21,21,21,21	0
57	MG	RA	3066	1/1	0.94	0.20	-1.73	24,24,24,24	0
57	MG	QA	1609	1/1	0.78	0.15	-1.74	34,34,34,34	0
57	MG	YA	3091	1/1	0.98	0.19	-1.74	21,21,21,21	0
57	MG	YA	3111	1/1	0.96	0.15	-1.75	34,34,34,34	0
57	MG	RA	3117	1/1	0.95	0.19	-1.76	3,3,3,3	0
57	MG	RA	3175	1/1	0.91	0.20	-1.78	21,21,21,21	0
57	MG	XV	101	1/1	0.94	0.19	-1.81	9,9,9,9	0
57	MG	RA	3208	1/1	0.90	0.15	-1.82	19,19,19,19	0
57	MG	YA	3058	1/1	0.96	0.18	-1.82	12,12,12,12	0
57	MG	YA	3004	1/1	0.95	0.17	-1.84	5,5,5,5	0
57	MG	YA	3073	1/1	0.97	0.21	-1.86	7,7,7,7	0
57	MG	RA	3051	1/1	0.93	0.16	-1.87	3,3,3,3	0
57	MG	XA	1614	1/1	0.97	0.17	-1.91	7,7,7,7	0
57	MG	XA	1609	1/1	0.76	0.21	-1.91	22,22,22,22	0
57	MG	YA	3125	1/1	0.96	0.18	-1.92	11,11,11,11	0
57	MG	RA	3015	1/1	0.97	0.17	-1.95	2,2,2,2	0
57	MG	QA	1655	1/1	0.88	0.14	-1.96	51,51,51,51	0
57	MG	QA	1650	1/1	0.61	0.18	-1.96	49,49,49,49	0
57	MG	YA	3014	1/1	0.96	0.17	-1.97	3,3,3,3	0
57	MG	QA	1621	1/1	0.95	0.08	-1.97	14,14,14,14	0
57	MG	RB	201	1/1	0.95	0.12	-1.99	59,59,59,59	0
57	MG	RA	3124	1/1	0.85	0.18	-1.99	23,23,23,23	0
57	MG	YA	3135	1/1	0.92	0.13	-2.02	21,21,21,21	0
57	MG	YE	302	1/1	0.87	0.20	-2.03	10,10,10,10	0
57	MG	QA	1639	1/1	0.93	0.11	-2.06	36,36,36,36	0
57	MG	YA	3070	1/1	0.96	0.19	-2.09	8,8,8,8	0
57	MG	XA	1616	1/1	0.93	0.11	-2.18	17,17,17,17	0
57	MG	XA	1647	1/1	0.81	0.15	-2.19	49,49,49,49	0
57	MG	YA	3115	1/1	0.96	0.16	-2.20	17,17,17,17	0
57	MG	YA	3024	1/1	0.93	0.19	-2.21	16,16,16,16	0
57	MG	RA	3023	1/1	0.94	0.21	-2.24	14,14,14,14	0
57	MG	RA	3043	1/1	0.83	0.16	-2.25	4,4,4,4	0
57	MG	RA	3106	1/1	0.97	0.16	-2.30	11,11,11,11	0
57	MG	XA	1645	1/1	0.90	0.13	-2.38	29,29,29,29	0
57	MG	XA	1617	1/1	0.96	0.16	-2.39	14,14,14,14	0
57	MG	YA	3132	1/1	0.94	0.14	-2.42	18,18,18,18	0
57	MG	RF	301	1/1	0.95	0.10	-2.44	40,40,40,40	0
57	MG	YA	3185	1/1	0.94	0.14	-2.47	10,10,10,10	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
57	MG	RA	3059	1/1	0.93	0.16	-2.49	2,2,2,2	0
57	MG	QA	1647	1/1	0.89	0.10	-2.49	23,23,23,23	0
57	MG	RA	3137	1/1	0.85	0.20	-2.50	10,10,10,10	0
57	MG	YA	3175	1/1	0.95	0.21	-2.53	37,37,37,37	0
57	MG	YA	3228	1/1	0.91	0.19	-2.54	22,22,22,22	0
57	MG	YA	3209	1/1	0.91	0.17	-2.55	27,27,27,27	0
57	MG	YA	3217	1/1	0.89	0.15	-2.55	29,29,29,29	0
57	MG	XA	1628	1/1	0.97	0.16	-2.56	27,27,27,27	0
57	MG	RA	3147	1/1	0.98	0.18	-2.57	21,21,21,21	0
57	MG	QA	1667	1/1	0.94	0.13	-2.59	32,32,32,32	0
57	MG	QM	201	1/1	0.99	0.04	-2.59	55,55,55,55	0
57	MG	QA	1630	1/1	0.96	0.17	-2.68	48,48,48,48	0
57	MG	YA	3238	1/1	0.93	0.12	-2.68	24,24,24,24	0
57	MG	RA	3223	1/1	0.93	0.17	-2.75	23,23,23,23	0
57	MG	YA	3028	1/1	0.98	0.19	-2.76	9,9,9,9	0
57	MG	XA	1625	1/1	0.92	0.12	-2.76	16,16,16,16	0
57	MG	YA	3205	1/1	0.89	0.18	-2.78	38,38,38,38	0
57	MG	RA	3087	1/1	0.95	0.14	-2.81	34,34,34,34	0
57	MG	RA	3082	1/1	0.94	0.18	-2.82	42,42,42,42	0
57	MG	RA	3113	1/1	0.96	0.11	-2.84	32,32,32,32	0
57	MG	QA	1640	1/1	0.89	0.14	-2.85	51,51,51,51	0
57	MG	YA	3153	1/1	0.76	0.15	-2.86	21,21,21,21	0
