



Full wwPDB EM Validation Report ⓘ

Mar 20, 2026 – 05:22 PM UTC

PDB ID : 8XJV / pdb_00008xjv
EMDB ID : EMD-38407
Title : Structural basis for the linker histone H5-nucleosome binding and chromatin compaction
Authors : Li, W.Y.; Song, F.; Zhu, P.
Deposited on : 2023-12-22
Resolution : 3.60 Å(reported)

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

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

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

EMDB validation analysis : 0.0.1.dev132
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

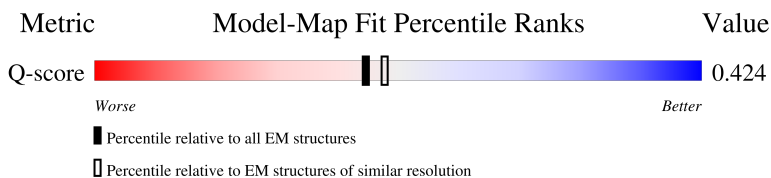
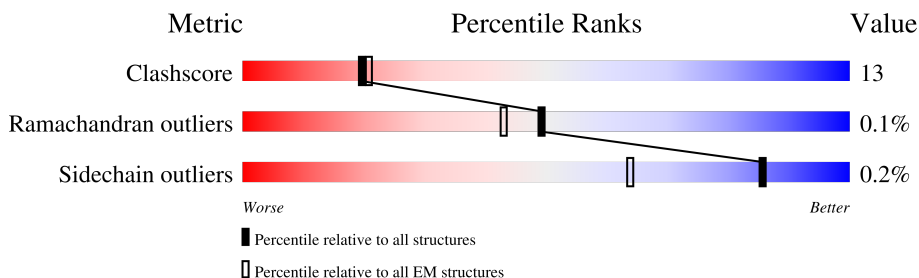
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.60 Å.

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



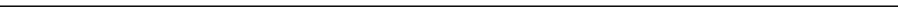
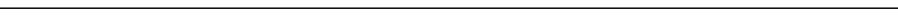
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
Q-score	-	25397	12797 (3.10 - 4.10)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	Au	2124	
2	Av	2124	
3	A	130	
3	Ae	130	

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Mol	Chain	Length	Quality of chain
3	B	130	 80% 17% .
3	C	130	 78% 20% ..
3	D	130	 88% 7% 5%
3	E	130	 82% 16% .
3	F	130	 75% 17% 8%
3	G	130	 82% 17% .
3	H	130	 78% 18% .
3	I	130	 86% 13% .
3	K	130	 78% 18% ...
3	L	130	 81% 18% .
3	aj	130	 74% 21% 5%
3	ak	130	 83% 12% 5%
3	al	130	 75% 10% 15%
3	am	130	 75% 20% ..
3	an	130	 83% 13% .
3	ao	130	 78% 18% 5%
3	ap	130	 78% 19% .
3	aq	130	 72% 18% 10%
3	ar	130	 84% 15% .
3	as	130	 77% 15% 8%
3	at	130	 78% 18% .
3	au	130	 75% 11% 15%
4	Aa	123	 66% 18% 16%
4	Ab	123	 76% 24%
4	Ac	123	 68% 13% 19%

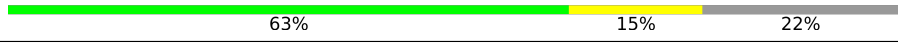
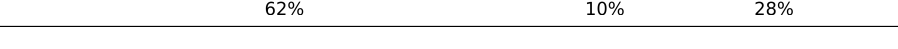
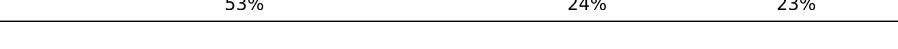
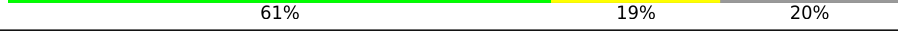
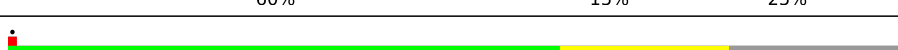
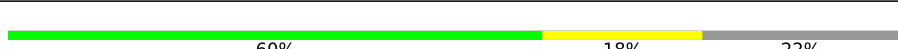
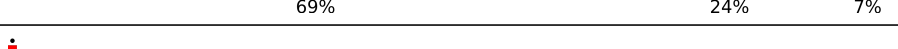
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Mol	Chain	Length	Quality of chain
4	Ad	123	
4	Af	123	
4	Ag	123	
4	At	123	
4	J	123	
4	M	123	
4	N	123	
4	O	123	
4	P	123	
4	Q	123	
4	R	123	
4	S	123	
4	T	123	
4	U	123	
4	V	123	
4	W	123	
4	av	123	
4	aw	123	
4	ax	123	
4	ay	123	
4	az	123	
5	X	136	
5	Y	136	
5	Z	136	
5	a	136	

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Mol	Chain	Length	Quality of chain
5	b	136	
5	c	136	
5	d	136	
5	e	136	
5	f	136	
5	g	136	
5	h	136	
5	i	136	
5	j	136	
5	k	136	
5	l	136	
5	m	136	
5	n	136	
5	o	136	
5	p	136	
5	q	136	
5	r	136	
5	s	136	
5	t	136	
5	u	136	
6	0	103	
6	1	103	
6	2	103	
6	3	103	
6	4	103	

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Mol	Chain	Length	Quality of chain
6	5	103	
6	6	103	
6	7	103	
6	8	103	
6	9	103	
6	CD	103	
6	a2	103	
6	a3	103	
6	a4	103	
6	a5	103	
6	a6	103	
6	a7	103	
6	a8	103	
6	a9	103	
6	v	103	
6	w	103	
6	x	103	
6	y	103	
6	z	103	
7	Ah	196	
7	Ai	196	
7	Aj	196	
7	Ak	196	
7	Al	196	
7	Am	196	

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Mol	Chain	Length	Quality of chain
7	An	196	44%20%35%
7	Ao	196	57%24%19%
7	Ap	196	26%11%63%
7	Aq	196	6%66%31%. .
7	Ar	196	5%59%33%. 8%
7	As	196	42%24%. 33%

2 Entry composition

There are 7 unique types of molecules in this entry. The entry contains 181715 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a DNA chain called DNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	Au	2116	Total	C	N	O	P	0	0
			43052	20433	7794	12709	2116		

- Molecule 2 is a DNA chain called DNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	Av	2112	Total	C	N	O	P	0	0
			43620	20607	8241	12660	2112		

- Molecule 3 is a protein called Histone H2A.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	A	122	Total	C	N	O		0	0
			936	585	184	167			
3	B	126	Total	C	N	O		0	0
			962	600	190	172			
3	C	129	Total	C	N	O		0	0
			983	611	196	176			
3	D	123	Total	C	N	O		0	0
			940	587	185	168			
3	E	128	Total	C	N	O		0	0
			973	605	194	174			
3	F	119	Total	C	N	O		0	0
			916	573	180	163			
3	G	129	Total	C	N	O		0	0
			983	611	196	176			
3	H	125	Total	C	N	O		0	0
			958	598	189	171			
3	I	129	Total	C	N	O		0	0
			983	611	196	176			
3	K	128	Total	C	N	O		0	0
			977	608	195	174			
3	L	130	Total	C	N	O	S	0	0
			991	616	197	177	1		

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Mol	Chain	Residues	Atoms				AltConf	Trace
3	aj	123	Total	C	N	O	0	0
			940	587	185	168		
3	ak	123	Total	C	N	O	0	0
			940	587	185	168		
3	al	111	Total	C	N	O	0	0
			851	533	169	149		
3	am	127	Total	C	N	O	0	0
			973	606	194	173		
3	an	125	Total	C	N	O	0	0
			958	598	189	171		
3	ao	124	Total	C	N	O	0	0
			949	592	187	170		
3	ap	127	Total	C	N	O	0	0
			973	606	194	173		
3	aq	117	Total	C	N	O	0	0
			900	564	175	161		
3	ar	129	Total	C	N	O	0	0
			983	611	196	176		
3	as	119	Total	C	N	O	0	0
			916	573	180	163		
3	at	126	Total	C	N	O	0	0
			962	600	190	172		
3	au	111	Total	C	N	O	0	0
			859	540	169	150		
3	Ae	122	Total	C	N	O	0	0
			936	585	184	167		

- Molecule 4 is a protein called Histone H2B 1.1.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	J	103	Total	C	N	O	S	0	0
			814	510	152	150	2		
4	M	123	Total	C	N	O	S	0	0
			956	599	179	175	3		
4	N	105	Total	C	N	O	S	0	0
			830	519	155	154	2		
4	O	103	Total	C	N	O	S	0	0
			814	510	152	150	2		
4	P	105	Total	C	N	O	S	0	0
			830	519	155	154	2		
4	Q	123	Total	C	N	O	S	0	0
			956	599	179	175	3		

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Mol	Chain	Residues	Atoms					AltConf	Trace
4	R	100	Total	C	N	O	S	0	0
			788	494	147	145	2		
4	S	123	Total	C	N	O	S	0	0
			956	599	179	175	3		
4	T	123	Total	C	N	O	S	0	0
			956	599	179	175	3		
4	U	123	Total	C	N	O	S	0	0
			956	599	179	175	3		
4	V	123	Total	C	N	O	S	0	0
			956	599	179	175	3		
4	W	123	Total	C	N	O	S	0	0
			956	599	179	175	3		
4	av	103	Total	C	N	O	S	0	0
			814	510	152	150	2		
4	aw	123	Total	C	N	O	S	0	0
			956	599	179	175	3		
4	ax	123	Total	C	N	O	S	0	0
			956	599	179	175	3		
4	ay	123	Total	C	N	O	S	0	0
			956	599	179	175	3		
4	az	100	Total	C	N	O	S	0	0
			788	494	147	145	2		
4	Aa	103	Total	C	N	O	S	0	0
			814	510	152	150	2		
4	Ab	123	Total	C	N	O	S	0	0
			956	599	179	175	3		
4	Ac	100	Total	C	N	O	S	0	0
			788	494	147	145	2		
4	Ad	102	Total	C	N	O	S	0	0
			805	504	150	149	2		
4	Af	97	Total	C	N	O	S	0	0
			766	480	142	142	2		
4	Ag	104	Total	C	N	O	S	0	0
			823	515	154	152	2		
4	At	123	Total	C	N	O	S	0	0
			956	599	179	175	3		

There are 24 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
J	1948	MET	-	initiating methionine	UNP P02281
M	0	MET	-	initiating methionine	UNP P02281
N	105	MET	-	initiating methionine	UNP P02281

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Chain	Residue	Modelled	Actual	Comment	Reference
O	375	MET	-	initiating methionine	UNP P02281
P	480	MET	-	initiating methionine	UNP P02281
Q	603	MET	-	initiating methionine	UNP P02281
R	230	MET	-	initiating methionine	UNP P02281
S	849	MET	-	initiating methionine	UNP P02281
T	2736	MET	-	initiating methionine	UNP P02281
U	1838	MET	-	initiating methionine	UNP P02281
V	976	MET	-	initiating methionine	UNP P02281
W	2859	MET	-	initiating methionine	UNP P02281
av	0	MET	-	initiating methionine	UNP P02281
aw	123	MET	-	initiating methionine	UNP P02281
ax	246	MET	-	initiating methionine	UNP P02281
ay	369	MET	-	initiating methionine	UNP P02281
az	469	MET	-	initiating methionine	UNP P02281
Aa	572	MET	-	initiating methionine	UNP P02281
Ab	695	MET	-	initiating methionine	UNP P02281
Ac	795	MET	-	initiating methionine	UNP P02281
Ad	2843	MET	-	initiating methionine	UNP P02281
Af	1074	MET	-	initiating methionine	UNP P02281
Ag	3069	MET	-	initiating methionine	UNP P02281
At	0	MET	-	initiating methionine	UNP P02281

- Molecule 5 is a protein called Histone H3.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	X	112	Total	C	N	O	S	0	0
			901	566	176	156	3		
5	Y	111	Total	C	N	O	S	0	0
			896	563	175	155	3		
5	Z	90	Total	C	N	O	S	0	0
			739	466	140	130	3		
5	a	125	Total	C	N	O	S	0	0
			995	624	196	172	3		
5	b	101	Total	C	N	O	S	0	0
			833	526	161	143	3		
5	c	106	Total	C	N	O	S	0	0
			860	542	166	149	3		
5	d	98	Total	C	N	O	S	0	0
			808	509	156	140	3		
5	e	94	Total	C	N	O	S	0	0
			768	483	147	135	3		
5	f	98	Total	C	N	O	S	0	0
			808	509	156	140	3		

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Mol	Chain	Residues	Atoms					AltConf	Trace
5	g	102	Total	C	N	O	S	0	0
			837	528	162	144	3		
5	h	97	Total	C	N	O	S	0	0
			801	504	155	139	3		
5	i	99	Total	C	N	O	S	0	0
			817	515	158	141	3		
5	j	105	Total	C	N	O	S	0	0
			853	537	165	148	3		
5	k	99	Total	C	N	O	S	0	0
			817	515	158	141	3		
5	l	114	Total	C	N	O	S	0	0
			917	576	179	159	3		
5	m	98	Total	C	N	O	S	0	0
			808	509	156	140	3		
5	n	113	Total	C	N	O	S	0	0
			910	572	178	157	3		
5	o	109	Total	C	N	O	S	0	0
			880	554	170	153	3		
5	p	102	Total	C	N	O	S	0	0
			837	528	162	144	3		
5	q	110	Total	C	N	O	S	0	0
			891	560	174	154	3		
5	r	106	Total	C	N	O	S	0	0
			860	542	166	149	3		
5	s	95	Total	C	N	O	S	0	0
			780	492	148	137	3		
5	t	110	Total	C	N	O	S	0	0
			890	560	174	153	3		
5	u	126	Total	C	N	O	S	0	0
			1001	627	197	174	3		

- Molecule 6 is a protein called Histone H4.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	v	98	Total	C	N	O	S	0	0
			767	481	156	129	1		
6	w	103	Total	C	N	O	S	0	0
			800	499	164	135	2		
6	x	99	Total	C	N	O	S	0	0
			771	483	157	130	1		
6	y	102	Total	C	N	O	S	0	0
			792	494	163	134	1		

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Mol	Chain	Residues	Atoms					AltConf	Trace
6	z	84	Total	C	N	O	S	0	0
			673	424	133	115	1		
6	0	94	Total	C	N	O	S	0	0
			741	465	150	125	1		
6	1	87	Total	C	N	O	S	0	0
			703	442	142	118	1		
6	2	95	Total	C	N	O	S	0	0
			750	471	152	126	1		
6	3	93	Total	C	N	O	S	0	0
			736	463	149	123	1		
6	4	87	Total	C	N	O	S	0	0
			703	442	142	118	1		
6	5	95	Total	C	N	O	S	0	0
			750	471	152	126	1		
6	6	85	Total	C	N	O	S	0	0
			688	432	140	115	1		
6	7	101	Total	C	N	O	S	0	0
			786	491	162	132	1		
6	8	86	Total	C	N	O	S	0	0
			694	436	140	117	1		
6	9	102	Total	C	N	O	S	0	0
			792	494	163	134	1		
6	CD	97	Total	C	N	O	S	0	0
			762	479	155	127	1		
6	a2	100	Total	C	N	O	S	0	0
			782	489	161	131	1		
6	a3	87	Total	C	N	O	S	0	0
			703	442	142	118	1		
6	a4	96	Total	C	N	O	S	0	0
			754	473	153	127	1		
6	a5	91	Total	C	N	O	S	0	0
			725	455	147	122	1		
6	a6	101	Total	C	N	O	S	0	0
			786	491	162	132	1		
6	a7	102	Total	C	N	O	S	0	0
			792	494	163	134	1		
6	a8	87	Total	C	N	O	S	0	0
			703	442	142	118	1		
6	a9	90	Total	C	N	O	S	0	0
			716	449	145	121	1		

- Molecule 7 is a protein called Histone H5.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	Ah	130	Total	C	N	O	S	0	0
			992	613	206	171	2		
7	Ai	170	Total	C	N	O	S	0	0
			1298	805	274	217	2		
7	Aj	103	Total	C	N	O	S	0	0
			780	485	154	139	2		
7	Ak	129	Total	C	N	O	S	0	0
			986	610	205	169	2		
7	Al	107	Total	C	N	O	S	0	0
			808	501	161	144	2		
7	Am	175	Total	C	N	O	S	0	0
			1340	831	284	223	2		
7	An	128	Total	C	N	O	S	0	0
			975	604	201	168	2		
7	Ao	159	Total	C	N	O	S	0	0
			1215	754	255	204	2		
7	Ap	73	Total	C	N	O	S	0	0
			555	346	109	99	1		
7	Aq	190	Total	C	N	O	S	0	0
			1456	903	311	240	2		
7	Ar	180	Total	C	N	O	S	0	0
			1375	852	295	226	2		
7	As	131	Total	C	N	O	S	0	0
			999	618	207	172	2		

There are 72 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
Ah	541	HIS	-	expression tag	UNP P02259
Ah	542	HIS	-	expression tag	UNP P02259
Ah	543	HIS	-	expression tag	UNP P02259
Ah	544	HIS	-	expression tag	UNP P02259
Ah	545	HIS	-	expression tag	UNP P02259
Ah	546	HIS	-	expression tag	UNP P02259
Ai	190	HIS	-	expression tag	UNP P02259
Ai	191	HIS	-	expression tag	UNP P02259
Ai	192	HIS	-	expression tag	UNP P02259
Ai	193	HIS	-	expression tag	UNP P02259
Ai	194	HIS	-	expression tag	UNP P02259
Ai	195	HIS	-	expression tag	UNP P02259
Aj	323	HIS	-	expression tag	UNP P02259
Aj	324	HIS	-	expression tag	UNP P02259
Aj	325	HIS	-	expression tag	UNP P02259
Aj	326	HIS	-	expression tag	UNP P02259

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Chain	Residue	Modelled	Actual	Comment	Reference
Aj	327	HIS	-	expression tag	UNP P02259
Aj	328	HIS	-	expression tag	UNP P02259
Ak	674	HIS	-	expression tag	UNP P02259
Ak	675	HIS	-	expression tag	UNP P02259
Ak	676	HIS	-	expression tag	UNP P02259
Ak	677	HIS	-	expression tag	UNP P02259
Ak	678	HIS	-	expression tag	UNP P02259
Ak	679	HIS	-	expression tag	UNP P02259
Al	431	HIS	-	expression tag	UNP P02259
Al	432	HIS	-	expression tag	UNP P02259
Al	433	HIS	-	expression tag	UNP P02259
Al	434	HIS	-	expression tag	UNP P02259
Al	435	HIS	-	expression tag	UNP P02259
Al	436	HIS	-	expression tag	UNP P02259
Am	190	HIS	-	expression tag	UNP P02259
Am	191	HIS	-	expression tag	UNP P02259
Am	192	HIS	-	expression tag	UNP P02259
Am	193	HIS	-	expression tag	UNP P02259
Am	194	HIS	-	expression tag	UNP P02259
Am	195	HIS	-	expression tag	UNP P02259
An	190	HIS	-	expression tag	UNP P02259
An	191	HIS	-	expression tag	UNP P02259
An	192	HIS	-	expression tag	UNP P02259
An	193	HIS	-	expression tag	UNP P02259
An	194	HIS	-	expression tag	UNP P02259
An	195	HIS	-	expression tag	UNP P02259
Ao	190	HIS	-	expression tag	UNP P02259
Ao	191	HIS	-	expression tag	UNP P02259
Ao	192	HIS	-	expression tag	UNP P02259
Ao	193	HIS	-	expression tag	UNP P02259
Ao	194	HIS	-	expression tag	UNP P02259
Ao	195	HIS	-	expression tag	UNP P02259
Ap	190	HIS	-	expression tag	UNP P02259
Ap	191	HIS	-	expression tag	UNP P02259
Ap	192	HIS	-	expression tag	UNP P02259
Ap	193	HIS	-	expression tag	UNP P02259
Ap	194	HIS	-	expression tag	UNP P02259
Ap	195	HIS	-	expression tag	UNP P02259
Aq	190	HIS	-	expression tag	UNP P02259
Aq	191	HIS	-	expression tag	UNP P02259
Aq	192	HIS	-	expression tag	UNP P02259
Aq	193	HIS	-	expression tag	UNP P02259