57	MG	RA	3234	1/1	0.93	0.17	-2.90	48,48,48,48	0
57	MG	RA	3159	1/1	0.90	0.17	-2.93	30,30,30,30	0
57	MG	QA	1606	1/1	0.97	0.10	-2.95	22,22,22,22	0
57	MG	XA	1650	1/1	0.94	0.09	-2.96	26,26,26,26	0
57	MG	RA	3191	1/1	0.91	0.10	-2.98	21,21,21,21	0
57	MG	RA	3065	1/1	0.99	0.14	-3.08	16,16,16,16	0
57	MG	YB	203	1/1	0.86	0.17	-3.11	37,37,37,37	0
57	MG	RA	3123	1/1	0.97	0.19	-3.18	28,28,28,28	0
57	MG	YA	3113	1/1	0.95	0.19	-3.20	19,19,19,19	0
57	MG	QA	1614	1/1	0.93	0.12	-3.22	26,26,26,26	0
57	MG	RA	3055	1/1	0.82	0.17	-3.25	7,7,7,7	0
57	MG	YA	3081	1/1	0.98	0.19	-3.26	5,5,5,5	0
57	MG	RA	3069	1/1	0.86	0.11	-3.29	21,21,21,21	0
57	MG	QA	1636	1/1	0.99	0.09	-3.38	16,16,16,16	0
57	MG	XA	1630	1/1	0.80	0.15	-3.44	16,16,16,16	0
57	MG	XA	1621	1/1	0.82	0.15	-3.47	29,29,29,29	0
57	MG	QA	1622	1/1	0.94	0.07	-3.48	32,32,32,32	0
57	MG	YA	3224	1/1	0.93	0.15	-3.54	24,24,24,24	0
57	MG	YA	3080	1/1	0.98	0.18	-3.55	10,10,10,10	0
57	MG	YA	3142	1/1	0.93	0.22	-3.63	28,28,28,28	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
57	MG	QA	1616	1/1	0.91	0.07	-3.65	40,40,40,40	0
57	MG	YA	3117	1/1	0.94	0.12	-3.79	18,18,18,18	0
57	MG	RA	3103	1/1	0.93	0.12	-3.82	8,8,8,8	0
57	MG	QA	1665	1/1	0.86	0.14	-3.83	18,18,18,18	0
57	MG	YA	3147	1/1	0.96	0.14	-3.92	8,8,8,8	0
57	MG	YA	3059	1/1	0.98	0.12	-3.95	6,6,6,6	0
57	MG	YA	3017	1/1	0.97	0.18	-3.96	2,2,2,2	0
57	MG	XA	1663	1/1	0.88	0.09	-3.97	44,44,44,44	0
57	MG	QV	101	1/1	0.99	0.15	-3.98	26,26,26,26	0
57	MG	YA	3016	1/1	0.84	0.13	-4.02	8,8,8,8	0
57	MG	YA	3108	1/1	0.99	0.17	-4.02	3,3,3,3	0
57	MG	YA	3137	1/1	0.90	0.15	-4.20	6,6,6,6	0
57	MG	RA	3089	1/1	0.98	0.15	-4.23	8,8,8,8	0
57	MG	YA	3262	1/1	0.91	0.17	-4.27	38,38,38,38	0
57	MG	QA	1659	1/1	0.94	0.11	-4.33	39,39,39,39	0
57	MG	RA	3151	1/1	0.91	0.11	-4.41	18,18,18,18	0
57	MG	YA	3168	1/1	0.96	0.08	-4.42	13,13,13,13	0
57	MG	YA	3138	1/1	0.96	0.10	-4.48	10,10,10,10	0
57	MG	YA	3082	1/1	0.92	0.14	-4.50	8,8,8,8	0
57	MG	YA	3242	1/1	0.93	0.17	-4.64	72,72,72,72	0
57	MG	QA	1646	1/1	0.91	0.09	-4.64	39,39,39,39	0
57	MG	XA	1638	1/1	0.91	0.11	-4.66	16,16,16,16	0
57	MG	XA	1624	1/1	0.93	0.10	-4.71	55,55,55,55	0
57	MG	YA	3079	1/1	0.94	0.13	-4.81	12,12,12,12	0
57	MG	YA	3176	1/1	0.98	0.16	-4.90	6,6,6,6	0
57	MG	XA	1662	1/1	0.97	0.08	-4.92	11,11,11,11	0
57	MG	YA	3056	1/1	0.96	0.14	-4.96	8,8,8,8	0
57	MG	YA	3263	1/1	0.94	0.17	-4.98	33,33,33,33	0
57	MG	YA	3038	1/1	0.95	0.12	-4.99	6,6,6,6	0
57	MG	YA	3206	1/1	0.89	0.14	-5.11	15,15,15,15	0
57	MG	YA	3065	1/1	0.94	0.14	-5.14	8,8,8,8	0
57	MG	RA	3108	1/1	0.96	0.14	-5.16	24,24,24,24	0
57	MG	RA	3165	1/1	0.89	0.09	-5.17	19,19,19,19	0
57	MG	RA	3081	1/1	0.89	0.07	-5.19	30,30,30,30	0
57	MG	YA	3190	1/1	0.99	0.07	-5.23	2,2,2,2	0
57	MG	YA	3234	1/1	0.92	0.14	-5.40	21,21,21,21	0
57	MG	QA	1610	1/1	0.98	0.13	-5.63	11,11,11,11	0
57	MG	XA	1636	1/1	0.91	0.13	-5.66	5,5,5,5	0
57	MG	QA	1613	1/1	0.93	0.19	-5.72	21,21,21,21	0
57	MG	RA	3025	1/1	0.98	0.17	-5.79	15,15,15,15	0
57	MG	YA	3112	1/1	0.98	0.06	-6.22	15,15,15,15	0
57	MG	RA	3161	1/1	0.90	0.15	-6.49	27,27,27,27	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
57	MG	YA	3177	1/1	0.86	0.10	-6.63	20,20,20,20	0
57	MG	YA	3167	1/1	0.98	0.09	-6.88	21,21,21,21	0
57	MG	RA	3018	1/1	0.97	0.12	-6.90	9,9,9,9	0
57	MG	YA	3005	1/1	0.98	0.06	-7.08	1,1,1,1	0
57	MG	QA	1607	1/1	0.96	0.10	-7.23	40,40,40,40	0
57	MG	YP	201	1/1	0.92	0.12	-7.27	23,23,23,23	0
57	MG	YA	3061	1/1	0.95	0.11	-7.48	15,15,15,15	0
57	MG	RA	3150	1/1	0.90	0.13	-8.12	25,25,25,25	0
57	MG	RA	3198	1/1	0.89	0.12	-8.15	20,20,20,20	0
57	MG	RA	3162	1/1	0.93	0.14	-8.19	18,18,18,18	0
57	MG	RA	3136	1/1	0.96	0.10	-8.67	9,9,9,9	0
57	MG	YA	3218	1/1	0.92	0.10	-8.82	10,10,10,10	0
57	MG	RA	3186	1/1	0.98	0.07	-10.49	20,20,20,20	0
57	MG	RA	3075	1/1	0.97	0.09	-10.64	15,15,15,15	0
57	MG	XA	1627	1/1	0.97	0.09	-11.00	7,7,7,7	0
57	MG	XA	1612	1/1	0.97	0.12	-11.78	13,13,13,13	0
57	MG	YA	3074	1/1	0.87	0.09	-12.57	6,6,6,6	0
57	MG	YA	3201	1/1	0.89	0.13	-	14,14,14,14	0
57	MG	RA	3102	1/1	0.95	0.23	-	14,14,14,14	0
57	MG	RA	3190	1/1	0.89	0.17	-	38,38,38,38	0
57	MG	YA	3122	1/1	0.99	0.17	-	9,9,9,9	0
57	MG	RA	3201	1/1	0.84	0.20	-	24,24,24,24	0
57	MG	RA	3116	1/1	0.98	0.22	-	1,1,1,1	0
57	MG	YA	3152	1/1	0.88	0.23	-	51,51,51,51	0
57	MG	RA	3084	1/1	0.74	0.16	-	9,9,9,9	0
57	MG	XA	1656	1/1	0.73	0.12	-	31,31,31,31	0
57	MG	YA	3120	1/1	0.45	0.62	-	63,63,63,63	0
57	MG	RA	3052	1/1	0.93	0.25	-	4,4,4,4	0
57	MG	XA	1659	1/1	0.91	0.30	-	34,34,34,34	0
57	MG	YA	3013	1/1	0.96	0.22	-	1,1,1,1	0
57	MG	YA	3131	1/1	0.94	0.14	-	35,35,35,35	0
57	MG	RA	3213	1/1	0.90	0.29	-	29,29,29,29	0
57	MG	XA	1633	1/1	0.86	0.16	-	37,37,37,37	0
57	MG	YA	3001	1/1	0.96	0.22	-	9,9,9,9	0
57	MG	QA	1664	1/1	0.84	0.15	-	40,40,40,40	0
57	MG	QA	1661	1/1	0.93	0.09	-	38,38,38,38	0
57	MG	RA	3079	1/1	0.98	0.20	-	17,17,17,17	0
57	MG	YA	3194	1/1	0.86	0.23	-	41,41,41,41	0
57	MG	RA	3209	1/1	0.79	0.32	-	50,50,50,50	0
57	MG	YA	3039	1/1	0.88	0.12	-	19,19,19,19	0
57	MG	YA	3098	1/1	0.97	0.16	-	16,16,16,16	0
57	MG	YA	3247	1/1	0.92	0.13	-	30,30,30,30	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
57	MG	YA	3086	1/1	0.97	0.22	-	6,6,6,6	0
57	MG	RA	3141	1/1	0.89	0.16	-	33,33,33,33	0
57	MG	XA	1654	1/1	0.86	0.26	-	53,53,53,53	0
57	MG	YA	3075	1/1	0.94	0.25	-	28,28,28,28	0
57	MG	RA	3011	1/1	0.94	0.49	-	32,32,32,32	0
57	MG	XA	1660	1/1	0.90	0.12	-	30,30,30,30	0
57	MG	QA	1633	1/1	0.90	0.26	-	44,44,44,44	0
57	MG	RA	3145	1/1	0.87	0.15	-	27,27,27,27	0
57	MG	YA	3019	1/1	0.98	0.25	-	1,1,1,1	0
57	MG	RA	3071	1/1	0.94	0.18	-	19,19,19,19	0
57	MG	QA	1634	1/1	0.95	0.23	-	20,20,20,20	0
57	MG	RA	3118	1/1	0.92	0.10	-	33,33,33,33	0
57	MG	RB	202	1/1	0.75	0.09	-	54,54,54,54	0
57	MG	YA	3069	1/1	0.96	0.31	-	15,15,15,15	0
57	MG	YA	3222	1/1	0.78	0.17	-	34,34,34,34	0
57	MG	QA	1658	1/1	0.92	0.20	-	63,63,63,63	0
57	MG	YA	3192	1/1	0.83	0.25	-	30,30,30,30	0
57	MG	YA	3225	1/1	0.96	0.19	-	9,9,9,9	0