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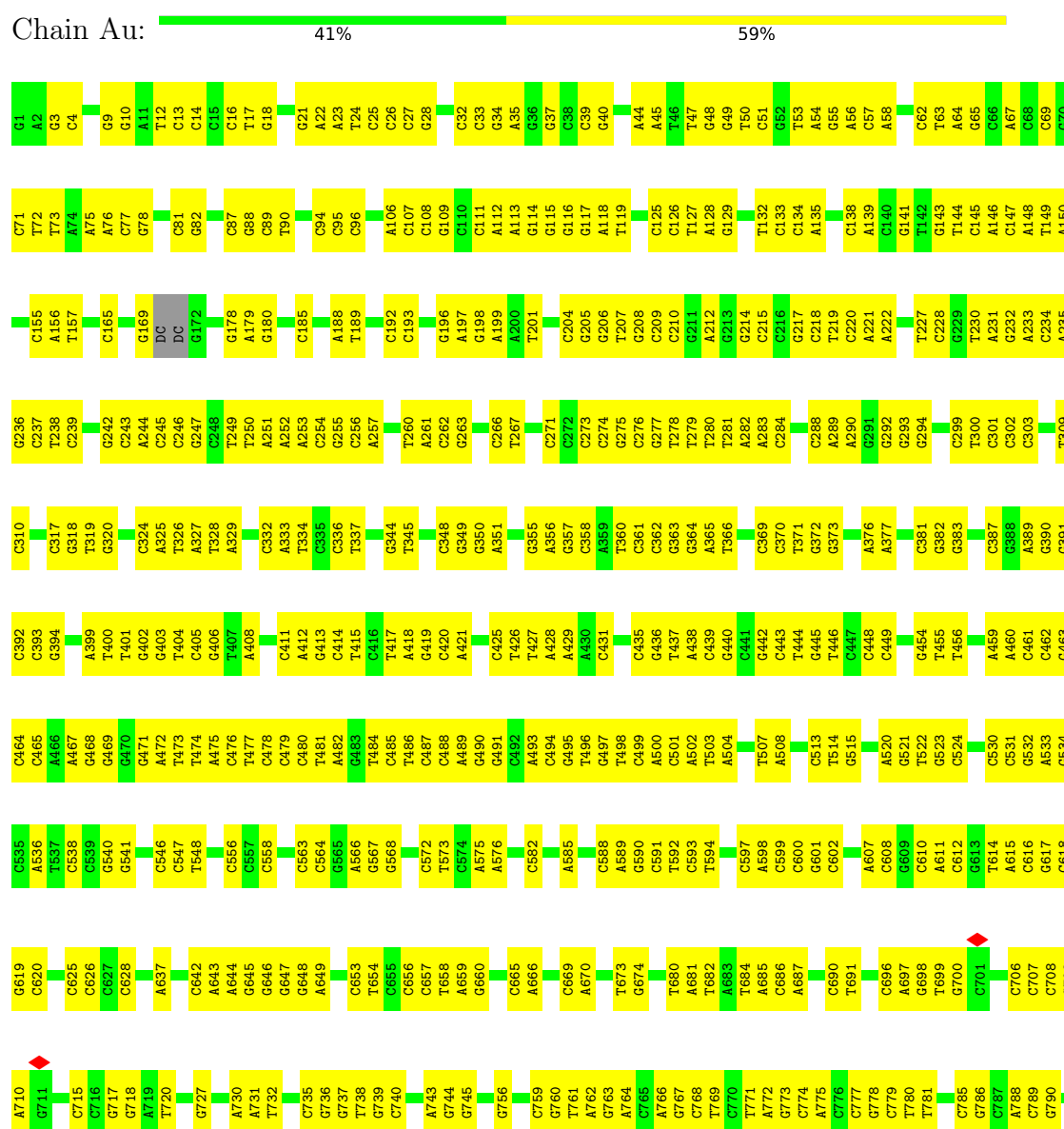
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Chain	Residue	Modelled	Actual	Comment	Reference
Aq	194	HIS	-	expression tag	UNP P02259
Aq	195	HIS	-	expression tag	UNP P02259
Ar	190	HIS	-	expression tag	UNP P02259
Ar	191	HIS	-	expression tag	UNP P02259
Ar	192	HIS	-	expression tag	UNP P02259
Ar	193	HIS	-	expression tag	UNP P02259
Ar	194	HIS	-	expression tag	UNP P02259
Ar	195	HIS	-	expression tag	UNP P02259
As	190	HIS	-	expression tag	UNP P02259
As	191	HIS	-	expression tag	UNP P02259
As	192	HIS	-	expression tag	UNP P02259
As	193	HIS	-	expression tag	UNP P02259
As	194	HIS	-	expression tag	UNP P02259
As	195	HIS	-	expression tag	UNP P02259

3 Residue-property plots

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

• Molecule 1: DNA



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● Molecule 2: DNA

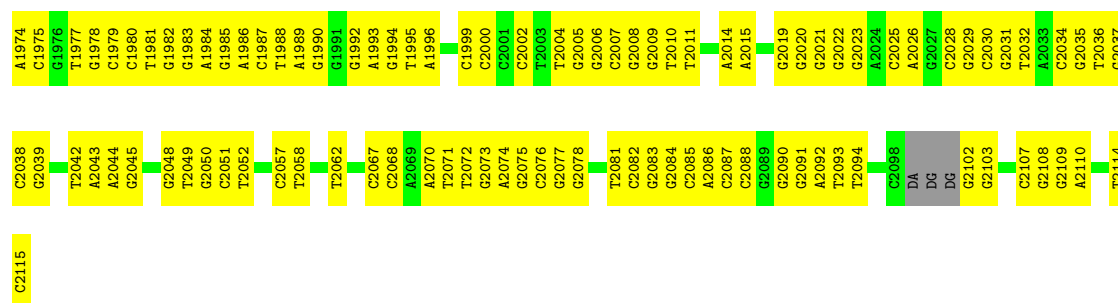
Chain Av:

41%

59%

DG	DG	DG	DT	DC	DC	DG	DG	DC	A1	C2	T3	G4	G5	A6	A7	C8	A9	G10	G11	G14	T15	A16	T17	A18	T19	A20	C26	G27	A27	G31	A37	C38	A39	A42	G43	G44	G45	A46	G47	T48	A49	A50	A51	C52	C55	T56	C60	G61	G62	T63	A66				
C69	G70	C71	G72	G73	G74	G75	G76	A77	C78	C81	G82	C83	G84	T85	A86	C87	G88	T89	G90	C91	G92	T93	T94	T95	A96	T102	G103	C104	G107	A108	G109	C110	T111	G112	T113	C114	T115	A116	C117	G118	A119	C120	G121	A122	G126	A127	G128	C129	G130	G131	C132	C133	C138	A139	
G144	A145	T146	T147	A152	G153	T164	G165	C166	T167	C168	G169	G170	G171	T172	C173	A178	C179	T180	G181	G182	C185	A186	A193	T194	A195	T196	T197	T198	G199	T200	T201	A202	C203	T207	G208	T211	G212	A214	G215	A216	C217	T218	A219	A226	A227	C231	C232	C238	A239						
G238	G239	T240	A243	A244	C247	C248	G249	G250	G251	G252	G253	A254	C255	A256	C257	G258	G259	C260	T262	A263	C264	G265	T266	G267	C268	G269	T270	T271	T272	A273	A274	G275	A283	G284	A285	G286	C287	T288	G289	T290	C291	G295	A296	C297	C298	A299	A300	T301	T302	G305	C306	G307	G308		
C309	C310	T311	C312	G313	G314	C315	A316	C319	G320	C325	T326	C327	C328	A329	G330	G331	G332	G333	C337	G338	G339	A340	T341	G342	C343	T344	C345	G346	G347	G348	T349	C350	C351	G352	G353	C354	A355	A360	A361	C362	G363	G364	G365	A366	T367	G368	T369	A370	T371	A372	T373	A374	T375	G376	G377
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G607	A608	C609	A610	G611	C612	G613	G614	G615	T616	A617	T620	G621	G622	G623	T624	T625	T626	G629	A637	G638	A639	T642	G643	A650	C651	G652	A653	A654	T655	G656	G657	A657	C658	G659	G662	C663	G664	T665	C666	G667	G668	C669	A670	C671	G672	G673	G674	G675	C682	A683	G684	G685	G686	G687	
G692	G693	A694	G700	G704	G705	G706	G707	G710	T711	G712	G713	A714	T717	G718	G722	T723	A724	T725	A726	T727	A728	T729	G730	T731	G732	A733	C734	G737	T738	G739	G740	C741	T742	G743	G744	G745	G746	A747	T748	T749	A750	G753	A754	G755	T756	A757	A758	T759	G760	C761	G762				
C763	T764	T765	G766	G767	G770	T771	T772	A773	A774	A775	C777	G778	C779	G780	G781	G782	G783	G784	C786	A787	G790	C791	G792	T793	A794	C799	G800	T801	A804	G805	G806	C807	G808	G809	T810	G811	C812	T813	A814	G815	A816	G820	T821	C822	T823	A824	C825	C829	A830	A831	T832				

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C1416	G1420	G1421	G1422	A1423	C1424	A1425	G1426	G1427	T1433	A1434	T1435	A1436	T1437	G1438	T1439	G1440	A1441	C1444	G1445	A1453	G1454	A1455	A1456	C1457	A1458	G1459	A1460	G1461	A1462	G1463	T1464	A1465	C1470	C1471	T1472	T1473	G1474	G1475	C1476	G1477	G1478	A1481	A1484	C1485	G1488	G1489	G1490	A1493	C1494						
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G1152	C1153	T1157	A1158	A1159	G1160	C1166	T1167	A1168	G1169	A1170	G1171	T1175	C1176	A1181	G1182	C1183	A1184	T1186	G1187	G1188	A1189	G1190	C1191	G1192	G1193	C1194	G1198	G1199	C1202	C1203	G1204	G1205	C1292	C1293	G1300	G1301	T1302	T1328	G1329	C1330	G1331	G1312	G1313	T1226	T1229	C1230	G1231	C1239	C1241						
A1245	A1246	C1247	A1248	G1249	G1250	A1251	T1252	G1253	T1254	A1259	T1260	G1261	T1262	G1263	A1264	C1265	A1266	C1267	T1268	G1270	C1271	C1272	T1273	G1274	G1275	A1276	G1277	A1281	G1282	G1283	G1284	A1285	G1286	T1287	C1292	C1293	G1300	G1301	T1302	T1328	G1329	C1330	G1331	G1312	G1313	T1226	T1229	C1230	G1231	C1239	C1241				
G1086	A1087	C1088	A1089	C1090	G1091	T1092	G1093	C1094	T1095	G1096	G1097	A1098	G1100	G1101	T1102	T1103	A1104	G1105	A1111	A1112	T1113	C1114	C1115	C1116	G1117	T1118	G1121	C1122	T1125	G1126	A1127	A1128	A1129	A1130	C1131	G1132	C1133	G1134	G1135	G1136	G1137	A1138	A1139	C1140	A1141	G1142	C1143	G1144	C1145	G1146	T1147	A1148	C1149	G1150	T1151
T996	G997	T998	C999	T1000	A1004	T1009	T1010	G1013	A1014	G1015	G1016	G1017	C1018	G1019	T1020	G1021	G1022	C1023	A1024	C1035	G1040	G1041	A1042	T1043	C1044	G1045	G1046	G1047	A1048	G1056	T1057	C1062	A1063	C1064	G1067	A1068	A1069	C1070	A1071	G1072	G1073	A1074	G1075	G1076	A1080	T1083	G1084	T1085							
G921	A922	G923	G928	G929	G930	A931	T932	A934	C937	C938	C939	C940	T941	G942	G943	G944	C945	G946	G947	A952	A953	G958	G959	A962	C963	A964	G965	G966	G967	C968	G969	T970	A971	T974	G975	T978	A982	G983	C984	G985	G986	C989	T990	G991	C992	A993	G994	C995							
T833	G834	A835	G836	C837	G838	G839	C840	C841	C843	C846	A847	C848	G851	G852	A853	C856	T857	G858	C859	A860	G863	G864	C867	A871	T872	G873	G877	G878	T880	C881	C882	G883	A886	G899	G907	T908	G909	A912	C913	T915	G916	C917	C918	T919	G920										



• Molecule 3: Histone H2A

Chain A: 86% 8% 6%



• Molecule 3: Histone H2A

Chain B: 80% 17% .



• Molecule 3: Histone H2A

Chain C: 78% 20% ..



• Molecule 3: Histone H2A

Chain D: 88% 7% 5%



• Molecule 3: Histone H2A

Chain E: 82% 16% .



• Molecule 3: Histone H2A

Chain F: 75% 17% 8%



• Molecule 3: Histone H2A

Chain G: 82% 17%



• Molecule 3: Histone H2A

Chain H: 78% 18%



• Molecule 3: Histone H2A

Chain I: 86% 13%



• Molecule 3: Histone H2A

Chain K: 78% 18%



• Molecule 3: Histone H2A

Chain L: 81% 18%



• Molecule 3: Histone H2A

Chain aj: 74% 21% 5%



• Molecule 3: Histone H2A

Chain ak:  83% 12% 5%



- Molecule 3: Histone H2A

Chain al:  75% 10% 15%



- Molecule 3: Histone H2A

Chain am:  75% 20% 5%



- Molecule 3: Histone H2A

Chain an:  83% 13% 4%



- Molecule 3: Histone H2A

Chain ao:  78% 18% 4%



- Molecule 3: Histone H2A

Chain ap:  78% 19% 3%



- Molecule 3: Histone H2A

Chain aq:  72% 18% 10%



- Molecule 3: Histone H2A

Chain ar:  84% 15%



• Molecule 3: Histone H2A

Chain as:  77% 15% 8%



• Molecule 3: Histone H2A

Chain at:  78% 18%



• Molecule 3: Histone H2A

Chain au:  75% 11% 15%



• Molecule 3: Histone H2A

Chain Ae:  82% 12% 6%



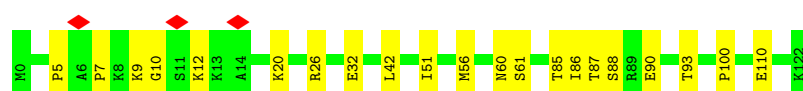
• Molecule 4: Histone H2B 1.1

Chain J:  68% 15% 16%



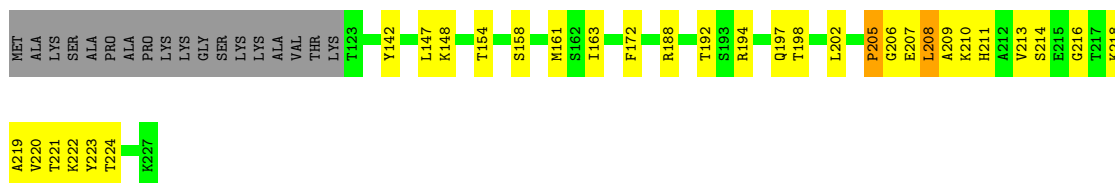
• Molecule 4: Histone H2B 1.1

Chain M:  83% 17%



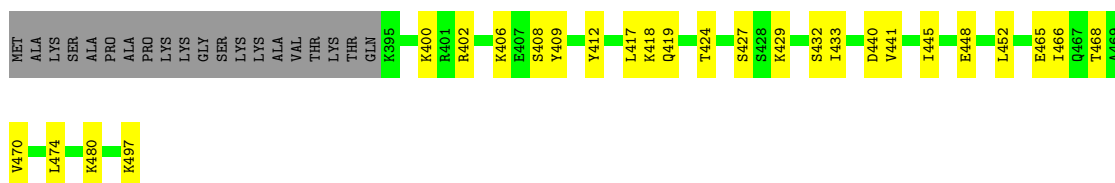
• Molecule 4: Histone H2B 1.1

Chain N:  60% 24% 15%



- Molecule 4: Histone H2B 1.1

Chain O:  63% 21% 16%



- Molecule 4: Histone H2B 1.1

Chain P:  75% 11% 15%



- Molecule 4: Histone H2B 1.1

Chain Q:  82% 18%



- Molecule 4: Histone H2B 1.1

Chain R:  69% 12% 19%



- Molecule 4: Histone H2B 1.1

Chain S:  79% 21%

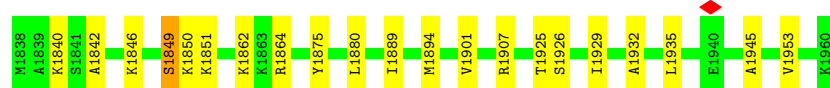
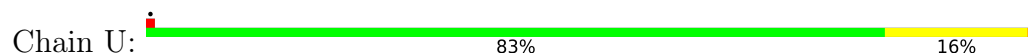


- Molecule 4: Histone H2B 1.1

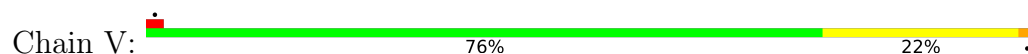
Chain T:  84% 16%



• Molecule 4: Histone H2B 1.1



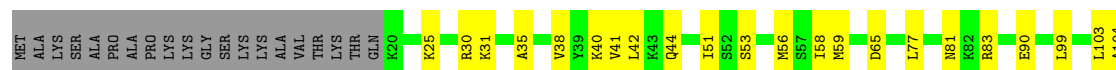
• Molecule 4: Histone H2B 1.1



• Molecule 4: Histone H2B 1.1



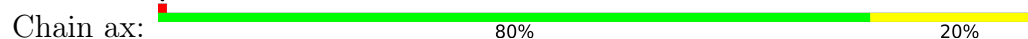
• Molecule 4: Histone H2B 1.1



• Molecule 4: Histone H2B 1.1



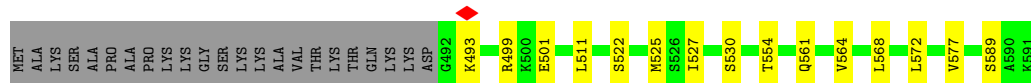
• Molecule 4: Histone H2B 1.1



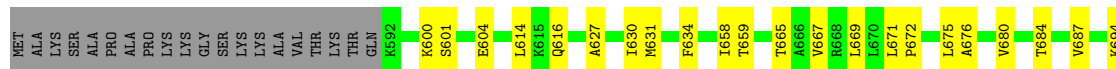
● Molecule 4: Histone H2B 1.1

Chain ay:  88% 12%

● Molecule 4: Histone H2B 1.1

Chain az:  69% 12% 19%

● Molecule 4: Histone H2B 1.1

Chain Aa:  66% 18% 16%

● Molecule 4: Histone H2B 1.1

Chain Ab:  76% 24%

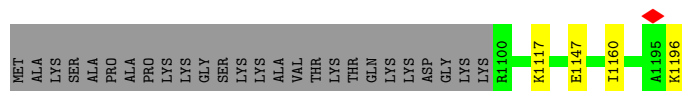
● Molecule 4: Histone H2B 1.1

Chain Ac:  68% 13% 19%

● Molecule 4: Histone H2B 1.1

Chain Ad:  68% 15% 17%

● Molecule 4: Histone H2B 1.1

Chain Af:  76% 21%

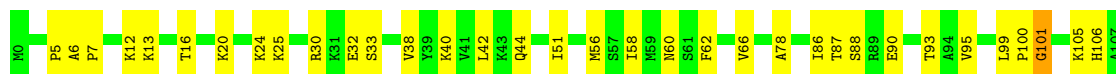
- Molecule 4: Histone H2B 1.1

Chain Ag:  76% 9% 15%



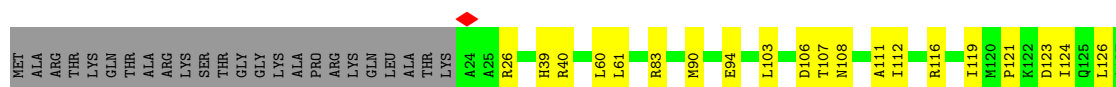
- Molecule 4: Histone H2B 1.1

Chain At:  67% 33%



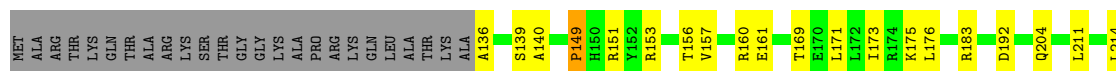
- Molecule 5: Histone H3

Chain X:  65% 17% 18%



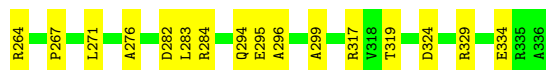
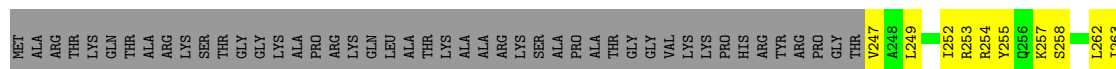
- Molecule 5: Histone H3

Chain Y:  64% 17% 18%



- Molecule 5: Histone H3

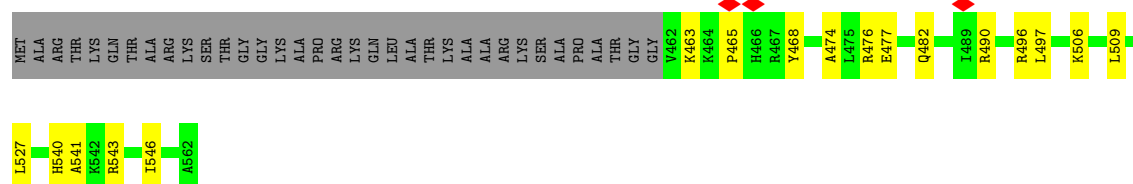
Chain Z:  47% 19% 34%



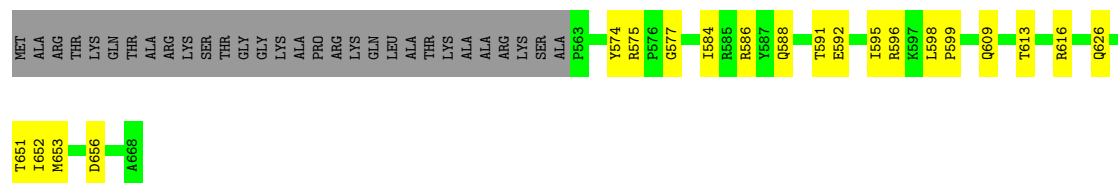
- Molecule 5: Histone H3



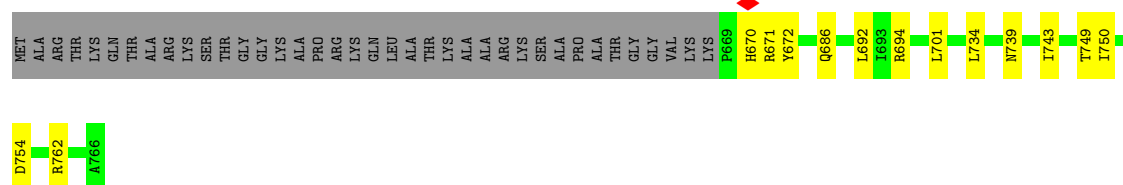
• Molecule 5: Histone H3



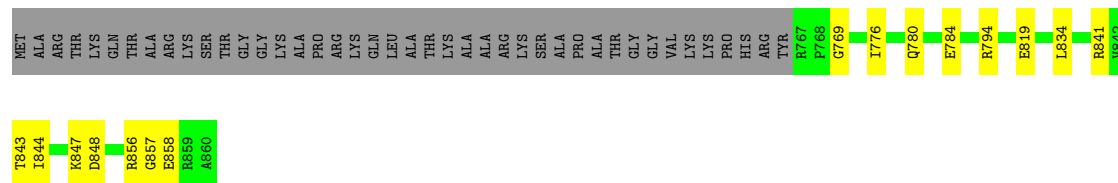
• Molecule 5: Histone H3



• Molecule 5: Histone H3

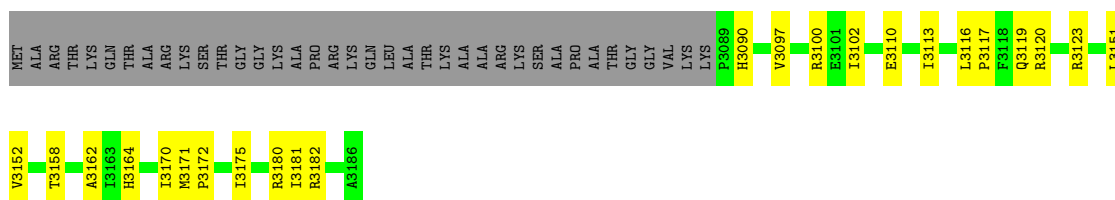


• Molecule 5: Histone H3



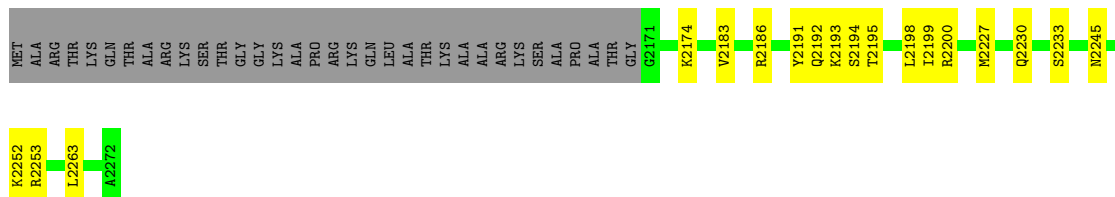
• Molecule 5: Histone H3





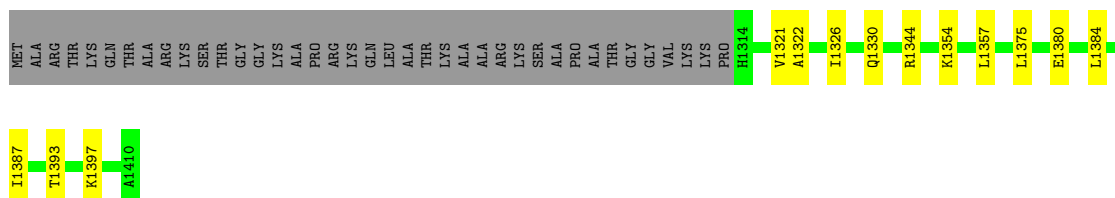
- Molecule 5: Histone H3

Chain g: 62% 13% 25%



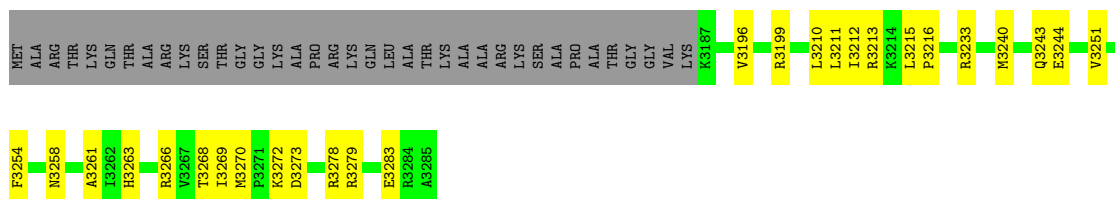
- Molecule 5: Histone H3

Chain h: 62% 10% 29%



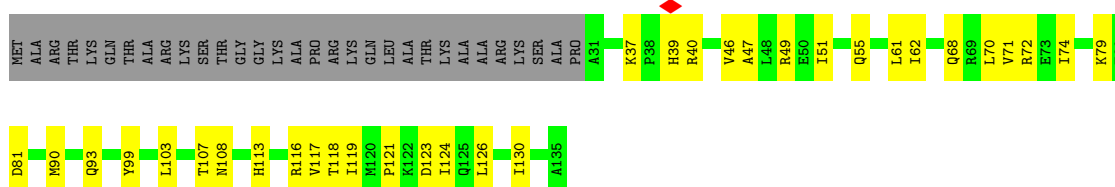
- Molecule 5: Histone H3

Chain i: 54% 19% 27%



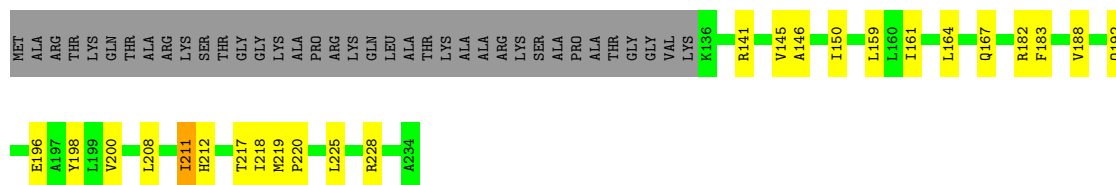
- Molecule 5: Histone H3

Chain j: 53% 24% 23%



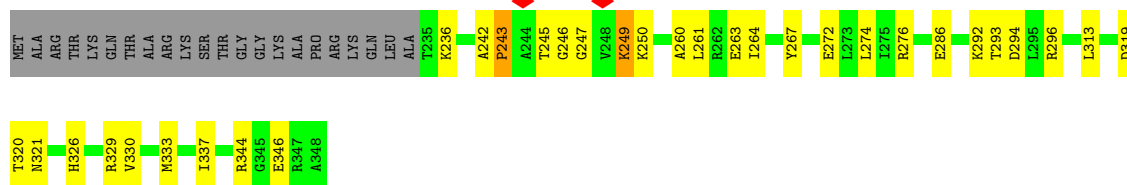
- Molecule 5: Histone H3

Chain k:  55% 17% 27%



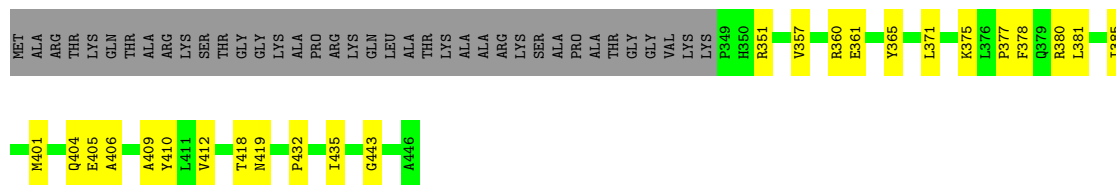
- Molecule 5: Histone H3

Chain l:  60% 22% 16%



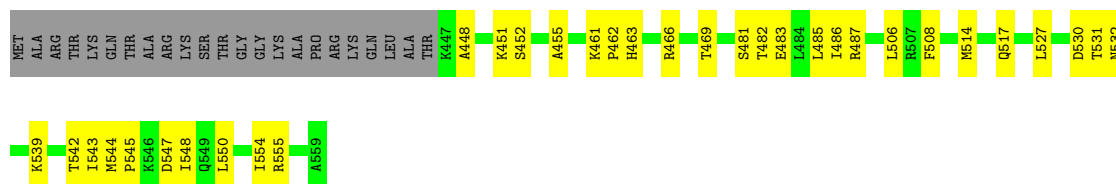
- Molecule 5: Histone H3

Chain m:  54% 18% 28%



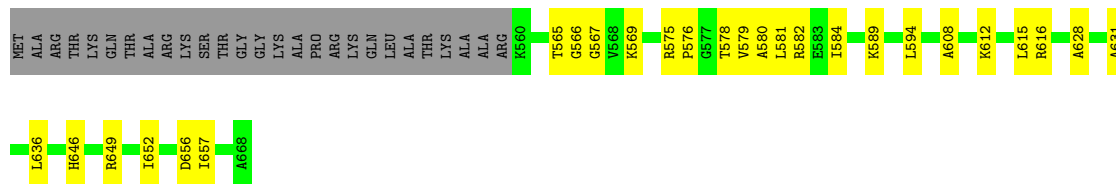
- Molecule 5: Histone H3

Chain n:  59% 24% 17%



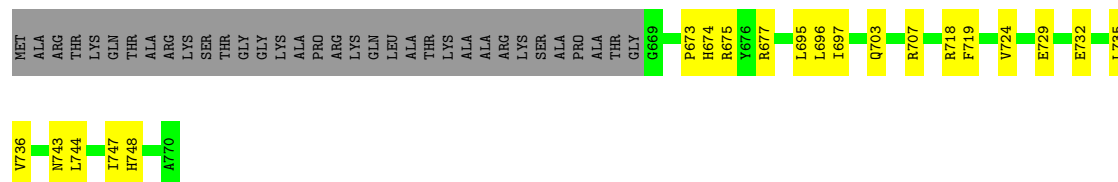
- Molecule 5: Histone H3

Chain o:  61% 19% 20%



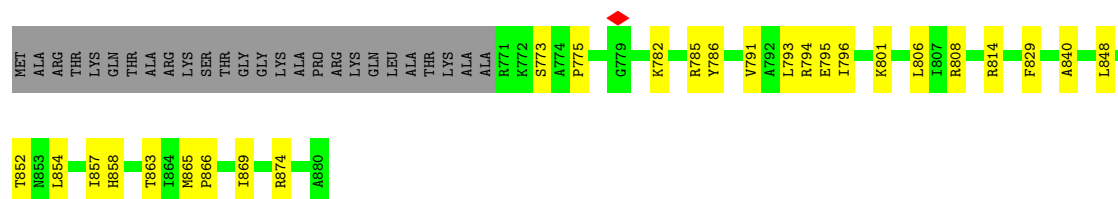
- Molecule 5: Histone H3

Chain p: 



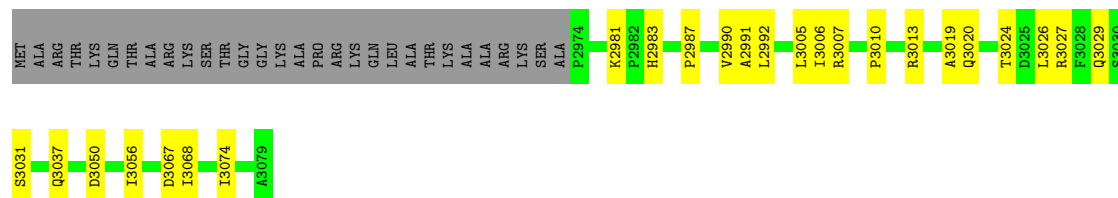
• Molecule 5: Histone H3

Chain q: 



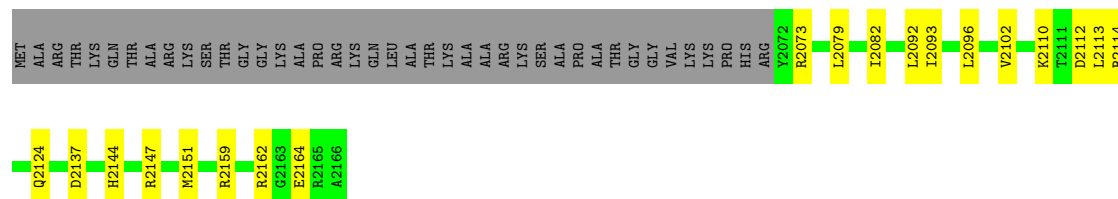
• Molecule 5: Histone H3

Chain r: 



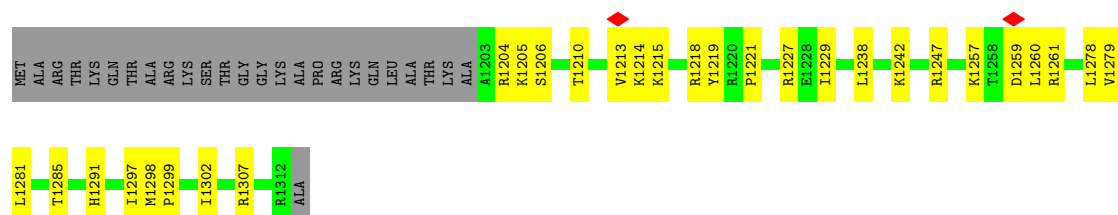
• Molecule 5: Histone H3

Chain s: 



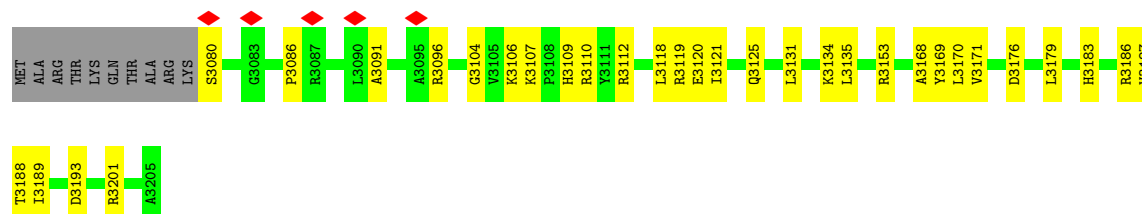
• Molecule 5: Histone H3

Chain t: 



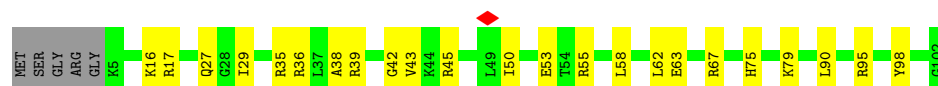
- Molecule 5: Histone H3

Chain u: 



- Molecule 6: Histone H4

Chain v: 



- Molecule 6: Histone H4

Chain w: 



- Molecule 6: Histone H4

Chain x: 



- Molecule 6: Histone H4

Chain y: 



- Molecule 6: Histone H4

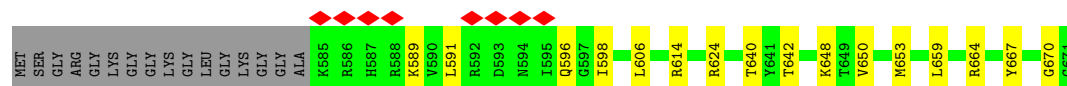
Chain z: 



- Molecule 6: Histone H4



- Molecule 6: Histone H4



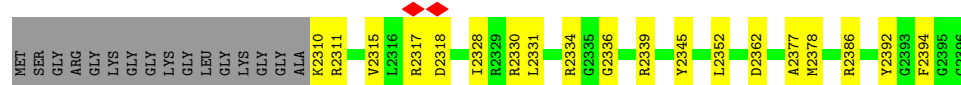
- Molecule 6: Histone H4



- Molecule 6: Histone H4



- Molecule 6: Histone H4



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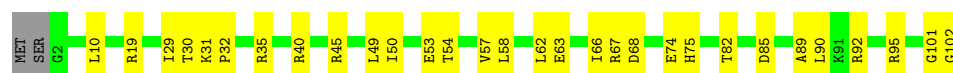


- Molecule 6: Histone H4



- Molecule 6: Histone H4

Chain 7:  69% 29% .



• Molecule 6: Histone H4

Chain 8:  61% 22% 17%



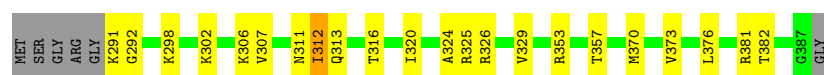
• Molecule 6: Histone H4

Chain 9:  71% 28% .



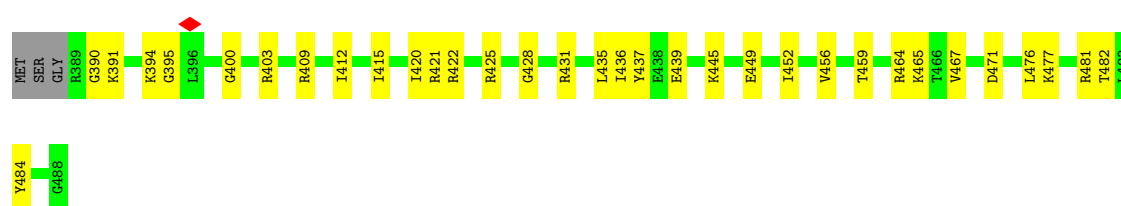
• Molecule 6: Histone H4

Chain CD:  73% 20% 6%



• Molecule 6: Histone H4

Chain a2:  65% 32% .