57	MG	RA	3183	1/1	0.87	0.17	-	19,19,19,19	0
57	MG	YA	3063	1/1	0.87	0.14	-	13,13,13,13	0
57	MG	RA	3031	1/1	0.99	0.18	-	16,16,16,16	0
57	MG	XA	1601	1/1	0.95	0.20	-	4,4,4,4	0
57	MG	QA	1666	1/1	0.92	0.19	-	36,36,36,36	0
57	MG	YA	3158	1/1	0.73	0.18	-	24,24,24,24	0
57	MG	YQ	201	1/1	0.97	0.14	-	25,25,25,25	0
57	MG	YA	3127	1/1	0.67	0.30	-	26,26,26,26	0
57	MG	YA	3085	1/1	0.98	0.15	-	71,71,71,71	0
57	MG	XA	1603	1/1	0.96	0.14	-	38,38,38,38	0
57	MG	RA	3033	1/1	0.96	0.27	-	3,3,3,3	0
57	MG	YA	3066	1/1	0.99	0.22	-	16,16,16,16	0
57	MG	YA	3149	1/1	0.95	0.13	-	16,16,16,16	0
57	MG	QA	1656	1/1	0.68	0.26	-	52,52,52,52	0
57	MG	YA	3043	1/1	0.98	0.33	-	15,15,15,15	0
57	MG	RA	3038	1/1	0.99	0.31	-	9,9,9,9	0
57	MG	RA	3068	1/1	0.86	0.18	-	21,21,21,21	0
57	MG	XA	1615	1/1	0.98	0.08	-	15,15,15,15	0
57	MG	YA	3162	1/1	0.95	0.15	-	20,20,20,20	0
57	MG	RA	3048	1/1	0.96	0.16	-	1,1,1,1	0
57	MG	RA	3167	1/1	0.93	0.14	-	29,29,29,29	0
57	MG	YA	3045	1/1	0.83	0.18	-	2,2,2,2	0
57	MG	YA	3084	1/1	0.85	0.21	-	10,10,10,10	0
57	MG	YA	3124	1/1	0.98	0.27	-	9,9,9,9	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
57	MG	QA	1608	1/1	0.96	0.06	-	13,13,13,13	0
57	MG	YA	3133	1/1	0.93	0.12	-	18,18,18,18	0
57	MG	XA	1639	1/1	0.91	0.09	-	35,35,35,35	0
57	MG	RA	3077	1/1	0.99	0.30	-	6,6,6,6	0
57	MG	XA	1619	1/1	0.98	0.11	-	18,18,18,18	0
57	MG	RA	3130	1/1	0.75	0.23	-	46,46,46,46	0
57	MG	QA	1625	1/1	0.92	0.09	-	36,36,36,36	0
57	MG	YA	3204	1/1	0.80	0.18	-	19,19,19,19	0
57	MG	RA	3217	1/1	0.82	0.10	-	28,28,28,28	0
57	MG	YA	3188	1/1	0.91	0.14	-	32,32,32,32	0
57	MG	RA	3128	1/1	0.96	0.25	-	31,31,31,31	0
57	MG	YA	3089	1/1	0.97	0.28	-	8,8,8,8	0
57	MG	RA	3109	1/1	0.97	0.09	-	8,8,8,8	0
57	MG	YA	3088	1/1	0.93	0.18	-	1,1,1,1	0
57	MG	YA	3021	1/1	0.98	0.30	-	9,9,9,9	0
57	MG	RA	3236	1/1	0.96	0.28	-	33,33,33,33	0
57	MG	YA	3172	1/1	0.76	0.18	-	43,43,43,43	0
57	MG	RA	3047	1/1	0.96	0.34	-	9,9,9,9	0
57	MG	YA	3123	1/1	0.94	0.18	-	9,9,9,9	0
57	MG	YA	3067	1/1	0.99	0.20	-	22,22,22,22	0
57	MG	QA	1641	1/1	0.93	0.17	-	24,24,24,24	0
57	MG	YA	3130	1/1	0.81	0.24	-	17,17,17,17	0
57	MG	QA	1651	1/1	0.87	0.21	-	35,35,35,35	0
57	MG	RA	3074	1/1	0.96	0.18	-	4,4,4,4	0
57	MG	YA	3203	1/1	0.98	0.18	-	27,27,27,27	0
57	MG	QA	1626	1/1	0.15	0.20	-	59,59,59,59	0
57	MG	YA	3254	1/1	0.97	0.19	-	7,7,7,7	0
57	MG	RA	3195	1/1	0.78	0.37	-	31,31,31,31	0
57	MG	YA	3052	1/1	0.84	0.23	-	21,21,21,21	0
57	MG	RA	3019	1/1	0.96	0.31	-	19,19,19,19	0
57	MG	YA	3174	1/1	0.86	0.12	-	19,19,19,19	0
57	MG	RA	3222	1/1	0.37	0.42	-	93,93,93,93	0
57	MG	RA	3153	1/1	0.90	0.28	-	51,51,51,51	0
57	MG	YA	3232	1/1	0.97	0.13	-	23,23,23,23	0
57	MG	YA	3223	1/1	0.94	0.15	-	25,25,25,25	0
57	MG	QA	1668	1/1	0.88	0.14	-	42,42,42,42	0
57	MG	RA	3067	1/1	0.99	0.20	-	9,9,9,9	0
57	MG	Y0	101	1/1	0.87	0.22	-	7,7,7,7	0
57	MG	RA	3007	1/1	0.98	0.24	-	6,6,6,6	0
57	MG	RA	3168	1/1	0.93	0.26	-	22,22,22,22	0
57	MG	RA	3181	1/1	0.86	0.33	-	48,48,48,48	0
57	MG	XA	1644	1/1	0.96	0.19	-	27,27,27,27	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