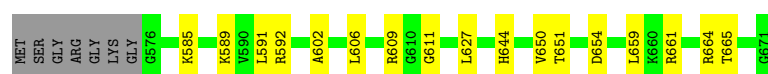
• Molecule 6: Histone H4

Chain a3:  69% 16% 16%

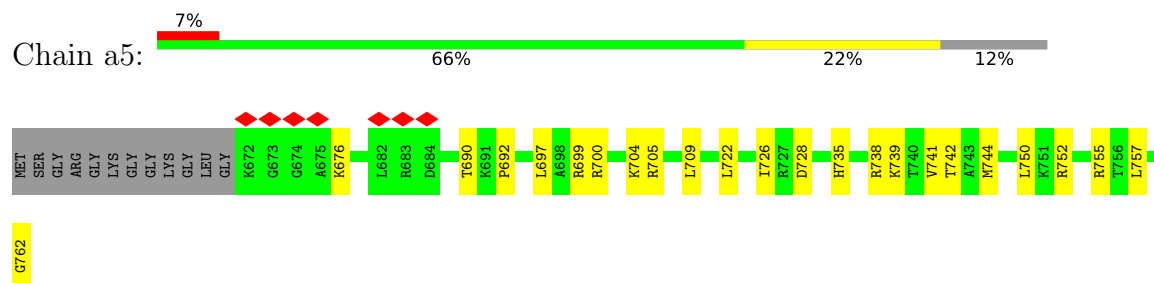


• Molecule 6: Histone H4

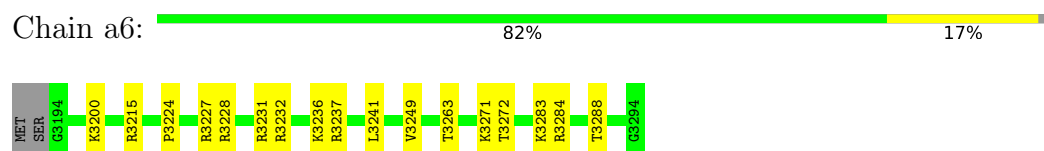
Chain a4:  77% 17% 7%



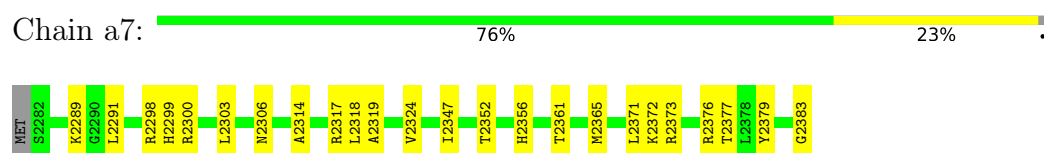
- Molecule 6: Histone H4



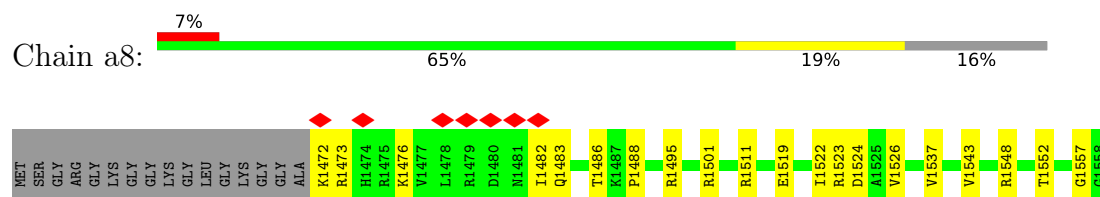
- Molecule 6: Histone H4



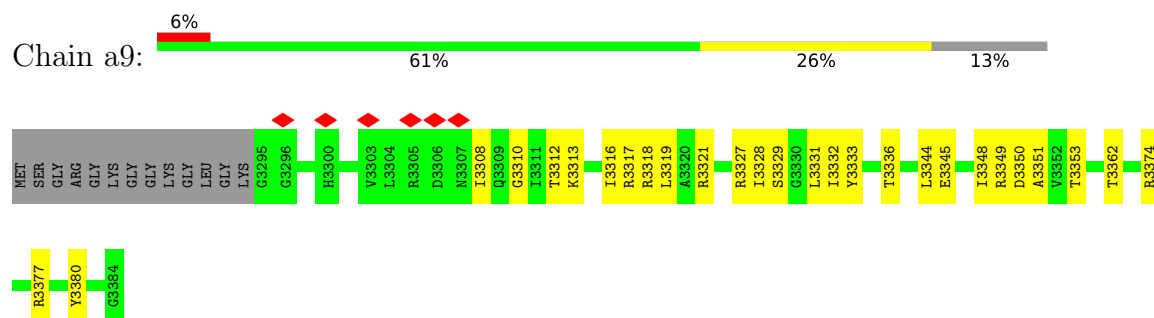
- Molecule 6: Histone H4



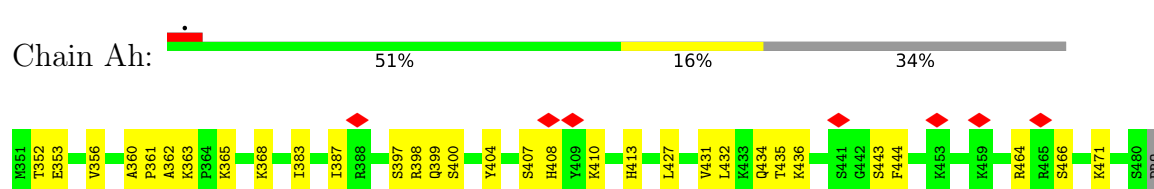
- Molecule 6: Histone H4



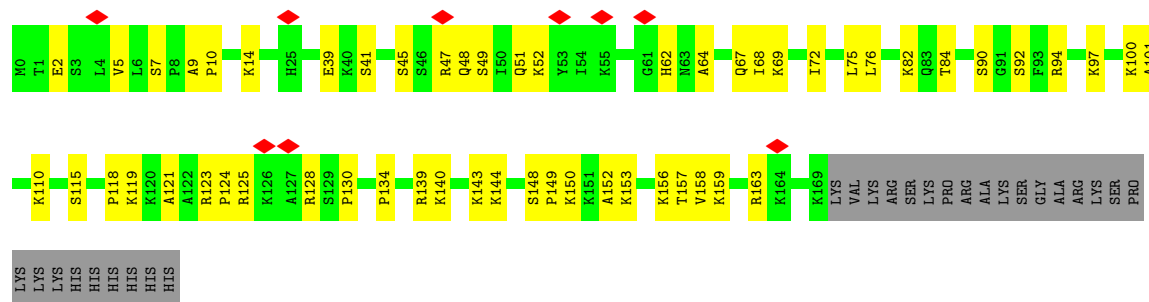
- Molecule 6: Histone H4



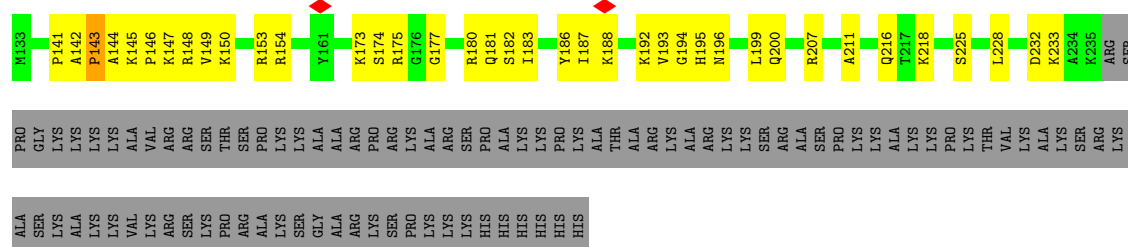
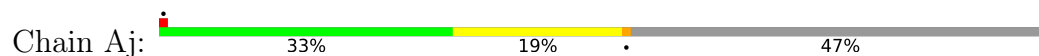
- Molecule 7: Histone H5



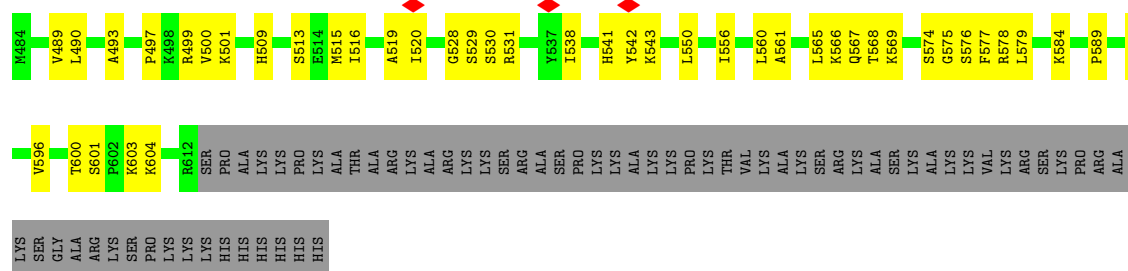
- Molecule 7: Histone H5



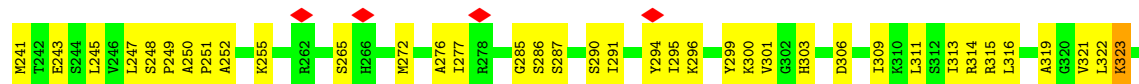
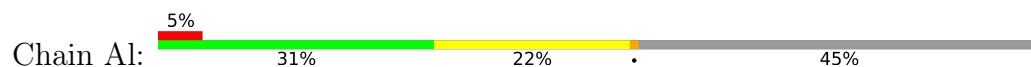
- Molecule 7: Histone H5

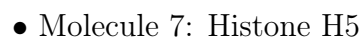
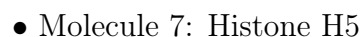
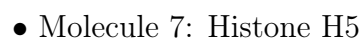
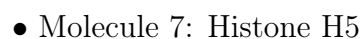


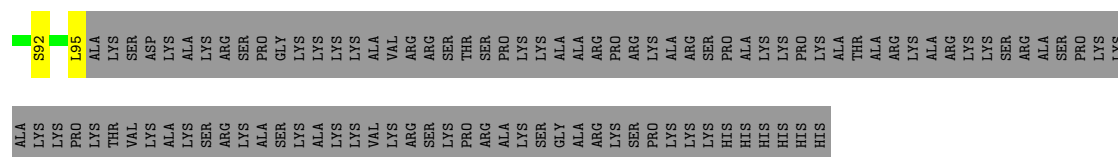
- Molecule 7: Histone H5



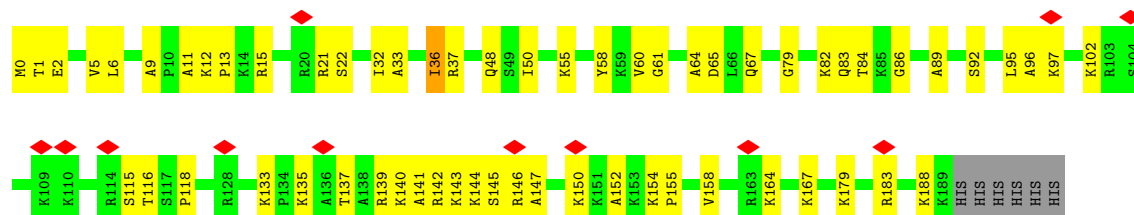
- Molecule 7: Histone H5



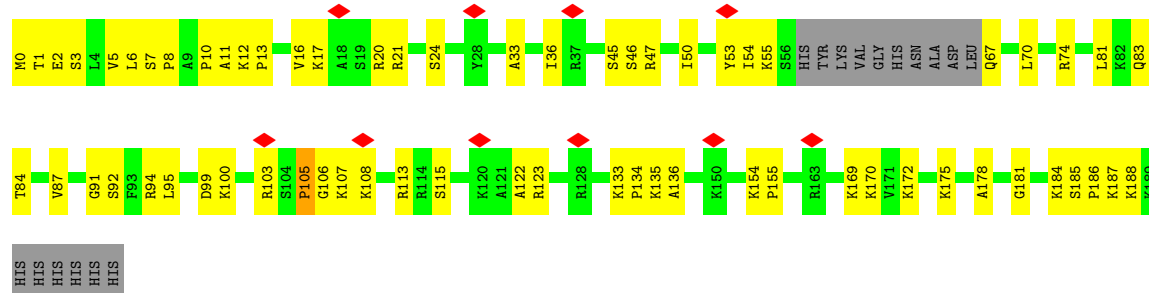




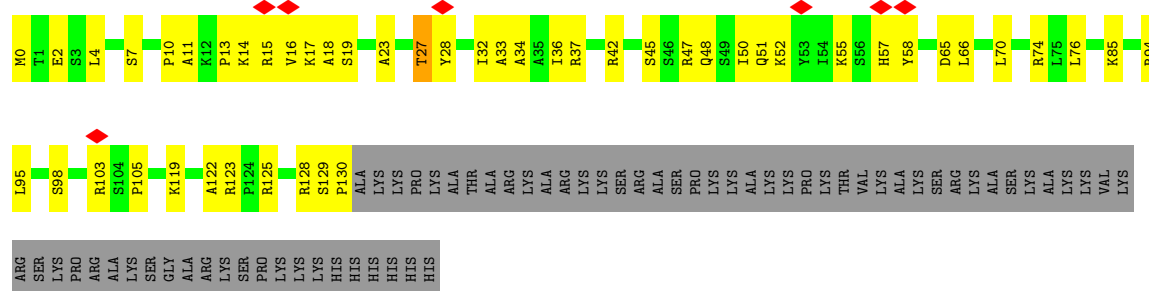
- Molecule 7: Histone H5



- Molecule 7: Histone H5



- Molecule 7: Histone H5



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	13670	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	60	Depositor
Minimum defocus (nm)	2000	Depositor
Maximum defocus (nm)	3000	Depositor
Magnification	47000	Depositor
Image detector	FEI FALCON II (4k x 4k)	Depositor
Maximum map value	0.183	Depositor
Minimum map value	-0.051	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.007	Depositor
Recommended contour level	0.0293	Depositor
Map size (Å)	506.88, 506.88, 506.88	wwPDB
Map dimensions	288, 288, 288	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.76, 1.76, 1.76	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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	Au	0.19	0/48227	0.40	0/74345
2	Av	0.19	0/49010	0.39	0/75728
3	A	0.10	0/946	0.27	0/1269
3	Ae	0.09	0/946	0.23	0/1269
3	B	0.11	0/972	0.34	1/1302 (0.1%)
3	C	0.25	1/993 (0.1%)	0.47	3/1329 (0.2%)
3	D	0.12	0/950	0.34	0/1274
3	E	0.09	0/983	0.26	0/1318
3	F	0.08	0/926	0.28	0/1243
3	G	0.10	0/993	0.31	0/1329
3	H	0.09	0/968	0.25	0/1297
3	I	0.09	0/993	0.27	0/1329
3	K	0.69	3/987 (0.3%)	0.70	6/1321 (0.5%)
3	L	0.43	2/1001 (0.2%)	0.44	3/1339 (0.2%)
3	aj	0.30	0/950	0.46	1/1274 (0.1%)
3	ak	0.11	0/950	0.31	0/1274
3	al	0.07	0/860	0.22	0/1158
3	am	0.37	0/983	0.60	2/1316 (0.2%)
3	an	0.12	0/968	0.35	0/1297
3	ao	0.11	0/959	0.30	0/1286
3	ap	0.09	0/983	0.26	0/1316
3	aq	0.13	0/910	0.33	0/1222
3	ar	0.09	0/993	0.28	0/1329
3	as	0.09	0/926	0.26	0/1243
3	at	0.11	0/972	0.31	0/1302
3	au	0.09	0/869	0.26	0/1171
4	Aa	0.11	0/825	0.31	0/1101
4	Ab	0.10	0/969	0.30	0/1292
4	Ac	0.08	0/799	0.26	0/1068
4	Ad	0.15	0/816	0.30	0/1090
4	Af	0.07	0/777	0.22	0/1041
4	Ag	0.09	0/834	0.25	0/1113
4	At	0.46	0/969	0.59	2/1292 (0.2%)
4	J	0.08	0/825	0.26	0/1101

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
4	M	0.12	0/969	0.31	0/1292
4	N	0.52	0/841	0.53	1/1123 (0.1%)
4	O	0.11	0/825	0.31	0/1101
4	P	0.08	0/841	0.22	0/1123
4	Q	0.10	0/969	0.32	0/1292
4	R	0.07	0/799	0.21	0/1068
4	S	0.13	0/969	0.36	1/1292 (0.1%)
4	T	0.10	0/969	0.30	0/1292
4	U	0.11	0/969	0.33	1/1292 (0.1%)
4	V	0.20	0/969	0.38	0/1292
4	W	0.50	2/969 (0.2%)	0.35	0/1292
4	av	0.11	0/825	0.30	0/1101
4	aw	0.11	0/969	0.34	0/1292
4	ax	0.14	0/969	0.36	1/1292 (0.1%)
4	ay	0.40	2/969 (0.2%)	0.50	3/1292 (0.2%)
4	az	0.06	0/799	0.20	0/1068
5	X	0.11	0/914	0.35	0/1225
5	Y	0.13	0/909	0.38	1/1218 (0.1%)
5	Z	0.08	0/747	0.25	0/1000
5	a	0.15	0/1009	0.38	1/1351 (0.1%)
5	b	0.08	0/845	0.25	0/1132
5	c	0.08	0/873	0.23	0/1170
5	d	0.09	0/820	0.26	0/1099
5	e	0.10	0/777	0.26	0/1041
5	f	0.08	0/820	0.23	0/1099
5	g	0.08	0/849	0.25	0/1137
5	h	0.08	0/812	0.22	0/1088
5	i	0.08	0/829	0.26	0/1111
5	j	0.12	0/865	0.32	0/1159
5	k	0.08	0/829	0.27	0/1111
5	l	0.14	0/930	0.47	3/1246 (0.2%)
5	m	0.13	0/820	0.37	1/1099 (0.1%)
5	n	0.09	0/923	0.30	0/1236
5	o	0.11	0/893	0.29	0/1197
5	p	0.07	0/849	0.23	0/1137
5	q	0.13	0/904	0.24	0/1211
5	r	0.09	0/873	0.25	0/1170
5	s	0.07	0/790	0.20	0/1059
5	t	0.11	0/903	0.31	0/1211
5	u	0.12	0/1015	0.35	0/1359
6	0	0.11	0/749	0.29	0/997
6	1	0.10	0/711	0.26	0/948
6	2	0.37	1/758 (0.1%)	0.80	3/1008 (0.3%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
6	3	0.10	0/744	0.28	0/992
6	4	0.10	0/711	0.29	0/948
6	5	0.10	0/758	0.29	0/1008
6	6	0.09	0/695	0.27	0/929
6	7	0.12	0/794	0.33	0/1053
6	8	0.11	0/702	0.35	0/937
6	9	0.11	0/800	0.35	0/1061
6	CD	0.15	0/770	0.42	0/1024
6	a2	0.12	0/790	0.27	0/1048
6	a3	0.09	0/711	0.24	0/948
6	a4	0.08	0/762	0.27	0/1013
6	a5	0.08	0/733	0.23	0/976
6	a6	0.09	0/794	0.29	0/1053
6	a7	0.09	0/800	0.29	0/1061
6	a8	0.09	0/711	0.24	0/948
6	a9	0.10	0/724	0.27	0/965
6	v	0.12	0/775	0.30	0/1029
6	w	0.08	0/808	0.22	0/1071
6	x	0.09	0/779	0.28	0/1034
6	y	0.10	0/800	0.27	0/1061
6	z	0.11	0/680	0.31	0/908
7	Ah	0.15	0/1005	0.45	0/1335
7	Ai	0.17	0/1315	0.52	0/1740
7	Aj	0.57	3/790 (0.4%)	1.10	6/1053 (0.6%)
7	Ak	0.20	0/999	0.56	1/1327 (0.1%)
7	Al	0.20	0/819	0.54	1/1092 (0.1%)
7	Am	0.19	0/1357	0.50	0/1794
7	An	0.20	0/988	0.56	1/1313 (0.1%)
7	Ao	0.17	0/1232	0.51	0/1634
7	Ap	0.20	0/562	0.47	0/749
7	Aq	0.17	0/1475	0.46	0/1947
7	Ar	0.19	0/1390	0.53	1/1830 (0.1%)
7	As	0.24	0/1013	0.65	2/1347 (0.1%)
All	All	0.19	14/193454 (0.0%)	0.39	46/278529 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
3	K	0	1