57	MG	YA	3116	1/1	0.84	0.19	-	36,36,36,36	0
57	MG	RA	3062	1/1	0.91	0.11	-	56,56,56,56	0
57	MG	YA	3018	1/1	0.89	0.32	-	13,13,13,13	0
57	MG	YA	3055	1/1	0.97	0.24	-	10,10,10,10	0
57	MG	RA	3017	1/1	0.99	0.28	-	8,8,8,8	0
57	MG	RA	3237	1/1	0.96	0.27	-	26,26,26,26	0
57	MG	YA	3214	1/1	0.93	0.16	-	35,35,35,35	0
57	MG	RA	3058	1/1	0.92	0.25	-	37,37,37,37	0
57	MG	R5	101	1/1	0.89	0.19	-	19,19,19,19	0
57	MG	QA	1662	1/1	0.91	0.11	-	53,53,53,53	0
57	MG	QA	1643	1/1	0.94	0.12	-	22,22,22,22	0
57	MG	YA	3157	1/1	0.95	0.10	-	30,30,30,30	0
57	MG	RA	3228	1/1	0.85	0.67	-	58,58,58,58	0
57	MG	RA	3107	1/1	0.96	0.17	-	25,25,25,25	0
57	MG	QA	1648	1/1	0.95	0.16	-	12,12,12,12	0
57	MG	RA	3211	1/1	0.84	0.40	-	43,43,43,43	0
57	MG	RA	3114	1/1	0.98	0.25	-	20,20,20,20	0
57	MG	YA	3046	1/1	0.91	0.25	-	8,8,8,8	0
57	MG	RA	3094	1/1	0.97	0.14	-	9,9,9,9	0
57	MG	YA	3182	1/1	0.88	0.21	-	24,24,24,24	0
57	MG	YA	3202	1/1	0.93	0.22	-	59,59,59,59	0
57	MG	RA	3154	1/1	0.97	0.20	-	22,22,22,22	0
57	MG	YA	3187	1/1	0.95	0.09	-	29,29,29,29	0
57	MG	RA	3134	1/1	0.82	0.27	-	44,44,44,44	0
57	MG	RA	3164	1/1	0.91	0.29	-	36,36,36,36	0
57	MG	YA	3128	1/1	0.89	0.27	-	26,26,26,26	0
57	MG	RA	3216	1/1	0.87	0.24	-	43,43,43,43	0
57	MG	YA	3165	1/1	0.30	0.32	-	54,54,54,54	0
57	MG	RA	3028	1/1	0.98	0.23	-	4,4,4,4	0
57	MG	YA	3229	1/1	0.85	0.16	-	24,24,24,24	0
57	MG	XA	1643	1/1	0.91	0.15	-	29,29,29,29	0
57	MG	RA	3146	1/1	0.95	0.14	-	33,33,33,33	0
57	MG	QA	1645	1/1	0.81	0.28	-	53,53,53,53	0
57	MG	R0	101	1/1	0.83	0.19	-	11,11,11,11	0
57	MG	XA	1608	1/1	0.97	0.34	-	23,23,23,23	0
57	MG	QA	1601	1/1	0.94	0.17	-	33,33,33,33	0
57	MG	RA	3096	1/1	0.95	0.28	-	23,23,23,23	0
57	MG	RA	3148	1/1	0.93	0.26	-	36,36,36,36	0
57	MG	YA	3210	1/1	0.86	0.21	-	37,37,37,37	0
57	MG	YA	3094	1/1	0.96	0.18	-	2,2,2,2	0
57	MG	YA	3143	1/1	0.91	0.18	-	17,17,17,17	0
57	MG	RA	3143	1/1	0.82	0.27	-	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
57	MG	RA	3002	1/1	0.78	0.54	-	36,36,36,36	0
57	MG	RA	3203	1/1	0.95	0.14	-	35,35,35,35	0
57	MG	YA	3226	1/1	0.95	0.19	-	3,3,3,3	0
57	MG	YA	3140	1/1	0.94	0.28	-	20,20,20,20	0
57	MG	XA	1626	1/1	0.99	0.19	-	19,19,19,19	0
57	MG	QA	1619	1/1	0.95	0.11	-	33,33,33,33	0
57	MG	YA	3161	1/1	0.93	0.10	-	25,25,25,25	0
57	MG	YA	3096	1/1	0.97	0.21	-	10,10,10,10	0
57	MG	YA	3213	1/1	0.95	0.27	-	29,29,29,29	0
57	MG	RA	3111	1/1	0.97	0.35	-	22,22,22,22	0
57	MG	RA	3104	1/1	0.98	0.19	-	16,16,16,16	0
57	MG	RA	3152	1/1	0.97	0.17	-	14,14,14,14	0
57	MG	YA	3060	1/1	0.88	0.17	-	4,4,4,4	0
57	MG	YA	3151	1/1	0.94	0.18	-	25,25,25,25	0
57	MG	YA	3010	1/1	0.97	0.21	-	4,4,4,4	0
57	MG	RA	3174	1/1	0.93	0.10	-	38,38,38,38	0
57	MG	RA	3240	1/1	0.96	0.33	-	25,25,25,25	0
57	MG	QA	1638	1/1	0.83	0.25	-	27,27,27,27	0
57	MG	YB	202	1/1	0.92	0.23	-	20,20,20,20	0
57	MG	RA	3045	1/1	0.95	0.24	-	16,16,16,16	0
57	MG	YA	3191	1/1	0.88	0.25	-	24,24,24,24	0
57	MG	YA	3198	1/1	0.76	0.34	-	59,59,59,59	0