All (14) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	K	5284	ALA	C-N	15.64	1.55	1.33
3	K	5285	GLY	C-N	13.17	1.51	1.33
4	W	2976	LYS	C-N	13.11	1.51	1.33
7	Aj	143	PRO	CB-CG	-10.87	0.95	1.49
6	2	696	PRO	CG-CD	-9.19	1.19	1.50
3	L	5457	GLU	C-N	9.02	1.45	1.33
4	ay	412	LYS	C-N	8.51	1.46	1.33
3	L	5456	LEU	C-N	-8.49	1.23	1.33
4	ay	413	GLN	C-N	8.19	1.45	1.33
4	W	2975	THR	C-N	7.81	1.44	1.33
7	Aj	143	PRO	CA-CB	6.65	1.65	1.53
3	C	279	GLN	C-N	-6.23	1.24	1.33
3	K	5327	GLU	C-N	-5.70	1.26	1.33
7	Aj	143	PRO	N-CD	-5.66	1.39	1.47

All (46) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	Aj	143	PRO	CA-N-CD	-17.72	87.20	112.00
7	Aj	143	PRO	N-CD-CG	-15.91	79.33	103.20
6	2	696	PRO	N-CD-CG	-15.83	79.45	103.20
7	Aj	143	PRO	CA-CB-CG	-15.79	74.50	104.50
7	As	130	PRO	CA-N-CD	-13.25	93.45	112.00
3	am	803	ARG	N-CA-C	-11.76	98.73	113.55
3	K	5284	ALA	O-C-N	10.94	136.51	122.39
6	2	696	PRO	CA-CB-CG	-9.34	86.75	104.50
6	2	696	PRO	CA-N-CD	-8.78	99.70	112.00
4	N	208	LEU	N-CA-C	-8.62	103.35	114.04
3	K	5284	ALA	CA-C-N	-8.11	110.20	122.28
3	K	5284	ALA	C-N-CA	-8.11	110.20	122.28
3	K	5285	GLY	O-C-N	-7.93	112.34	122.25
3	K	5285	GLY	CA-C-N	7.80	131.79	120.71
3	K	5285	GLY	C-N-CA	7.80	131.79	120.71
3	am	796	LYS	N-CA-C	-7.80	100.86	113.19
5	m	432	PRO	CA-N-CD	-7.46	101.55	112.00
3	C	278	LEU	O-C-N	7.44	132.05	123.27
7	Aj	141	PRO	CA-N-CD	-7.12	102.04	112.00
3	L	5456	LEU	CA-C-N	-7.08	111.31	120.65
3	L	5456	LEU	C-N-CA	-7.08	111.31	120.65
7	An	8	PRO	CA-N-CD	-6.88	102.37	112.00
4	S	854	PRO	CA-N-CD	-6.57	102.80	112.00
7	As	130	PRO	N-CD-CG	-6.55	93.37	103.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L	5456	LEU	O-C-N	6.36	129.40	122.15
7	Ar	105	PRO	CA-N-CD	-6.26	103.23	112.00
4	ay	413	GLN	CA-C-N	6.11	129.25	123.08
4	ay	413	GLN	C-N-CA	6.11	129.25	123.08
5	l	249	LYS	CA-C-N	-6.01	113.25	121.61
5	l	249	LYS	C-N-CA	-6.01	113.25	121.61
3	aj	20	ARG	N-CA-C	-6.01	105.80	113.01
7	Aj	142	ALA	C-N-CD	5.98	149.53	125.00
3	B	245	LYS	CB-CA-C	-5.73	109.95	116.54
7	Ak	589	PRO	CA-N-CD	-5.70	104.02	112.00
5	a	364	PRO	CA-N-CD	-5.65	104.09	112.00
4	U	1849	SER	CB-CA-C	-5.63	110.06	116.54
7	Aj	141	PRO	N-CD-CG	-5.61	94.78	103.20
5	l	243	PRO	CA-N-CD	-5.58	104.18	112.00
5	Y	149	PRO	CA-N-CD	-5.44	104.38	112.00
4	ax	253	PRO	CA-N-CD	-5.40	104.45	112.00
3	C	279	GLN	CA-C-N	5.39	127.88	120.39
3	C	279	GLN	C-N-CA	5.39	127.88	120.39
4	At	5	PRO	CA-C-N	5.29	126.70	120.09
4	At	5	PRO	C-N-CA	5.29	126.70	120.09
7	Al	328	VAL	N-CA-C	-5.24	108.73	113.71
4	ay	412	LYS	O-C-N	5.07	128.51	122.27

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
3	K	5285	GLY	Mainchain

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	Au	43052	0	23722	1365	0
2	Av	43620	0	23665	1432	0
3	A	936	0	1008	10	0
3	Ae	936	0	1008	15	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	B	962	0	1035	22	0
3	C	983	0	1056	33	0
3	D	940	0	1011	11	0
3	E	973	0	1043	17	0
3	F	916	0	985	23	0
3	G	983	0	1056	19	0
3	H	958	0	1032	20	0
3	I	983	0	1056	15	0
3	K	977	0	1051	20	0
3	L	991	0	1065	27	0
3	aj	940	0	1011	20	0
3	ak	940	0	1011	14	0
3	al	851	0	909	10	0
3	am	973	0	1048	24	0
3	an	958	0	1032	16	0
3	ao	949	0	1019	21	0
3	ap	973	0	1048	23	0
3	aq	900	0	967	21	0
3	ar	983	0	1056	12	0
3	as	916	0	985	15	0
3	at	962	0	1035	18	0
3	au	859	0	921	12	0
4	Aa	814	0	856	24	0
4	Ab	956	0	1021	27	0
4	Ac	788	0	826	18	0
4	Ad	805	0	843	15	0
4	Af	766	0	797	5	0
4	Ag	823	0	864	9	0
4	At	956	0	1024	33	0
4	J	814	0	856	18	0
4	M	956	0	1024	20	0
4	N	830	0	871	29	0
4	O	814	0	856	33	0
4	P	830	0	871	13	0
4	Q	956	0	1021	16	0
4	R	788	0	826	13	0
4	S	956	0	1021	20	0
4	T	956	0	1021	15	0
4	U	956	0	1021	19	0
4	V	956	0	1021	24	0
4	W	956	0	1021	29	0
4	av	814	0	856	20	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	aw	956	0	1021	16	0
4	ax	956	0	1021	21	0
4	ay	956	0	1021	8	0
4	az	788	0	826	13	0
5	X	901	0	951	21	0
5	Y	896	0	946	24	0
5	Z	739	0	779	28	0
5	a	995	0	1059	21	0
5	b	833	0	880	15	0
5	c	860	0	906	21	0
5	d	808	0	846	11	0
5	e	768	0	809	14	0
5	f	808	0	846	17	0
5	g	837	0	883	16	0
5	h	801	0	838	13	0
5	i	817	0	858	24	0
5	j	853	0	898	31	0
5	k	817	0	858	24	0
5	l	917	0	971	28	0
5	m	808	0	846	16	0
5	n	910	0	964	30	0
5	o	880	0	928	22	0
5	p	837	0	883	19	0
5	q	891	0	941	23	0
5	r	860	0	906	23	0
5	s	780	0	818	16	0
5	t	890	0	941	31	0
5	u	1001	0	1064	37	0
6	0	741	0	796	19	0
6	1	703	0	755	13	0
6	2	750	0	809	28	0
6	3	736	0	793	17	0
6	4	703	0	755	17	0
6	5	750	0	809	14	0
6	6	688	0	745	15	0
6	7	786	0	847	26	0
6	8	694	0	742	24	0
6	9	792	0	852	27	0
6	CD	762	0	825	24	0
6	a2	782	0	844	28	0
6	a3	703	0	755	15	0
6	a4	754	0	812	14	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
6	a5	725	0	779	21	0
6	a6	786	0	847	16	0
6	a7	792	0	852	19	0
6	a8	703	0	755	18	0
6	a9	716	0	766	25	0
6	v	767	0	828	19	0
6	w	800	0	861	21	0
6	x	771	0	831	26	0
6	y	792	0	852	13	0
6	z	673	0	722	23	0
7	Ah	992	0	1087	23	0
7	Ai	1298	0	1466	47	0
7	Aj	780	0	838	30	0
7	Ak	986	0	1082	36	0
7	Al	808	0	866	39	0
7	Am	1340	0	1519	52	0
7	An	975	0	1072	36	0
7	Ao	1215	0	1363	48	0
7	Ap	555	0	584	19	0
7	Aq	1456	0	1660	62	0
7	Ar	1375	0	1585	57	0
7	As	999	0	1097	50	0
All	All	181715	0	149311	3933	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 13.