57	MG	RA	3214	1/1	0.92	0.17	-	18,18,18,18	0
57	MG	XA	1674	1/1	0.91	0.12	-	25,25,25,25	0
57	MG	RA	3014	1/1	0.98	0.30	-	9,9,9,9	0
57	MG	RA	3030	1/1	0.95	0.27	-	12,12,12,12	0
57	MG	RE	301	1/1	0.97	0.11	-	1,1,1,1	0
57	MG	YA	3150	1/1	0.89	0.23	-	61,61,61,61	0
57	MG	YA	3145	1/1	0.91	0.23	-	11,11,11,11	0
57	MG	XA	1642	1/1	0.96	0.19	-	23,23,23,23	0
57	MG	RA	3021	1/1	0.98	0.29	-	2,2,2,2	0
57	MG	YA	3163	1/1	0.94	0.14	-	28,28,28,28	0
57	MG	RA	3158	1/1	0.90	0.33	-	51,51,51,51	0
57	MG	RA	3233	1/1	0.97	0.27	-	24,24,24,24	0
57	MG	RA	3024	1/1	0.95	0.21	-	5,5,5,5	0
57	MG	RA	3112	1/1	0.96	0.10	-	25,25,25,25	0
57	MG	YA	3252	1/1	0.96	0.38	-	25,25,25,25	0
57	MG	YA	3139	1/1	0.36	0.26	-	70,70,70,70	0
57	MG	YA	3040	1/1	0.96	0.26	-	8,8,8,8	0
57	MG	RA	3182	1/1	0.93	0.18	-	10,10,10,10	0
57	MG	YA	3237	1/1	0.82	0.21	-	44,44,44,44	0
57	MG	YA	3083	1/1	0.94	0.20	-	7,7,7,7	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
57	MG	QA	1637	1/1	0.77	0.23	-	57,57,57,57	0
57	MG	QA	1623	1/1	0.93	0.16	-	37,37,37,37	0
57	MG	RA	3205	1/1	0.89	0.24	-	46,46,46,46	0
57	MG	YA	3077	1/1	0.97	0.23	-	16,16,16,16	0
57	MG	RA	3001	1/1	0.93	0.24	-	11,11,11,11	0
57	MG	YA	3110	1/1	0.96	0.10	-	15,15,15,15	0
57	MG	RA	3101	1/1	0.76	0.22	-	7,7,7,7	0
57	MG	RA	3004	1/1	0.97	0.32	-	15,15,15,15	0
57	MG	RA	3026	1/1	0.81	0.16	-	8,8,8,8	0
57	MG	RA	3156	1/1	0.94	0.23	-	44,44,44,44	0
57	MG	RA	3199	1/1	0.77	0.14	-	29,29,29,29	0
57	MG	QA	1603	1/1	0.92	0.16	-	7,7,7,7	0
57	MG	RA	3231	1/1	0.96	0.37	-	9,9,9,9	0
57	MG	RA	3085	1/1	0.95	0.18	-	16,16,16,16	0
57	MG	YA	3241	1/1	0.59	0.25	-	46,46,46,46	0
57	MG	XA	1607	1/1	0.94	0.28	-	31,31,31,31	0
57	MG	YA	3003	1/1	0.98	0.22	-	10,10,10,10	0
57	MG	YA	3078	1/1	0.97	0.24	-	19,19,19,19	0
57	MG	QA	1663	1/1	0.94	0.10	-	82,82,82,82	0
57	MG	RA	3177	1/1	0.76	0.40	-	38,38,38,38	0
57	MG	YA	3251	1/1	0.92	0.29	-	20,20,20,20	0
57	MG	YA	3216	1/1	0.88	0.20	-	59,59,59,59	0
57	MG	YA	3166	1/1	0.89	0.30	-	58,58,58,58	0
57	MG	QA	1605	1/1	0.93	0.32	-	30,30,30,30	0
57	MG	QA	1627	1/1	0.93	0.10	-	26,26,26,26	0
57	MG	YA	3156	1/1	0.90	0.26	-	33,33,33,33	0
57	MG	YA	3186	1/1	0.94	0.16	-	39,39,39,39	0
57	MG	QA	1602	1/1	0.93	0.20	-	18,18,18,18	0
57	MG	RA	3180	1/1	0.84	0.17	-	34,34,34,34	0
57	MG	RA	3012	1/1	0.98	0.26	-	8,8,8,8	0
57	MG	XA	1670	1/1	0.95	0.11	-	29,29,29,29	0
57	MG	RA	3070	1/1	0.93	0.24	-	26,26,26,26	0
57	MG	YA	3236	1/1	0.92	0.22	-	40,40,40,40	0
57	MG	RA	3139	1/1	0.73	0.20	-	49,49,49,49	0
57	MG	XA	1655	1/1	0.56	0.23	-	81,81,81,81	0
57	MG	RA	3061	1/1	0.97	0.28	-	9,9,9,9	0
57	MG	YA	3053	1/1	0.95	0.23	-	5,5,5,5	0
57	MG	RA	3092	1/1	0.94	0.12	-	9,9,9,9	0
57	MG	XA	1664	1/1	0.87	0.24	-	51,51,51,51	0
57	MG	YA	3121	1/1	0.97	0.11	-	18,18,18,18	0
57	MG	YA	3244	1/1	0.83	0.28	-	25,25,25,25	0
57	MG	YA	3243	1/1	0.90	0.21	-	42,42,42,42	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
57	MG	QA	1628	1/1	0.95	0.28	-	25,25,25,25	0
57	MG	XA	1648	1/1	0.90	0.11	-	39,39,39,39	0
57	MG	YA	3155	1/1	0.86	0.17	-	53,53,53,53	0
57	MG	RA	3105	1/1	0.96	0.26	-	18,18,18,18	0
57	MG	YA	3164	1/1	0.59	0.41	-	36,36,36,36	0
57	MG	QH	201	1/1	0.77	0.09	-	58,58,58,58	0
57	MG	QA	1660	1/1	0.91	0.21	-	35,35,35,35	0
57	MG	YA	3146	1/1	0.84	0.32	-	57,57,57,57	0
57	MG	QA	1635	1/1	0.97	0.08	-	33,33,33,33	0
57	MG	YA	3220	1/1	0.81	0.32	-	52,52,52,52	0
57	MG	RA	3127	1/1	0.86	0.21	-	23,23,23,23	0
57	MG	XA	1604	1/1	0.97	0.14	-	15,15,15,15	0
57	MG	YA	3230	1/1	0.95	0.18	-	32,32,32,32	0
57	MG	RA	3187	1/1	0.86	0.24	-	63,63,63,63	0
57	MG	RA	3149	1/1	0.93	0.17	-	32,32,32,32	0
57	MG	YA	3200	1/1	0.88	0.19	-	26,26,26,26	0
57	MG	YA	3007	1/1	0.99	0.20	-	9,9,9,9	0
57	MG	RA	3232	1/1	0.79	0.18	-	30,30,30,30	0
57	MG	XV	102	1/1	0.97	0.21	-	0,0,0,0	0
57	MG	RA	3166	1/1	0.94	0.12	-	43,43,43,43	0
57	MG	RA	3042	1/1	0.98	0.24	-	3,3,3,3	0
57	MG	RA	3046	1/1	0.97	0.15	-	12,12,12,12	0
57	MG	QA	1624	1/1	0.96	0.19	-	27,27,27,27	0
57	MG	RA	3083	1/1	0.96	0.20	-	11,11,11,11	0
57	MG	YA	3126	1/1	0.92	0.15	-	22,22,22,22	0
57	MG	YA	3022	1/1	0.91	0.28	-	7,7,7,7	0
57	MG	XA	1629	1/1	0.96	0.19	-	29,29,29,29	0
57	MG	RA	3202	1/1	0.95	0.10	-	21,21,21,21	0
57	MG	RA	3040	1/1	0.97	0.30	-	21,21,21,21	0
57	MG	YA	3118	1/1	0.96	0.28	-	25,25,25,25	0
57	MG	YA	3097	1/1	0.97	0.21	-	19,19,19,19	0
57	MG	RA	3091	1/1	0.69	0.47	-	73,73,73,73	0
57	MG	YA	3183	1/1	0.87	0.18	-	30,30,30,30	0
57	MG	RA	3215	1/1	0.86	0.14	-	48,48,48,48	0
57	MG	RA	3218	1/1	0.91	0.18	-	29,29,29,29	0
57	MG	RA	3227	1/1	0.74	0.24	-	73,73,73,73	0
57	MG	XA	1669	1/1	0.97	0.16	-	41,41,41,41	0
57	MG	RA	3044	1/1	0.91	0.21	-	24,24,24,24	0
57	MG	XA	1672	1/1	0.65	0.20	-	40,40,40,40	0
57	MG	YA	3104	1/1	0.94	0.25	-	24,24,24,24	0
57	MG	RA	3120	1/1	0.21	0.34	-	60,60,60,60	0
57	MG	YA	3265	1/1	0.96	0.29	-	27,27,27,27	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
57	MG	YA	3160	1/1	0.80	0.16	-	12,12,12,12	0
57	MG	YA	3102	1/1	0.95	0.26	-	12,12,12,12	0
57	MG	YB	201	1/1	0.93	0.32	-	35,35,35,35	0
57	MG	YA	3173	1/1	0.84	0.21	-	43,43,43,43	0
57	MG	XA	1602	1/1	0.98	0.12	-	30,30,30,30	0
57	MG	RA	3172	1/1	0.95	0.12	-	23,23,23,23	0
57	MG	RA	3140	1/1	0.95	0.38	-	26,26,26,26	0
57	MG	Y5	101	1/1	0.98	0.16	-	26,26,26,26	0
57	MG	RA	3196	1/1	0.92	0.20	-	15,15,15,15	0
57	MG	YA	3136	1/1	0.98	0.17	-	18,18,18,18	0
57	MG	YA	3189	1/1	0.76	0.27	-	23,23,23,23	0
57	MG	RA	3135	1/1	0.87	0.17	-	16,16,16,16	0
57	MG	RA	3072	1/1	0.94	0.24	-	13,13,13,13	0
57	MG	RA	3097	1/1	0.95	0.27	-	14,14,14,14	0
57	MG	YA	3051	1/1	0.99	0.18	-	2,2,2,2	0
57	MG	YA	3199	1/1	0.91	0.31	-	18,18,18,18	0
57	MG	YE	301	1/1	0.87	0.18	-	7,7,7,7	0
57	MG	QA	1629	1/1	0.38	0.33	-	43,43,43,43	0
57	MG	YA	3233	1/1	0.93	0.12	-	34,34,34,34	0
57	MG	RA	3115	1/1	0.75	0.20	-	7,7,7,7	0
57	MG	XA	1649	1/1	0.85	0.20	-	30,30,30,30	0
57	MG	YA	3062	1/1	0.96	0.12	-	9,9,9,9	0
57	MG	QA	1653	1/1	0.94	0.15	-	36,36,36,36	0
57	MG	QF	201	1/1	0.90	0.20	-	39,39,39,39	0
57	MG	RA	3207	1/1	0.76	0.36	-	47,47,47,47	0
57	MG	RA	3225	1/1	0.88	0.10	-	27,27,27,27	0