All (3933) 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)
3:C:279:GLN:HE22	4:O:419:GLN:CD	1.10	1.56
3:C:279:GLN:NE2	4:O:419:GLN:NE2	1.80	1.28
3:C:279:GLN:NE2	4:O:419:GLN:CD	1.92	1.27
3:C:279:GLN:HE22	4:O:419:GLN:NE2	1.38	1.18
3:C:279:GLN:NE2	4:O:419:GLN:OE1	1.80	1.11
1:Au:558:DC:N4	2:Av:1555:DA:H62	1.50	1.08
1:Au:1781:DA:N6	2:Av:337:DC:H42	1.51	1.06
1:Au:1781:DA:H61	2:Av:337:DC:N4	1.53	1.06
1:Au:558:DC:H42	2:Av:1555:DA:N6	1.53	1.06
1:Au:1174:DA:H2	2:Av:944:DG:N1	1.54	1.05
1:Au:1732:DA:H62	2:Av:387:DC:H42	1.07	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Au:1174:DA:C2	2:Av:944:DG:N1	2.27	0.98
1:Au:1114:DG:N1	2:Av:1004:DA:C2	2.34	0.96
1:Au:874:DA:H61	2:Av:1239:DC:H42	1.13	0.96
3:C:279:GLN:NE2	4:O:419:GLN:HE22	1.50	0.94
1:Au:1732:DA:H62	2:Av:387:DC:N4	1.65	0.94
1:Au:991:DA:N6	2:Av:1122:DC:N4	2.17	0.93
3:B:218:GLU:HB3	4:N:208:LEU:HD11	1.50	0.92
1:Au:1009:DC:H42	2:Av:1104:DA:H62	1.10	0.92
7:Aj:207:ARG:HH12	7:Aj:211:ALA:HB2	1.34	0.91
1:Au:1615:DA:H62	2:Av:504:DC:N4	1.69	0.91
3:C:279:GLN:HE21	4:O:419:GLN:HE22	1.18	0.91
3:C:279:GLN:CD	4:O:419:GLN:OE1	2.13	0.91
1:Au:1835:DG:O6	2:Av:283:DA:N1	2.04	0.90
1:Au:1114:DG:N1	2:Av:1004:DA:H2	1.65	0.90
6:7:30:THR:HG22	6:7:32:PRO:HD2	1.53	0.89
1:Au:493:DA:N6	2:Av:1621:DC:N4	2.21	0.87
1:Au:2022:DA:H62	2:Av:96:DA:H62	1.24	0.85
2:Av:859:DC:H4'	7:Ap:63:ASN:HB2	1.57	0.85
1:Au:896:DA:H61	2:Av:1217:DG:H22	1.24	0.84
1:Au:1114:DG:H1	2:Av:1004:DA:H2	0.90	0.84
1:Au:1781:DA:H61	2:Av:337:DC:H42	0.87	0.83
1:Au:127:DT:H3	2:Av:1990:DG:H22	1.27	0.82
1:Au:1757:DC:H42	2:Av:362:DC:H41	1.27	0.82
1:Au:376:DA:N6	2:Av:1739:DT:O4	2.12	0.82
6:a5:704:LYS:HG2	6:a5:705:ARG:HG3	1.60	0.82
1:Au:1009:DC:N4	2:Av:1104:DA:H62	1.76	0.82
7:As:15:ARG:HG3	7:As:16:VAL:HG23	1.63	0.81
1:Au:1585:DG:H1	2:Av:534:DT:H3	1.27	0.81
2:Av:755:DG:H3'	4:Ad:2869:ARG:HG2	1.63	0.81
7:Ar:154:LYS:HG3	7:Ar:155:PRO:HD3	1.63	0.80
7:Aj:143:PRO:O	7:Aj:147:LYS:NZ	2.14	0.80
1:Au:1775:DA:H61	2:Av:345:DC:H42	1.29	0.80
1:Au:1850:DA:N6	2:Av:269:DG:O6	2.15	0.80
1:Au:1170:DC:H4'	5:g:2200:ARG:HD2	1.64	0.80
7:Aq:33:ALA:HB1	7:Aq:37:ARG:HH12	1.47	0.80
1:Au:415:DT:O4	2:Av:1700:DG:O6	2.00	0.80
7:Ah:365:LYS:HD3	7:Ah:368:LYS:HE2	1.64	0.80
7:Am:97:LYS:HA	7:Ao:37:ARG:HH12	1.46	0.79
1:Au:991:DA:N6	2:Av:1122:DC:C4	2.51	0.79
1:Au:1337:DG:N7	2:Av:779:DC:N4	2.31	0.79
1:Au:1868:DG:O6	2:Av:251:DG:N2	2.15	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Au:620:DC:H42	2:Av:1493:DA:N6	1.81	0.79
4:M:9:LYS:HA	4:M:12:LYS:HE2	1.65	0.78
1:Au:491:DG:N2	2:Av:1624:DG:O6	2.15	0.78
1:Au:1174:DA:H2	2:Av:944:DG:H1	0.80	0.78
1:Au:1351:DA:N6	2:Av:767:DG:O6	2.15	0.78
1:Au:1732:DA:N6	2:Av:387:DC:H42	1.80	0.78
7:Am:13:PRO:O	7:Am:17:LYS:HB2	1.84	0.78
1:Au:1097:DA:H2	2:Av:1021:DG:H1	1.31	0.78
1:Au:383:DG:O6	2:Av:1732:DA:N6	2.17	0.77
1:Au:874:DA:N6	2:Av:1239:DC:H42	1.82	0.77
5:u:3080:SER:N	7:As:2:GLU:O	2.18	0.77
1:Au:2111:DC:H42	2:Av:6:DA:H62	1.33	0.77
1:Au:959:DA:N1	2:Av:1153:DC:N4	2.32	0.77
1:Au:1637:DA:H61	2:Av:483:DC:H42	1.33	0.76
1:Au:1030:DC:N4	2:Av:1083:DT:O4	2.18	0.76
7:Ar:46:SER:HA	7:Ar:91:GLY:HA3	1.67	0.76
5:f:3120:ARG:HD3	6:3:3174:LYS:HE3	1.66	0.76
2:Av:395:DT:H2''	2:Av:396:DA:H5''	1.67	0.76
1:Au:438:DA:H61	2:Av:1676:DC:H41	1.32	0.75
3:B:227:THR:HG21	6:8:181:ARG:HH21	1.51	0.75
5:f:3102:ILE:HD11	6:3:3196:GLY:HA2	1.69	0.75
3:am:792:LYS:HG3	3:am:796:LYS:HB2	1.67	0.75
1:Au:23:DA:N6	2:Av:2093:DT:O4	2.18	0.75
1:Au:1277:DC:H42	2:Av:840:DC:H41	1.34	0.75
2:Av:611:DG:H2''	6:a9:3327:ARG:HH21	1.51	0.75
1:Au:403:DG:H1	2:Av:1712:DA:H61	1.32	0.75
1:Au:1464:DG:H1	2:Av:655:DT:H3	1.33	0.75
4:At:95:VAL:HG13	4:At:99:LEU:HD12	1.68	0.75
1:Au:1706:DA:H3'	1:Au:1707:DG:H21	1.51	0.74
5:Z:276:ALA:HB1	5:Z:283:LEU:HD13	1.68	0.74
1:Au:1269:DT:O4	2:Av:848:DC:N4	2.20	0.74
2:Av:2022:DG:H5''	6:7:30:THR:HG21	1.70	0.74
7:Aj:207:ARG:NH1	7:Aj:207:ARG:O	2.19	0.74
7:Aq:5:VAL:HG23	7:Aq:6:LEU:HD23	1.68	0.74
1:Au:493:DA:N6	2:Av:1621:DC:C4	2.55	0.74
2:Av:1048:DA:H62	7:Aq:21:ARG:HH12	1.36	0.74
5:u:3107:LYS:HZ3	5:u:3110:ARG:H	1.36	0.74
1:Au:1547:DC:H2''	1:Au:1548:DT:H5''	1.70	0.74
6:a8:1486:THR:HG22	6:a8:1488:PRO:HD2	1.69	0.74
1:Au:1615:DA:H62	2:Av:504:DC:H42	1.36	0.73
7:Ap:68:ILE:O	7:Ap:72:ILE:HG13	1.88	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:Ar:169:LYS:HA	7:Ar:172:LYS:HD2	1.71	0.73
2:Av:2073:DG:H2'	2:Av:2074:DA:C8	2.23	0.73
1:Au:620:DC:H42	2:Av:1493:DA:H61	1.35	0.73
1:Au:1615:DA:N6	2:Av:504:DC:H42	1.86	0.73
7:Am:153:LYS:HE3	7:Am:160:ALA:HB2	1.70	0.73
1:Au:1097:DA:N1	2:Av:1021:DG:O6	2.22	0.73
7:Al:315:ARG:HH12	7:Al:319:ALA:HB2	1.53	0.73
3:C:279:GLN:OE1	4:O:419:GLN:OE1	2.05	0.73
1:Au:1089:DC:H2''	1:Au:1090:DG:C2	2.23	0.73
1:Au:1748:DC:H2'	1:Au:1749:DA:C8	2.24	0.73
1:Au:443:DC:H42	2:Av:1671:DC:H41	1.35	0.72
1:Au:462:DC:H2'	1:Au:463:DG:C8	2.24	0.72
1:Au:653:DC:H2''	1:Au:654:DT:H5''	1.71	0.72
2:Av:265:DG:H2'	2:Av:266:DT:H71	1.71	0.72
1:Au:985:DG:O6	2:Av:1128:DA:N6	2.22	0.72
1:Au:1711:DA:N6	2:Av:408:DC:N4	2.36	0.72
5:r:3005:LEU:HD21	6:a6:3232:ARG:HE	1.54	0.72
1:Au:1305:DC:N3	1:Au:1306:DA:N6	2.37	0.72
2:Av:983:DG:H2''	2:Av:984:DC:H5''	1.71	0.72
3:aj:15:LYS:HE3	3:aj:19:SER:HB3	1.72	0.72
1:Au:426:DT:O4	2:Av:1689:DA:N6	2.20	0.72
1:Au:558:DC:H42	2:Av:1555:DA:H62	0.77	0.72
1:Au:1700:DC:H41	2:Av:419:DA:H61	1.37	0.72
1:Au:1707:DG:O6	2:Av:411:DT:O4	2.07	0.72
1:Au:1293:DA:N7	2:Av:824:DA:N6	2.37	0.72
2:Av:310:DC:H2'	2:Av:311:DT:H71	1.69	0.72
6:8:161:HIS:HA	4:aw:212:ARG:HH12	1.54	0.72
1:Au:844:DG:H1	2:Av:1270:DG:H22	1.37	0.72
1:Au:1922:DA:H2'	1:Au:1923:DT:H71	1.71	0.72
2:Av:1148:DA:H3'	5:t:1215:LYS:HZ1	1.55	0.72
1:Au:657:DC:O2	1:Au:658:DT:N3	2.22	0.71
1:Au:874:DA:H61	2:Av:1239:DC:N4	1.86	0.71
2:Av:1117:DC:H2'	2:Av:1118:DT:H71	1.72	0.71
1:Au:477:DT:OP1	4:Aa:694:LYS:NZ	2.22	0.71
1:Au:890:DA:H2'	1:Au:891:DT:C6	2.25	0.71
2:Av:2009:DG:H2'	2:Av:2010:DT:H71	1.72	0.71
6:a8:1524:ASP:OD2	6:a8:1548:ARG:NH1	2.22	0.71
1:Au:1352:DA:N6	2:Av:766:DG:H1	1.88	0.71
7:Aq:146:ARG:HB3	7:Aq:150:LYS:HD3	1.72	0.71
1:Au:111:DC:H2''	1:Au:112:DA:H5''	1.72	0.71
1:Au:1192:DT:OP2	3:Ae:2993:ARG:NH2	2.23	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Au:1190:DA:N1	2:Av:929:DG:N2	2.38	0.71
1:Au:67:DA:N1	2:Av:2050:DG:C2	2.59	0.71
5:Z:257:LYS:O	3:al:750:ARG:NH1	2.22	0.71
1:Au:660:DG:O6	2:Av:1453:DA:N6	2.24	0.70
2:Av:758:DA:H2'	2:Av:759:DT:H71	1.73	0.70
7:An:102:LYS:HD2	7:Ap:82:LYS:HD3	1.73	0.70
1:Au:406:DG:OP2	4:Aa:601:SER:OG	2.07	0.70
1:Au:1143:DC:H2'	1:Au:1144:DG:C8	2.25	0.70
1:Au:1352:DA:N6	2:Av:766:DG:N1	2.38	0.70
1:Au:1692:DC:OP1	7:An:47:ARG:NH1	2.24	0.70
1:Au:2064:DG:H2'	1:Au:2065:DA:C8	2.26	0.70
6:a7:2372:LYS:HA	6:a7:2377:THR:HG22	1.73	0.70
2:Av:1750:DA:H2'	2:Av:1751:DT:C6	2.26	0.70
5:X:121:PRO:HB3	6:v:53:GLU:HG3	1.73	0.70
5:p:674:HIS:ND1	5:p:674:HIS:O	2.25	0.70
7:Aq:97:LYS:HA	7:As:37:ARG:HH12	1.57	0.70
7:Aq:179:LYS:HD2	7:Aq:183:ARG:HH12	1.56	0.70
1:Au:1097:DA:C2	2:Av:1021:DG:N1	2.58	0.70
2:Av:380:DC:H2'	2:Av:381:DA:C8	2.27	0.70
5:X:60:LEU:HD21	5:X:94:GLU:HG2	1.74	0.70
3:al:732:LEU:HD13	4:ax:288:LEU:HB2	1.73	0.70
4:Aa:671:LEU:HD12	4:Aa:675:LEU:HB3	1.72	0.70
1:Au:1102:DG:H22	2:Av:1016:DG:H1	1.40	0.70
2:Av:593:DG:H2'	2:Av:594:DT:C4	2.27	0.69
5:u:3169:TYR:HA	6:a9:3377:ARG:HH12	1.57	0.69
1:Au:648:DG:O6	2:Av:1465:DA:N6	2.25	0.69
2:Av:166:DC:H4'	7:Aj:174:SER:HA	1.73	0.69
3:F:706:ARG:NH1	5:o:589:LYS:O	2.25	0.69
7:Aq:140:LYS:HE3	7:Aq:154:LYS:HG3	1.73	0.69
1:Au:827:DT:H2'	1:Au:828:DT:H71	1.73	0.69
1:Au:1445:DG:H1	2:Av:674:DG:H22	1.39	0.69
6:a5:690:THR:HG23	6:a5:692:PRO:HD2	1.72	0.69
7:As:0:MET:HA	7:As:4:LEU:HB3	1.75	0.69
1:Au:1368:DG:H2'	1:Au:1369:DT:H71	1.73	0.69
2:Av:492:DC:H2'	2:Av:493:DA:C2	2.27	0.69
2:Av:1341:DT:H2''	2:Av:1342:DG:C8	2.28	0.69
3:am:870:VAL:HG12	3:am:871:ARG:HD2	1.75	0.69
4:Aa:627:ALA:HA	4:Aa:630:ILE:HD12	1.74	0.69
1:Au:1235:DG:H22	2:Av:883:DG:H22	1.41	0.69
1:Au:1828:DA:H2''	1:Au:1829:DG:N7	2.08	0.69
2:Av:1385:DT:H2''	2:Av:1386:DT:H5''	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:v:63:GLU:O	6:v:67:ARG:HG3	1.93	0.69
1:Au:356:DA:H3'	1:Au:357:DG:H21	1.58	0.69
1:Au:1910:DC:H2''	1:Au:1911:DG:H5''	1.74	0.69
4:At:51:ILE:HD13	4:At:56:MET:HE2	1.72	0.69
1:Au:1159:DC:H2''	1:Au:1160:DG:N7	2.07	0.69
1:Au:1764:DC:H42	2:Av:355:DA:H62	1.39	0.69
3:A:81:ARG:NH2	5:j:55:GLN:O	2.25	0.69
5:Y:161:GLU:HB2	6:w:142:ARG:HD2	1.74	0.69
2:Av:3:DT:H2''	2:Av:4:DG:H5''	1.74	0.68
3:A:63:LEU:HD13	4:M:42:LEU:HB2	1.75	0.68
3:L:5456:LEU:HD22	4:W:2901:LEU:HD12	1.74	0.68
1:Au:439:DC:H2'	1:Au:440:DG:C8	2.29	0.68
1:Au:699:DT:OP2	7:Ai:125:ARG:NH2	2.27	0.68
1:Au:1530:DG:H5'	1:Au:1530:DG:C8	2.28	0.68
2:Av:1240:DA:H2''	2:Av:1241:DC:H5''	1.73	0.68
7:Ah:368:LYS:HE3	7:Ah:410:LYS:HA	1.74	0.68
7:Ar:2:GLU:HA	7:Ar:6:LEU:HD12	1.74	0.68
1:Au:964:DC:H42	2:Av:1149:DC:H41	1.40	0.68
1:Au:1355:DG:O6	2:Av:762:DC:N4	2.26	0.68
7:An:48:GLN:OE1	7:An:48:GLN:N	2.27	0.68
1:Au:968:DT:H2'	1:Au:969:DA:C8	2.28	0.68
1:Au:1781:DA:N6	2:Av:338:DG:O6	2.27	0.68
1:Au:2046:DC:H2'	1:Au:2047:DG:C8	2.29	0.68
1:Au:1180:DA:H61	2:Av:938:DC:H42	1.40	0.68
1:Au:1561:DC:H42	2:Av:558:DA:H61	1.42	0.68
1:Au:1615:DA:N6	2:Av:504:DC:N4	2.42	0.68
1:Au:2085:DC:OP2	3:E:510:ARG:NH1	2.26	0.68
2:Av:441:DC:H2'	2:Av:442:DG:H8	1.59	0.68
2:Av:1970:DT:H2''	2:Av:1971:DG:C2	2.29	0.68
3:C:334:ILE:HG22	3:C:336:ARG:H	1.58	0.68
7:Ai:143:LYS:HG3	7:Ai:144:LYS:HD3	1.76	0.68
1:Au:493:DA:C6	2:Av:1621:DC:N4	2.61	0.68
2:Av:1348:DG:H5''	6:a5:739:LYS:HD3	1.75	0.68
5:Y:149:PRO:O	5:Y:153:ARG:NH2	2.23	0.68
5:k:150:ILE:HD11	6:8:128:GLY:HA2	1.76	0.68
7:Al:323:LYS:NZ	7:Al:337:ALA:HA	2.09	0.68
1:Au:415:DT:C4	2:Av:1700:DG:O6	2.46	0.68
1:Au:793:DC:H2''	1:Au:794:DG:C8	2.29	0.67
1:Au:873:DC:H41	2:Av:1240:DA:H62	1.39	0.67
1:Au:880:DG:H2'	1:Au:881:DG:C8	2.29	0.67
1:Au:1084:DA:H2'	1:Au:1085:DA:C8	2.29	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Au:1174:DA:N1	2:Av:944:DG:O6	2.27	0.67
1:Au:1338:DC:N4	2:Av:779:DC:N3	2.43	0.67
7:Ao:137:THR:H	7:Ao:141:ALA:HB2	1.59	0.67
1:Au:425:DC:N4	2:Av:1689:DA:H62	1.91	0.67
1:Au:1352:DA:H61	2:Av:766:DG:H1	1.38	0.67
1:Au:108:DC:O2	2:Av:2009:DG:N2	2.27	0.67
1:Au:348:DC:H42	2:Av:1768:DG:H1	1.42	0.67
1:Au:1692:DC:H2'	1:Au:1693:DG:C8	2.29	0.67
2:Av:343:DC:H2''	2:Av:344:DT:O2	1.94	0.67
1:Au:67:DA:N6	2:Av:2050:DG:N1	2.42	0.67
1:Au:520:DA:H2''	1:Au:521:DG:N2	2.09	0.67
1:Au:1652:DG:H2''	1:Au:1653:DC:C5	2.29	0.67
7:Ak:515:MET:HE1	7:Ak:565:LEU:HD22	1.77	0.67
2:Av:270:DT:H2''	2:Av:271:DT:H5''	1.75	0.67
1:Au:415:DT:O4	2:Av:1700:DG:C6	2.48	0.67
1:Au:497:DG:H2''	1:Au:498:DT:H5''	1.77	0.67
1:Au:945:DC:H2''	1:Au:946:DT:H5''	1.75	0.67
1:Au:1009:DC:H42	2:Av:1104:DA:N6	1.89	0.67
1:Au:1114:DG:O6	2:Av:1004:DA:N1	2.28	0.67
1:Au:2051:DT:O3'	7:Al:314:ARG:NH2	2.26	0.67
2:Av:565:DT:H5'	3:L:5394:SER:HA	1.76	0.67
2:Av:1745:DA:OP1	5:o:582:ARG:NH1	2.28	0.67
4:T:2745:LYS:O	4:T:2748:LYS:NZ	2.27	0.67
1:Au:48:DG:H2'	1:Au:49:DG:H21	1.58	0.67
2:Av:226:DA:H2''	2:Av:227:DA:C8	2.30	0.67
1:Au:620:DC:N4	2:Av:1493:DA:H61	1.93	0.67
5:j:79:LYS:NZ	6:7:74:GLU:OE1	2.28	0.67
5:p:735:LEU:HD11	6:a4:627:LEU:HD11	1.77	0.67
7:An:51:GLN:O	7:An:55:LYS:HB2	1.95	0.67
7:As:15:ARG:NH1	7:As:15:ARG:O	2.28	0.67
1:Au:376:DA:H2'	1:Au:377:DA:C8	2.30	0.67
6:3:3174:LYS:HZ3	6:3:3179:ASN:HA	1.59	0.67
1:Au:106:DA:H2''	1:Au:107:DC:H5''	1.76	0.66
1:Au:266:DC:H2''	1:Au:267:DT:H5''	1.76	0.66
1:Au:710:DA:N6	2:Av:1404:DG:N7	2.41	0.66
1:Au:1013:DA:H61	2:Av:1101:DA:H61	1.41	0.66
1:Au:1281:DT:O4	2:Av:837:DC:N4	2.29	0.66
2:Av:496:DG:H21	2:Av:498:DG:H22	1.41	0.66
3:an:927:SER:HB2	3:an:931:LEU:HB2	1.77	0.66
7:Al:316:LEU:HB3	7:Al:321:VAL:HB	1.76	0.66
7:Ao:128:ARG:HG3	7:Ao:130:PRO:HD2	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Au:502:DA:H62	2:Av:1613:DA:H62	1.41	0.66
1:Au:576:DA:H61	2:Av:1537:DC:H41	1.43	0.66
1:Au:949:DA:H2''	1:Au:950:DG:H5''	1.77	0.66
2:Av:482:DG:OP2	3:G:831:ARG:NH2	2.28	0.66
4:O:445:ILE:HD11	4:O:466:ILE:HG23	1.76	0.66
1:Au:970:DC:H42	2:Av:1144:DG:H22	1.43	0.66
1:Au:1735:DT:H2'	1:Au:1736:DG:C8	2.30	0.66
2:Av:438:DG:H8	2:Av:438:DG:H5''	1.61	0.66
2:Av:509:DG:O6	7:An:120:LYS:NZ	2.28	0.66
2:Av:1056:DG:H2''	2:Av:1057:DT:H5''	1.77	0.66
3:A:42:ARG:HB2	4:M:85:THR:HG22	1.76	0.66
1:Au:256:DC:H2'	1:Au:257:DA:C8	2.30	0.66
1:Au:337:DT:H6	2:Av:1780:DG:H22	1.43	0.66
5:g:2192:GLN:NE2	6:4:2334:ARG:O	2.27	0.66
7:Ao:46:SER:HA	7:Ao:91:GLY:HA3	1.77	0.66
6:2:682:HIS:O	6:2:682:HIS:HD2	1.77	0.66
4:N:205:PRO:HD2	4:N:208:LEU:HD13	1.78	0.66
5:Z:299:ALA:HB3	6:x:297:ARG:HH22	1.59	0.66
7:Ak:516:ILE:O	7:Ak:520:ILE:HG13	1.96	0.66
2:Av:760:DC:H2''	2:Av:761:DC:C4	2.31	0.66
2:Av:1820:DA:H2'	2:Av:1821:DT:H71	1.76	0.66
2:Av:1965:DA:H5''	2:Av:1966:DT:H71	1.78	0.66
5:q:795:GLU:OE1	6:a5:699:ARG:NH1	2.29	0.66
2:Av:295:DG:N2	2:Av:296:DA:N7	2.43	0.65
4:U:1849:SER:OG	4:U:1850:LYS:N	2.25	0.65
5:e:784:GLU:N	5:e:784:GLU:OE2	2.28	0.65
7:Aq:79:GLY:HA3	7:As:98:SER:H	1.59	0.65
1:Au:1678:DC:N3	2:Av:441:DC:N4	2.44	0.65
3:H:5213:ILE:HB	4:S:900:ILE:HG13	1.77	0.65
5:t:1260:LEU:HD11	6:a8:1537:VAL:HG23	1.78	0.65
6:8:106:LYS:HA	6:8:106:LYS:HE3	1.79	0.65
2:Av:393:DA:H2''	2:Av:394:DC:H5''	1.79	0.65
5:Z:317:ARG:NH2	5:Z:324:ASP:OD2	2.29	0.65
6:6:3338:THR:HB	3:au:4462:VAL:HG23	1.78	0.65
1:Au:1863:DC:N4	2:Av:254:DA:N7	2.43	0.65
5:d:670:HIS:CD2	5:d:671:ARG:H	2.14	0.65
7:Al:341:LYS:HD3	7:Al:341:LYS:N	2.12	0.65
7:Ap:72:ILE:HG23	7:Ap:81:LEU:HD13	1.78	0.65
1:Au:501:DC:OP1	5:c:586:ARG:NH2	2.29	0.65
1:Au:1073:DA:N3	2:Av:1046:DG:N2	2.45	0.65
1:Au:1557:DG:H1	2:Av:562:DG:H22	1.43	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Av:239:DG:H2''	2:Av:240:DT:H5''	1.76	0.65
5:n:485:LEU:HD22	6:a2:422:ARG:HB3	1.77	0.65
1:Au:745:DG:H1	2:Av:1369:DG:H22	1.45	0.65
1:Au:1099:DG:N2	2:Av:1020:DC:O2	2.29	0.65
2:Av:398:DG:OP2	4:R:257:ARG:NH1	2.29	0.65
2:Av:1877:DG:H2'	2:Av:1878:DA:C8	2.31	0.65
6:z:466:ARG:HG3	6:z:468:THR:HG22	1.79	0.65
6:2:682:HIS:CD2	6:2:683:ARG:HG2	2.31	0.65
1:Au:87:DC:H42	2:Av:2029:DG:H1	1.42	0.65
1:Au:977:DT:OP1	6:5:1449:LYS:NZ	2.30	0.65
2:Av:1275:DG:H2''	2:Av:1276:DA:N7	2.12	0.65
2:Av:1941:DG:OP1	7:Ak:603:LYS:NZ	2.30	0.65
4:M:51:ILE:HG21	4:M:56:MET:HE3	1.79	0.65
4:Q:697:ALA:HA	4:Q:700:LEU:HD12	1.78	0.65
5:o:612:LYS:HB2	5:o:615:LEU:HD12	1.79	0.65
4:Ac:890:VAL:HG13	4:Ac:894:LEU:HD12	1.78	0.65
1:Au:533:DA:H2''	1:Au:534:DG:H5''	1.79	0.65
1:Au:932:DT:O4	2:Av:1181:DA:N6	2.29	0.65
1:Au:991:DA:C6	2:Av:1122:DC:N4	2.64	0.65
5:k:218:ILE:HG12	6:8:129:VAL:HG21	1.79	0.65
1:Au:1716:DT:OP2	5:p:718:ARG:NH1	2.30	0.65
1:Au:478:DC:H2''	1:Au:479:DC:H5''	1.79	0.64
1:Au:1176:DG:H1	2:Av:942:DT:H3	1.45	0.64
1:Au:1975:DG:H2''	5:b:465:PRO:HG2	1.79	0.64
2:Av:320:DG:H3'	6:6:3257:ALA:HA	1.79	0.64
2:Av:1132:DG:H5'	5:h:1321:VAL:HG21	1.79	0.64
4:N:211:HIS:O	4:N:214:SER:HB2	1.97	0.64
4:S:849:MET:N	4:S:849:MET:SD	2.71	0.64
6:a6:3263:THR:HG22	4:Ad:2936:THR:HG23	1.78	0.64
1:Au:1531:DG:H21	2:Av:589:DG:H22	1.45	0.64
1:Au:1642:DG:O6	2:Av:477:DA:N6	2.27	0.64
2:Av:196:DT:H2''	2:Av:197:DA:C8	2.32	0.64
2:Av:2057:DC:H2'	2:Av:2058:DT:H71	1.77	0.64
4:M:5:PRO:HB2	4:M:7:PRO:HD2	1.79	0.64
5:X:108:ASN:ND2	6:v:42:GLY:O	2.30	0.64
3:ap:4063:LEU:HD13	4:Ab:737:LEU:HB2	1.78	0.64
7:Ar:36:ILE:HD13	7:Ar:95:LEU:HG	1.79	0.64
1:Au:597:DC:H2''	1:Au:598:DA:C8	2.32	0.64
1:Au:808:DG:H1'	1:Au:809:DT:H5'	1.78	0.64
3:aq:4231:VAL:HG23	3:aq:4237:THR:HG23	1.80	0.64
1:Au:972:DC:OP2	7:Ar:47:ARG:NH2	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Au:1040:DC:H2''	1:Au:1041:DA:H5''	1.78	0.64
2:Av:51:DT:H2''	2:Av:52:DC:C2	2.32	0.64
6:CD:291:LYS:O	6:CD:298:LYS:NZ	2.30	0.64
1:Au:686:DC:O2	1:Au:686:DC:H2'	1.96	0.64
1:Au:1898:DA:H2'	1:Au:1899:DG:C2	2.33	0.64
2:Av:55:DC:O3'	5:b:490:ARG:NH1	2.31	0.64
2:Av:1572:DG:H5'	2:Av:1572:DG:C8	2.32	0.64
5:X:107:THR:HG22	5:X:119:ILE:HB	1.80	0.64
3:aj:111:ILE:HG13	3:aj:115:LEU:HD12	1.78	0.64
3:at:4263:ARG:NH1	4:Af:1196:LYS:O	2.29	0.64
1:Au:274:DC:H2'	1:Au:275:DG:C8	2.32	0.64
1:Au:1542:DC:N3	2:Av:578:DG:N2	2.45	0.64
1:Au:431:DC:N4	2:Av:1683:DG:O6	2.30	0.64
1:Au:534:DG:H22	2:Av:1581:DG:H22	1.42	0.64
1:Au:1235:DG:N2	2:Av:883:DG:H22	1.95	0.64
1:Au:2011:DA:N1	2:Av:107:DG:O6	2.31	0.64
7:Ah:399:GLN:OE1	7:Ah:399:GLN:N	2.31	0.64
7:Al:311:LEU:HG	7:Al:314:ARG:HH22	1.63	0.64
7:As:27:THR:OG1	7:As:28:TYR:N	2.30	0.64
1:Au:1080:DG:H21	6:2:674:LEU:HB2	1.63	0.64
2:Av:1983:DG:H2'	2:Av:1984:DA:C8	2.32	0.64
1:Au:697:DA:H4'	7:Ai:118:PRO:HB3	1.79	0.64
1:Au:1468:DG:H2'	1:Au:1469:DT:C6	2.33	0.64
1:Au:1765:DG:O6	2:Av:354:DC:N4	2.30	0.64
2:Av:605:DG:H2'	2:Av:606:DG:C8	2.33	0.64
7:Ar:33:ALA:HA	7:Ar:95:LEU:HD11	1.80	0.64
5:Z:249:LEU:HA	5:Z:252:ILE:HG12	1.80	0.64
3:aq:4180:LEU:HD22	4:Ac:837:LEU:HD12	1.78	0.64
7:Am:169:LYS:HB3	7:Am:173:ARG:HH21	1.62	0.64
7:Ao:125:ARG:HA	7:Ao:128:ARG:HG2	1.80	0.64
7:Ar:133:LYS:O	7:Ar:135:LYS:N	2.31	0.64
1:Au:1160:DG:H4'	6:4:2339:ARG:HG3	1.79	0.63
2:Av:1311:DG:H2''	2:Av:1312:DG:C2	2.32	0.63
4:U:1880:LEU:HB2	3:Ae:3021:LEU:HD13	1.79	0.63
1:Au:820:DA:H2''	1:Au:821:DA:H5''	1.79	0.63
3:aj:88:ARG:NH1	3:aj:97:LEU:O	2.32	0.63
7:Aj:149:VAL:HG12	7:Aj:150:LYS:H	1.64	0.63
7:Ak:499:ARG:O	7:Ak:499:ARG:NE	2.24	0.63
1:Au:1242:DG:H1	2:Av:878:DG:H21	1.44	0.63
1:Au:1325:DG:H5'	5:r:2987:PRO:HD3	1.78	0.63
1:Au:1444:DG:H1	2:Av:675:DG:H22	1.43	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Au:1508:DT:H5''	5:u:3106:LYS:HE2	1.80	0.63
1:Au:1873:DT:O4'	5:l:329:ARG:NH2	2.29	0.63
1:Au:2110:DT:H2'	1:Au:2111:DC:C6	2.34	0.63
2:Av:1245:DA:N1	2:Av:1247:DC:N4	2.46	0.63
1:Au:358:DC:N4	2:Av:1758:DG:H22	1.95	0.63
1:Au:1191:DG:H2''	1:Au:1192:DT:C2	2.32	0.63
1:Au:1686:DC:H42	2:Av:434:DG:H1	1.47	0.63
2:Av:496:DG:N2	2:Av:498:DG:H22	1.97	0.63
5:Y:227:ARG:NH2	5:Y:234:ASP:OD2	2.32	0.63
6:a2:459:THR:HG21	6:a2:467:VAL:HG12	1.79	0.63
7:Ak:500:VAL:HG12	7:Ak:501:LYS:HD2	1.79	0.63
1:Au:1292:DT:O4	2:Av:825:DC:N4	2.30	0.63
2:Av:730:DG:H2'	2:Av:731:DT:H71	1.79	0.63
2:Av:1338:DC:OP1	5:q:814:ARG:NH2	2.31	0.63
2:Av:1993:DA:H2'	2:Av:1994:DG:C8	2.33	0.63
5:Y:240:ARG:HH11	5:k:208:LEU:HD11	1.62	0.63
7:Al:156:LYS:HE2	7:Ar:16:VAL:HG11	1.79	0.63
7:Ao:12:LYS:HB2	7:Ao:13:PRO:HD3	1.80	0.63
1:Au:1081:DG:H2''	1:Au:1082:DA:C8	2.33	0.63
1:Au:1102:DG:N2	2:Av:1016:DG:H22	1.94	0.63
1:Au:1845:DA:H3'	6:x:214:LYS:HE2	1.81	0.63
5:k:183:PHE:HZ	6:8:152:ILE:HD11	1.63	0.63
5:n:542:THR:HG22	6:a2:431:ARG:HB2	1.80	0.63
7:Ao:9:ALA:HA	7:Ao:13:PRO:HD2	1.79	0.63
1:Au:214:DG:H2''	1:Au:215:DC:H5''	1.81	0.63
2:Av:200:DT:H2'	2:Av:201:DG:C8	2.33	0.63
5:X:103:LEU:HD21	5:X:124:ILE:HG23	1.81	0.63
6:a9:3353:THR:HG22	4:Ag:3162:THR:HG23	1.80	0.63
1:Au:149:DT:H2'	1:Au:150:DA:C8	2.34	0.63
1:Au:618:DC:H2'	1:Au:619:DG:C8	2.34	0.63
1:Au:1128:DC:H2''	1:Au:1129:DA:C8	2.34	0.63
1:Au:1340:DT:H2'	1:Au:1341:DT:C5	2.34	0.63
1:Au:1413:DA:N6	2:Av:705:DC:H42	1.97	0.63
1:Au:1534:DA:H2'	1:Au:1535:DT:H71	1.80	0.63
2:Av:71:DC:H4'	7:Al:331:SER:HA	1.80	0.63
2:Av:982:DA:H5'	5:s:2096:LEU:HB3	1.79	0.63
1:Au:1549:DC:H42	2:Av:570:DA:H61	1.47	0.63
5:t:1206:SER:HB3	7:Ar:1:THR:HG23	1.81	0.63
2:Av:1558:DG:H2'	2:Av:1558:DG:N3	2.14	0.62
1:Au:521:DG:N2	1:Au:521:DG:OP2	2.32	0.62
2:Av:462:DA:H2'	2:Av:463:DG:C4	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Av:741:DC:H2'	2:Av:742:DT:H72	1.81	0.62
3:K:5342:ILE:HG22	3:K:5344:ARG:H	1.64	0.62
2:Av:367:DT:H2'	2:Av:368:DG:H21	1.63	0.62
2:Av:1274:DG:H2'	2:Av:1275:DG:C8	2.34	0.62
2:Av:1783:DT:H3'	2:Av:1784:DG:H21	1.63	0.62
5:c:595:ILE:O	5:c:626:GLN:NE2	2.33	0.62
1:Au:521:DG:OP1	7:Ao:14:LYS:NZ	2.33	0.62
1:Au:2032:DC:N4	2:Av:85:DT:O4	2.32	0.62
3:F:657:ARG:NH2	4:At:32:GLU:OE2	2.32	0.62
4:N:206:GLY:C	4:N:208:LEU:H	2.05	0.62
5:u:3096:ARG:CD	5:u:3096:ARG:H	2.12	0.62
7:Ap:32:ILE:O	7:Ap:36:ILE:HD12	2.00	0.62
1:Au:1985:DC:H41	2:Av:132:DC:H41	1.45	0.62
1:Au:2086:DA:N6	2:Av:31:DG:O6	2.33	0.62
6:z:456:ASP:OD2	6:z:480:ARG:NH1	2.32	0.62
6:6:3261:ARG:HB3	6:6:3265:ARG:HD2	1.81	0.62
6:a7:2365:MET:HE1	6:a7:2383:GLY:H	1.63	0.62
1:Au:283:DA:H2''	1:Au:284:DC:H5''	1.82	0.62
1:Au:868:DT:H2''	1:Au:869:DG:C4	2.34	0.62
6:x:270:ASP:OD2	6:x:294:ARG:NH1	2.29	0.62
6:4:2362:ASP:OD2	6:4:2386:ARG:NH1	2.32	0.62
7:Aj:148:ARG:O	7:Aj:148:ARG:NE	2.29	0.62
7:Ak:600:THR:HA	7:Ak:603:LYS:HE2	1.82	0.62
1:Au:1271:DC:H42	2:Av:846:DC:H41	1.48	0.62
1:Au:1336:DC:H42	2:Av:781:DG:H1	1.48	0.62
1:Au:1679:DG:H22	2:Av:441:DC:H42	1.48	0.62
1:Au:556:DC:H41	2:Av:1557:DC:H41	1.48	0.62
1:Au:1156:DC:OP1	7:Aq:83:GLN:NE2	2.32	0.62
1:Au:2048:DT:O4	2:Av:69:DC:N4	2.20	0.62
2:Av:585:DC:H2''	2:Av:586:DC:H5''	1.80	0.62
2:Av:1570:DG:H2''	2:Av:1571:DG:C2	2.34	0.62
2:Av:1885:DT:H1'	6:y:320:LYS:HZ1	1.64	0.62
7:Am:50:ILE:O	7:Am:54:ILE:HG12	2.00	0.62
7:Aq:32:ILE:HG23	7:Aq:50:ILE:HD11	1.80	0.62
1:Au:67:DA:N6	2:Av:2050:DG:H1	1.97	0.62
2:Av:1340:DG:H2'	2:Av:1341:DT:H71	1.82	0.62
7:Am:134:PRO:HG2	7:Am:135:LYS:NZ	2.14	0.62
1:Au:437:DT:H2''	1:Au:438:DA:C8	2.35	0.62
2:Av:248:DC:H41	7:Aj:218:LYS:HE2	1.65	0.61
2:Av:345:DC:H3'	7:An:13:PRO:HA	1.80	0.61
2:Av:741:DC:H6	2:Av:741:DC:H5''	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Av:1146:DG:H5''	5:t:1221:PRO:HD2	1.82	0.61
3:L:5514:GLU:OE1	5:u:3112:ARG:NH1	2.33	0.61
4:Q:616:LYS:HD2	4:Q:627:LYS:HB3	1.80	0.61
4:W:2871:LYS:HE3	4:W:2886:ARG:HD3	1.80	0.61
5:u:3120:GLU:OE1	6:a9:3321:ARG:NH1	2.33	0.61
1:Au:610:DC:H5'	7:Ai:90:SER:HA	1.81	0.61
1:Au:1686:DC:H2''	1:Au:1687:DC:C5	2.35	0.61
1:Au:1789:DG:H2''	1:Au:1790:DA:H5''	1.81	0.61
1:Au:1884:DG:H2'	1:Au:1885:DG:C8	2.35	0.61
2:Av:247:DG:OP2	7:Aj:216:GLN:NE2	2.33	0.61
4:P:531:ILE:HD13	4:P:536:MET:HG3	1.80	0.61
5:X:126:LEU:O	5:X:130:ILE:HG12	2.00	0.61
5:Y:173:ILE:O	5:Y:204:GLN:NE2	2.34	0.61
7:Ak:528:GLY:HA2	7:Ak:576:SER:HA	1.81	0.61
1:Au:1664:DC:OP2	4:Ab:721:ARG:NH2	2.33	0.61
2:Av:742:DT:H2''	2:Av:743:DG:C5	2.34	0.61
2:Av:833:DT:H2''	2:Av:834:DG:C8	2.35	0.61
2:Av:1655:DG:H2'	2:Av:1656:DT:H71	1.81	0.61
5:q:806:LEU:HD11	6:a5:700:ARG:HD2	1.82	0.61
1:Au:2001:DA:H2'	1:Au:2002:DG:C2	2.36	0.61
2:Av:704:DC:H2''	2:Av:705:DC:C5	2.35	0.61
2:Av:1981:DT:H2'	2:Av:1982:DG:C8	2.36	0.61
5:i:3210:LEU:HD21	5:i:3244:GLU:HG2	1.81	0.61
5:j:81:ASP:OD1	6:7:19:ARG:NH2	2.33	0.61
7:Am:80:VAL:HB	7:Ao:98:SER:HB3	1.80	0.61
7:Ap:52:LYS:HA	7:Ap:55:LYS:HD3	1.82	0.61
1:Au:332:DC:H2''	1:Au:333:DA:C8	2.36	0.61
1:Au:869:DG:H2''	1:Au:870:DT:O4'	2.00	0.61
1:Au:1811:DC:H2'	1:Au:1812:DT:H71	1.83	0.61
5:d:739:ASN:ND2	3:ap:4112:GLN:OE1	2.34	0.61
7:Al:286:SER:HB2	7:Al:291:ILE:HB	1.83	0.61
1:Au:1277:DC:N4	2:Av:839:DG:N7	2.48	0.61
1:Au:1798:DG:H2'	1:Au:1799:DG:C5	2.35	0.61
2:Av:2043:DA:H2''	2:Av:2044:DA:H5''	1.82	0.61
3:G:854:VAL:HG12	6:a4:665:THR:HB	1.81	0.61
1:Au:1101:DC:H2''	1:Au:1102:DG:H8	1.65	0.61
1:Au:1105:DC:H2''	1:Au:1106:DA:C8	2.36	0.61
1:Au:1481:DG:N2	2:Av:638:DG:H22	1.99	0.61
2:Av:383:DG:H2'	2:Av:384:DT:C5	2.35	0.61
4:N:206:GLY:O	4:N:208:LEU:HD12	2.01	0.61
5:i:3240:MET:HA	5:i:3240:MET:HE2	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:4:2310:LYS:N	4:Ag:3171:GLU:OE1	2.33	0.61
6:a9:3350:ASP:OD2	6:a9:3374:ARG:NH1	2.25	0.61
3:ar:2685:ARG:NH1	3:ar:2694:LEU:O	2.33	0.61
4:av:35:ALA:HA	4:av:56:MET:HE2	1.83	0.61
1:Au:233:DA:H2''	1:Au:234:DC:H5''	1.82	0.61
5:m:361:GLU:OE2	6:CD:325:ARG:NH1	2.34	0.61
3:ao:1090:LEU:HD21	4:Aa:671:LEU:HD11	1.83	0.61
1:Au:94:DC:H2''	1:Au:95:DC:C5	2.36	0.61
1:Au:1736:DG:H2'	1:Au:1737:DT:H71	1.83	0.61
2:Av:301:DT:H2''	2:Av:302:DT:H5''	1.83	0.61
5:t:1257:LYS:HD2	6:a8:1526:VAL:HG23	1.83	0.61
1:Au:1948:DG:H1	2:Av:170:DG:H21	1.48	0.61
2:Av:81:DC:N4	2:Av:82:DG:O6	2.34	0.61
2:Av:178:DA:OP2	5:Z:247:VAL:N	2.33	0.61
2:Av:652:DC:H2''	2:Av:653:DA:H5''	1.82	0.61
1:Au:425:DC:H42	2:Av:1689:DA:N6	1.99	0.60
2:Av:260:DC:H2'	2:Av:261:DG:C8	2.35	0.60
3:D:456:ILE:HB	4:P:531:ILE:HG13	1.83	0.60
5:g:2183:VAL:HG13	5:g:2186:ARG:HE	1.66	0.60
1:Au:1008:DT:O4	2:Av:1105:DG:O6	2.18	0.60
1:Au:1610:DT:H2''	1:Au:1611:DG:N7	2.15	0.60
1:Au:1859:DC:H2''	1:Au:1860:DT:H5''	1.84	0.60
2:Av:231:DC:H2'	2:Av:232:DC:C6	2.35	0.60
2:Av:290:DT:C6	2:Av:290:DT:H5''	2.36	0.60
2:Av:963:DC:OP1	5:g:2253:ARG:NH1	2.34	0.60
2:Av:1035:DC:OP2	7:Aq:1:THR:OG1	2.13	0.60
5:b:468:TYR:OH	5:b:476:ARG:NH1	2.34	0.60
3:am:786:ARG:HG3	3:am:787:GLY:N	2.15	0.60
7:Aq:2:GLU:HA	7:Aq:5:VAL:HG22	1.83	0.60
1:Au:953:DC:H2''	1:Au:954:DC:H5''	1.82	0.60
1:Au:2005:DA:H61	2:Av:112:DG:H22	1.47	0.60
2:Av:445:DC:H2''	2:Av:446:DG:C8	2.37	0.60
2:Av:479:DT:H2''	2:Av:480:DG:C8	2.36	0.60
2:Av:932:DG:H2'	2:Av:933:DT:H71	1.83	0.60
5:b:540:HIS:NE2	5:n:547:ASP:OD1	2.23	0.60
5:p:743:ASN:ND2	6:a4:611:GLY:O	2.34	0.60
4:av:30:ARG:NH1	4:av:31:LYS:O	2.34	0.60
1:Au:1147:DC:N4	2:Av:970:DT:O4	2.34	0.60
1:Au:1748:DC:H2'	1:Au:1749:DA:H8	1.65	0.60
2:Av:1:DA:H3'	2:Av:2:DC:H5''	1.83	0.60
2:Av:506:DA:H2''	2:Av:507:DG:N7	2.16	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Au:1090:DG:N2	1:Au:1090:DG:OP2	2.34	0.60
1:Au:1310:DC:H42	2:Av:807:DC:H41	1.49	0.60
1:Au:1872:DT:H1'	5:l:329:ARG:NH2	2.17	0.60
2:Av:1962:DT:H2''	2:Av:1963:DA:C8	2.37	0.60
4:av:56:MET:HA	4:av:56:MET:HE3	1.83	0.60
1:Au:400:DT:O4	2:Av:1714:DC:N4	2.35	0.60
1:Au:642:DC:H41	2:Av:1471:DC:H42	1.48	0.60
1:Au:978:DC:N4	2:Av:1135:DG:O6	2.34	0.60
2:Av:1137:DG:N1	2:Av:1138:DG:O6	2.35	0.60