57	MG	QA	1612	1/1	0.96	0.21	-	13,13,13,13	0
57	MG	YA	3029	1/1	0.93	0.23	-	12,12,12,12	0
57	MG	YA	3134	1/1	0.93	0.18	-	21,21,21,21	0
57	MG	YA	3106	1/1	0.94	0.13	-	9,9,9,9	0
57	MG	YA	3245	1/1	0.97	0.14	-	38,38,38,38	0
57	MG	RA	3235	1/1	0.89	0.25	-	22,22,22,22	0
57	MG	XA	1634	1/1	0.96	0.10	-	15,15,15,15	0
57	MG	YA	3169	1/1	0.96	0.20	-	20,20,20,20	0
57	MG	XA	1641	1/1	0.95	0.10	-	40,40,40,40	0
57	MG	RA	3138	1/1	0.85	0.32	-	12,12,12,12	0
57	MG	RA	3054	1/1	0.94	0.11	-	0,0,0,0	0
57	MG	RA	3008	1/1	0.89	0.20	-	27,27,27,27	0
57	MG	RA	3009	1/1	0.91	0.10	-	9,9,9,9	0
57	MG	RA	3197	1/1	0.85	0.18	-	55,55,55,55	0
57	MG	YA	3195	1/1	0.89	0.20	-	35,35,35,35	0
57	MG	YA	3179	1/1	0.89	0.23	-	35,35,35,35	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
57	MG	YA	3208	1/1	0.82	0.15	-	55,55,55,55	0
57	MG	YA	3076	1/1	0.98	0.34	-	7,7,7,7	0
57	MG	YA	3221	1/1	0.85	0.23	-	19,19,19,19	0
57	MG	RA	3176	1/1	0.81	0.14	-	24,24,24,24	0
57	MG	RA	3170	1/1	0.91	0.11	-	25,25,25,25	0
57	MG	XA	1671	1/1	0.86	0.16	-	71,71,71,71	0
57	MG	YA	3193	1/1	0.95	0.20	-	27,27,27,27	0
57	MG	YA	3012	1/1	0.96	0.38	-	9,9,9,9	0
57	MG	RA	3189	1/1	0.95	0.10	-	34,34,34,34	0
57	MG	RA	3129	1/1	0.97	0.12	-	21,21,21,21	0
57	MG	YA	3141	1/1	0.97	0.10	-	16,16,16,16	0
57	MG	YA	3196	1/1	0.78	0.30	-	28,28,28,28	0
57	MG	YA	3264	1/1	0.96	0.13	-	24,24,24,24	0
57	MG	YA	3064	1/1	0.97	0.08	-	39,39,39,39	0
57	MG	YA	3257	1/1	0.99	0.24	-	3,3,3,3	0
57	MG	XA	1651	1/1	0.97	0.14	-	12,12,12,12	0
57	MG	YA	3148	1/1	0.93	0.16	-	14,14,14,14	0
57	MG	QA	1652	1/1	0.96	0.20	-	37,37,37,37	0
57	MG	XA	1635	1/1	0.87	0.16	-	41,41,41,41	0
57	MG	YA	3103	1/1	0.94	0.22	-	31,31,31,31	0
57	MG	YA	3250	1/1	0.95	0.12	-	40,40,40,40	0
57	MG	RA	3224	1/1	0.98	0.11	-	52,52,52,52	0
57	MG	RA	3090	1/1	0.97	0.17	-	23,23,23,23	0
57	MG	RA	3110	1/1	0.92	0.21	-	9,9,9,9	0
57	MG	YA	3248	1/1	0.98	0.23	-	26,26,26,26	0
57	MG	RA	3093	1/1	0.95	0.26	-	9,9,9,9	0
57	MG	XA	1666	1/1	0.90	0.34	-	43,43,43,43	0
57	MG	RA	3178	1/1	0.92	0.16	-	22,22,22,22	0
57	MG	YA	3231	1/1	0.95	0.10	-	19,19,19,19	0
57	MG	YA	3212	1/1	0.98	0.11	-	9,9,9,9	0
57	MG	XX	101	1/1	0.95	0.18	-	22,22,22,22	0
57	MG	RA	3049	1/1	0.89	0.10	-	8,8,8,8	0
57	MG	YA	3249	1/1	0.95	0.18	-	26,26,26,26	0
57	MG	YA	3093	1/1	0.97	0.16	-	13,13,13,13	0
57	MG	XA	1665	1/1	0.83	0.21	-	44,44,44,44	0
57	MG	RA	3194	1/1	0.80	0.22	-	44,44,44,44	0
57	MG	YA	3054	1/1	0.94	0.22	-	49,49,49,49	0
57	MG	QA	1649	1/1	0.96	0.17	-	39,39,39,39	0
57	MG	RA	3173	1/1	0.88	0.16	-	15,15,15,15	0
57	MG	XA	1611	1/1	0.93	0.21	-	23,23,23,23	0
57	MG	XA	1632	1/1	0.91	0.18	-	17,17,17,17	0
57	MG	QA	1642	1/1	0.97	0.11	-	21,21,21,21	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
57	MG	XA	1618	1/1	0.98	0.16	-	7,7,7,7	0
57	MG	RA	3006	1/1	0.95	0.34	-	18,18,18,18	0
57	MG	RA	3169	1/1	0.97	0.45	-	35,35,35,35	0
57	MG	YA	3030	1/1	0.94	0.38	-	20,20,20,20	0

## 6.5 Other polymers [i](#)

There are no such residues in this entry.