5:f:3171:MET:HG2	5:f:3172:PRO:HD2	1.82	0.60
1:Au:242:DG:H2''	1:Au:243:DC:H5''	1.84	0.60
1:Au:788:DA:H2''	1:Au:789:DC:C2	2.37	0.60
1:Au:2068:DA:H61	2:Av:49:DA:H62	1.50	0.60
2:Av:1104:DA:H2'	2:Av:1105:DG:C8	2.36	0.60
3:H:5216:ARG:NH1	5:q:801:LYS:O	2.33	0.60
5:e:819:GLU:HG2	3:aq:4220:ALA:HA	1.84	0.60
5:f:3119:GLN:HE21	5:f:3123:ARG:HH21	1.50	0.60
5:h:1326:ILE:HD12	6:5:1447:GLY:HA2	1.84	0.60
7:Al:323:LYS:HZ2	7:Al:337:ALA:HA	1.65	0.60
1:Au:888:DG:H2''	1:Au:889:DC:O2	2.01	0.60
1:Au:962:DC:H41	2:Av:1151:DT:H71	1.67	0.60
3:H:5254:LYS:HG2	3:H:5255:THR:HG22	1.83	0.60
5:e:841:ARG:NH2	5:e:848:ASP:OD1	2.34	0.60
6:5:1483:ARG:NH2	6:5:1490:ASP:OD2	2.35	0.60
1:Au:426:DT:H5'	5:c:577:GLY:H	1.67	0.60
1:Au:685:DA:H4'	3:ak:248:SER:HB3	1.84	0.60
1:Au:1336:DC:N4	1:Au:1337:DG:O6	2.35	0.60
1:Au:2071:DC:H42	2:Av:46:DA:H61	1.50	0.60
3:B:233:VAL:HG21	5:k:200:VAL:HG11	1.84	0.60
3:C:319:GLU:O	3:C:323:ASN:ND2	2.34	0.60
1:Au:220:DC:H2''	1:Au:221:DA:C8	2.36	0.60
1:Au:255:DG:H21	7:Ak:569:LYS:HD3	1.67	0.60
1:Au:807:DC:H2''	1:Au:808:DG:N7	2.17	0.60
2:Av:607:DG:H2'	7:As:76:LEU:HD11	1.83	0.60
4:S:913:ASN:ND2	6:a5:762:GLY:OXT	2.34	0.60
4:W:2914:ALA:HA	4:W:2917:ILE:HD12	1.84	0.60
5:n:486:ILE:O	5:n:517:GLN:NE2	2.34	0.60
6:3:3245:LYS:NZ	4:Ad:2911:GLU:OE1	2.34	0.60
6:9:285:LEU:HG	6:9:287:GLY:H	1.67	0.60
1:Au:540:DG:H2''	1:Au:541:DG:H5''	1.84	0.59
1:Au:1784:DC:N4	2:Av:333:DG:N7	2.49	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Av:1047:DG:OP2	7:Aq:58:TYR:OH	2.20	0.59
2:Av:1642:DA:H5'	3:ao:1076:GLY:HA2	1.84	0.59
5:f:3151:LEU:HD11	6:3:3212:LEU:HD13	1.83	0.59
7:Ao:15:ARG:O	7:Ao:20:ARG:NH2	2.35	0.59
1:Au:1011:DC:H42	2:Av:1102:DC:H41	1.49	0.59
1:Au:1152:DT:H2''	1:Au:1153:DG:C8	2.37	0.59
1:Au:1776:DT:H5'	2:Av:339:DG:H21	1.67	0.59
2:Av:1701:DA:H2''	2:Av:1702:DG:C8	2.37	0.59
2:Av:2073:DG:H2'	2:Av:2074:DA:H8	1.66	0.59
5:Z:262:LEU:HD12	6:x:239:LEU:HD23	1.83	0.59
5:g:2245:ASN:ND2	6:4:2336:GLY:O	2.35	0.59
5:k:228:ARG:NH1	5:k:228:ARG:O	2.36	0.59
6:3:3181:GLN:OE1	6:3:3209:ARG:NH1	2.35	0.59
1:Au:772:DA:C2	2:Av:1342:DG:N1	2.68	0.59
1:Au:1334:DC:N4	2:Av:783:DG:O6	2.35	0.59
1:Au:1469:DT:H2''	1:Au:1470:DA:C8	2.38	0.59
1:Au:1764:DC:H5''	2:Av:83:DC:H4'	1.85	0.59
3:ap:4015:LYS:NZ	4:az:589:SER:O	2.32	0.59
7:Ap:65:ASP:N	7:Ap:65:ASP:OD1	2.33	0.59
7:Aq:2:GLU:OE1	7:Aq:2:GLU:N	2.35	0.59
1:Au:514:DT:H2''	1:Au:515:DG:O4'	2.03	0.59
1:Au:1541:DC:OP1	6:6:3321:LYS:NZ	2.35	0.59
1:Au:1729:DG:H2''	1:Au:1730:DG:H21	1.67	0.59
2:Av:178:DA:H4'	5:Z:249:LEU:HD12	1.84	0.59
4:av:77:LEU:O	4:av:81:ASN:ND2	2.35	0.59
1:Au:1002:DG:O6	2:Av:1111:DA:N6	2.36	0.59
1:Au:1302:DT:O4	2:Av:816:DA:N6	2.35	0.59
2:Av:1865:DT:H2''	2:Av:1866:DA:C8	2.37	0.59
5:j:61:LEU:HD11	6:7:40:ARG:HE	1.68	0.59
5:l:320:THR:HG21	5:l:337:ILE:HG13	1.83	0.59
4:Ad:2930:THR:HG22	4:Ad:2931:SER:H	1.68	0.59
1:Au:108:DC:N4	1:Au:109:DG:O6	2.36	0.59
2:Av:5:DG:H2'	2:Av:6:DA:C8	2.36	0.59
2:Av:612:DC:H2'	2:Av:613:DG:C8	2.37	0.59
2:Av:1040:DG:H2''	2:Av:1041:DG:C8	2.38	0.59
2:Av:1680:DC:H2''	2:Av:1681:DG:C8	2.38	0.59
5:r:3020:GLN:NE2	5:r:3024:THR:O	2.36	0.59
5:u:3096:ARG:HD2	7:As:0:MET:HE3	1.83	0.59
4:At:62:PHE:O	4:At:66:VAL:HG22	2.02	0.59
1:Au:344:DG:C2	2:Av:1773:DT:H73	2.38	0.59
1:Au:1749:DA:N6	2:Av:370:DA:N7	2.50	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Au:1802:DC:H41	2:Av:316:DA:H61	1.51	0.59
3:F:748:SER:OG	3:F:749:LYS:N	2.31	0.59
3:L:5404:ARG:NH1	4:W:2981:LYS:O	2.35	0.59
3:aj:24:GLN:HG2	3:aj:56:GLU:OE2	2.02	0.59
1:Au:1132:DG:H22	2:Av:986:DG:H1	1.50	0.59
1:Au:1257:DG:H2'	1:Au:1258:DG:C8	2.38	0.59
2:Av:1083:DT:O2	2:Av:1083:DT:H2'	2.01	0.59
2:Av:1350:DT:OP1	6:a5:738:ARG:NH2	2.33	0.59
2:Av:1573:DA:N7	6:CD:291:LYS:N	2.50	0.59
5:j:108:ASN:HA	5:j:119:ILE:HD11	1.85	0.59
5:s:2112:ASP:OD2	6:a7:2289:LYS:NZ	2.36	0.59
7:Ai:134:PRO:HB2	7:Ai:140:LYS:HE2	1.85	0.59
7:Ao:48:GLN:O	7:Ao:52:LYS:HG2	2.02	0.59
1:Au:628:DC:H41	2:Av:1484:DA:H62	1.49	0.59
1:Au:1724:DC:H2'	1:Au:1725:DT:H71	1.84	0.59
5:q:840:ALA:HB2	6:a5:757:LEU:HD12	1.84	0.59
1:Au:1086:DT:H2'	1:Au:1087:DC:C6	2.38	0.59
1:Au:1246:DC:H41	2:Av:873:DG:H22	1.51	0.59
1:Au:1734:DG:H2'	1:Au:1735:DT:H71	1.84	0.59
2:Av:291:DC:H5''	3:C:268:LYS:HA	1.85	0.59
2:Av:1250:DG:H2'	2:Av:1251:DA:C6	2.38	0.59
2:Av:1310:DC:H2''	6:2:681:ARG:HH12	1.68	0.59
5:p:695:LEU:HD21	5:p:729:GLU:HG2	1.85	0.59
6:1:642:THR:HG21	6:1:650:VAL:HG22	1.85	0.59
3:ak:245:SER:HB2	3:ak:252:LYS:HA	1.85	0.59
1:Au:467:DA:H2''	1:Au:468:DG:H5'	1.84	0.58
1:Au:1386:DC:N3	1:Au:1387:DA:N6	2.51	0.58
1:Au:1759:DA:H61	2:Av:360:DA:H62	1.51	0.58
2:Av:672:DC:H2''	2:Av:673:DG:C8	2.38	0.58
5:a:363:LYS:HD2	5:a:366:ARG:H	1.68	0.58
3:ao:1056:GLN:HG2	4:Aa:616:GLN:HE22	1.68	0.58
3:au:4425:LEU:HD13	4:Ag:3111:LEU:HB2	1.85	0.58
1:Au:1265:DC:H42	2:Av:853:DA:H61	1.49	0.58
2:Av:748:DC:H2'	2:Av:749:DT:C6	2.37	0.58
2:Av:1281:DA:H2''	2:Av:1282:DG:C2	2.38	0.58
4:V:1067:ILE:O	4:V:1071:VAL:HG23	2.03	0.58
5:i:3211:LEU:HD12	6:6:3279:LEU:HD23	1.85	0.58
1:Au:1496:DA:H2''	1:Au:1497:DC:C5	2.39	0.58
2:Av:199:DG:H2'	2:Av:200:DT:H71	1.84	0.58
2:Av:451:DA:H3'	2:Av:452:DG:H21	1.68	0.58
2:Av:1717:DT:H2'	2:Av:1718:DT:H71	1.83	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Av:2006:DG:H2''	2:Av:2007:DC:H5''	1.85	0.58
3:C:279:GLN:HE21	4:O:419:GLN:NE2	1.78	0.58
5:j:62:ILE:O	5:j:93:GLN:NE2	2.36	0.58
5:n:530:ASP:OD2	5:n:555:ARG:NH2	2.36	0.58
3:an:971:LEU:HD22	4:az:511:LEU:HD13	1.84	0.58
4:aw:168:VAL:HG23	4:aw:169:HIS:HD2	1.68	0.58
1:Au:762:DA:H2''	1:Au:763:DG:C8	2.39	0.58
1:Au:892:DC:H42	2:Av:1222:DC:N4	2.01	0.58
1:Au:1177:DG:H2''	1:Au:1178:DG:C8	2.38	0.58
2:Av:669:DC:H2''	2:Av:670:DA:H5''	1.86	0.58
4:T:2779:LYS:HA	4:T:2783:PRO:HA	1.85	0.58
5:n:481:SER:OG	5:n:483:GLU:OE1	2.18	0.58
3:ao:1144:GLN:HB2	3:ao:1147:LEU:HG	1.86	0.58
1:Au:991:DA:N6	2:Av:1121:DG:N7	2.52	0.58
1:Au:1097:DA:H2	2:Av:1021:DG:N1	1.98	0.58
2:Av:2010:DT:H2'	2:Av:2011:DT:C4	2.39	0.58
5:q:806:LEU:HD12	6:a5:697:LEU:HD23	1.85	0.58
7:Am:75:LEU:HB3	7:Ao:98:SER:HB2	1.85	0.58
7:Ao:84:THR:HG23	7:Ao:94:ARG:HH22	1.67	0.58
1:Au:1455:DC:H42	2:Av:664:DC:H42	1.52	0.58
2:Av:178:DA:H5'	5:Z:249:LEU:HB2	1.85	0.58
4:S:935:ILE:HG23	4:S:939:GLU:HB2	1.83	0.58
4:S:944:VAL:HG13	4:S:948:LEU:HD13	1.85	0.58
6:8:150:ASN:OD1	6:8:153:ARG:NH2	2.36	0.58
1:Au:289:DA:H2''	1:Au:290:DA:C2	2.39	0.58
1:Au:1132:DG:H5'	6:a7:2299:HIS:H	1.68	0.58
1:Au:1216:DA:H2''	1:Au:1217:DC:H5''	1.84	0.58
1:Au:1347:DC:N4	2:Av:770:DG:O6	2.37	0.58
1:Au:1379:DC:N4	2:Av:737:DG:N7	2.52	0.58
3:A:63:LEU:HB3	4:M:42:LEU:HD12	1.85	0.58
5:u:3096:ARG:H	5:u:3096:ARG:HD3	1.69	0.58
6:2:682:HIS:O	6:2:682:HIS:CD2	2.56	0.58
6:2:731:ARG:O	6:2:735:THR:OG1	2.17	0.58
6:CD:306:LYS:HA	6:CD:306:LYS:HE3	1.85	0.58
3:am:846:LEU:HD13	4:ay:411:LEU:HB2	1.86	0.58
1:Au:1114:DG:H2''	1:Au:1115:DT:H5''	1.86	0.58
1:Au:1884:DG:H2'	1:Au:1885:DG:H8	1.66	0.58
2:Av:1252:DT:H2''	2:Av:1253:DG:C8	2.39	0.58
3:B:189:LEU:HD22	4:N:147:LEU:HD13	1.86	0.58
3:aq:4236:LYS:HA	3:aq:4236:LYS:HE3	1.86	0.58
1:Au:1280:DC:H2''	1:Au:1281:DT:H5''	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Av:1545:DC:H2'	3:B:139:LYS:HG2	1.86	0.58
2:Av:1848:DC:H2''	2:Av:1849:DA:C8	2.39	0.58
2:Av:1959:DA:H2''	2:Av:1960:DT:H72	1.86	0.58
3:F:688:LEU:HD13	4:At:42:LEU:HB2	1.85	0.58
3:F:688:LEU:HB3	4:At:42:LEU:HD13	1.86	0.58
6:CD:298:LYS:HD2	6:CD:298:LYS:O	2.04	0.58
4:Ac:889:ALA:HA	4:Ac:892:LEU:HD12	1.86	0.58
1:Au:47:DT:H2'	1:Au:48:DG:C8	2.39	0.58
2:Av:1800:DT:H2''	2:Av:1801:DG:C8	2.39	0.58
3:C:356:THR:OG1	6:9:283:ARG:NH1	2.37	0.58
4:J:2042:ALA:HA	4:J:2045:LEU:HD12	1.86	0.58
1:Au:89:DC:OP2	6:7:35:ARG:NH2	2.37	0.57
1:Au:897:DT:H2''	1:Au:898:DC:H5	1.68	0.57
1:Au:924:DC:H2''	1:Au:925:DG:C8	2.39	0.57
1:Au:1251:DT:O4	2:Av:867:DC:N4	2.37	0.57
2:Av:243:DA:H2''	2:Av:244:DA:H8	1.69	0.57
2:Av:1749:DG:H2''	2:Av:1750:DA:N7	2.19	0.57
5:f:3158:THR:HG21	5:f:3175:ILE:HD13	1.86	0.57
5:l:286:GLU:OE1	6:9:213:ASN:ND2	2.37	0.57
3:as:1829:SER:O	3:as:1836:LYS:NZ	2.36	0.57
4:aw:217:ALA:HA	4:aw:220:LEU:HD12	1.86	0.57
4:ax:259:LYS:HB2	4:ax:271:LYS:HA	1.86	0.57
1:Au:165:DC:H5	2:Av:1952:DG:H1	1.52	0.57
1:Au:1101:DC:H2''	1:Au:1102:DG:C8	2.39	0.57
1:Au:1650:DC:H2''	1:Au:1651:DA:H8	1.69	0.57
2:Av:248:DC:OP2	7:Aj:180:ARG:NH1	2.29	0.57
2:Av:614:DC:H2''	2:Av:615:DG:H8	1.69	0.57
2:Av:1350:DT:H1'	4:S:875:ARG:HH12	1.68	0.57
2:Av:1964:DT:O2	6:0:491:GLY:N	2.37	0.57
5:i:3272:LYS:HE2	5:u:3183:HIS:HA	1.85	0.57
5:l:319:ASP:OD2	5:l:344:ARG:NH1	2.36	0.57
6:7:62:LEU:O	6:7:66:ILE:HG23	2.04	0.57
7:Ak:601:SER:HA	7:Ak:604:LYS:HE3	1.86	0.57
2:Av:432:DC:H2'	2:Av:433:DA:C8	2.40	0.57
2:Av:1404:DG:OP1	7:Ao:120:LYS:NZ	2.34	0.57
2:Av:1651:DG:H2''	2:Av:1652:DG:C8	2.39	0.57
2:Av:1909:DA:H2''	2:Av:1910:DC:H5''	1.85	0.57
2:Av:2084:DG:H2''	2:Av:2085:DC:H5''	1.86	0.57
4:N:158:SER:HA	4:N:161:MET:HE3	1.86	0.57
7:Al:277:ILE:HG13	7:Al:336:LEU:HD13	1.85	0.57
1:Au:39:DC:N3	2:Av:2078:DG:N2	2.52	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Av:1292:DC:N3	2:Av:1293:DC:N4	2.53	0.57
4:V:1075:LEU:HB2	4:V:1080:ALA:HB2	1.86	0.57
5:Z:282:ASP:OD1	6:x:221:ARG:NH1	2.37	0.57
7:Am:72:ILE:O	7:Am:76:LEU:HG	2.04	0.57
1:Au:835:DT:H2''	1:Au:836:DA:C8	2.39	0.57
1:Au:1834:DA:H2'	1:Au:1835:DG:C8	2.38	0.57
1:Au:2087:DC:N4	2:Av:31:DG:O6	2.37	0.57
2:Av:216:DA:H2''	2:Av:217:DC:C6	2.40	0.57
2:Av:1959:DA:H2'	7:Ah:363:LYS:NZ	2.19	0.57
7:Ar:188:LYS:HE3	7:Ar:188:LYS:HA	1.86	0.57
1:Au:1331:DT:O4	2:Av:786:DC:N4	2.38	0.57
2:Av:1799:DG:H2'	2:Av:1800:DT:H71	1.86	0.57
5:X:123:ASP:OD1	5:j:113:HIS:HE1	1.88	0.57
7:An:9:ALA:O	7:An:13:PRO:HD2	2.05	0.57
7:An:15:ARG:HH22	7:An:25:HIS:HB3	1.69	0.57
7:Aq:65:ASP:OD1	7:Aq:65:ASP:N	2.36	0.57
7:Aq:97:LYS:HA	7:As:37:ARG:HH22	1.68	0.57
1:Au:185:DC:O2	1:Au:185:DC:H2'	2.03	0.57
1:Au:658:DT:O4	2:Av:1454:DG:N2	2.38	0.57
1:Au:955:DG:H1	2:Av:1159:DA:H61	1.52	0.57
2:Av:78:DC:H5'	5:n:466:ARG:HD2	1.87	0.57
2:Av:829:DC:H2''	2:Av:830:DA:H8	1.69	0.57
5:a:368:ARG:NH1	3:am:904:GLU:OE1	2.37	0.57
7:Ar:45:SER:O	7:Ar:92:SER:N	2.38	0.57
1:Au:139:DA:OP1	3:aj:76:THR:OG1	2.20	0.57
2:Av:170:DG:H2'	2:Av:171:DG:C8	2.39	0.57
2:Av:373:DT:H2''	2:Av:374:DA:N7	2.20	0.57
2:Av:447:DT:H2'	2:Av:448:DT:C6	2.40	0.57
2:Av:605:DG:H22	7:As:85:LYS:HZ3	1.52	0.57
2:Av:686:DG:H2'	2:Av:687:DG:C8	2.39	0.57
2:Av:985:DG:H1'	2:Av:986:DG:C8	2.40	0.57
3:H:5223:ARG:NH1	3:H:5229:ASN:OD1	2.38	0.57
5:g:2199:ILE:O	5:g:2230:GLN:NE2	2.38	0.57
2:Av:72:DG:H2''	2:Av:73:DG:C8	2.40	0.57
2:Av:462:DA:H2'	2:Av:463:DG:N3	2.20	0.57
2:Av:608:DA:H2''	2:Av:609:DC:H5''	1.87	0.57
5:c:656:ASP:OD1	5:o:646:HIS:NE2	2.38	0.57
1:Au:617:DG:H5''	1:Au:617:DG:H8	1.70	0.57
1:Au:1109:DT:OP1	3:as:1739:ARG:NH1	2.38	0.57
6:a5:735:HIS:CD2	4:Ac:872:LEU:HD12	2.40	0.57
3:an:1010:ILE:HG23	4:az:527:ILE:HD12	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Au:401:DT:H2''	1:Au:402:DG:N7	2.19	0.56
1:Au:766:DA:H2'	1:Au:767:DG:C8	2.40	0.56
1:Au:1199:DG:H1	2:Av:920:DG:H21	1.53	0.56
1:Au:1701:DC:H2''	1:Au:1702:DG:H5''	1.86	0.56
2:Av:974:DT:H2''	2:Av:975:DG:H8	1.69	0.56
2:Av:1400:DG:H2''	2:Av:1401:DG:C8	2.39	0.56
7:Ar:97:LYS:NZ	7:Ar:81:LEU:O	2.31	0.56
1:Au:439:DC:H2'	1:Au:440:DG:H8	1.70	0.56
1:Au:876:DT:O2	1:Au:877:DG:N1	2.38	0.56
1:Au:1122:DC:H2'	1:Au:1123:DT:H71	1.87	0.56
2:Av:1725:DC:OP2	4:At:30:ARG:NH1	2.38	0.56
7:Ao:140:LYS:HE2	7:Ao:155:PRO:HG3	1.85	0.56
1:Au:132:DT:H3	2:Av:1985:DG:H22	1.53	0.56
1:Au:564:DC:H42	2:Av:1549:DC:H41	1.53	0.56
1:Au:585:DA:N6	2:Av:1528:DG:O6	2.38	0.56
1:Au:1707:DG:C6	2:Av:411:DT:O4	2.58	0.56
2:Av:1067:DG:H2''	2:Av:1068:DA:C4	2.39	0.56
2:Av:1136:DG:H2'	2:Av:1137:DG:C8	2.40	0.56
2:Av:1284:DG:H2''	2:Av:1285:DA:C8	2.41	0.56
2:Av:1533:DC:H2''	2:Av:1534:DG:C8	2.40	0.56
3:G:755:SER:O	3:G:757:ARG:NH2	2.39	0.56
4:O:418:LYS:NZ	4:O:424:THR:O	2.36	0.56
5:a:410:PHE:HA	6:y:384:THR:HG23	1.86	0.56
7:Ar:149:PRO:HD2	7:Ar:159:LYS:HE2	1.86	0.56
2:Av:128:DG:H5''	2:Av:128:DG:C8	2.41	0.56
2:Av:1168:DA:H2''	2:Av:1169:DG:H5''	1.86	0.56
2:Av:1420:DG:H2'	2:Av:1421:DG:N3	2.20	0.56
3:G:763:LYS:HG3	3:G:764:THR:H	1.70	0.56
3:ap:4104:GLN:OE1	4:Ab:749:LYS:NZ	2.38	0.56
7:An:14:LYS:HB3	7:An:59:LYS:HB3	1.86	0.56
7:Ar:175:LYS:O	7:Ar:178:ALA:N	2.39	0.56
1:Au:21:DG:H2'	1:Au:22:DA:C8	2.40	0.56
1:Au:47:DT:H2'	1:Au:48:DG:H8	1.71	0.56
1:Au:245:DC:H2''	1:Au:246:DC:H5''	1.87	0.56
1:Au:983:DG:H1	2:Av:1130:DA:H61	1.54	0.56
2:Av:1261:DG:H2'	2:Av:1262:DT:H71	1.88	0.56
2:Av:1461:DG:H2''	2:Av:1462:DA:C8	2.41	0.56
2:Av:1808:DG:H2'	2:Av:1809:DA:N3	2.20	0.56
3:G:867:SER:HB2	3:G:876:SER:HB3	1.87	0.56
4:R:316:ILE:HG23	4:R:320:GLU:HB2	1.87	0.56
5:d:692:LEU:HD23	6:l:606:LEU:HA	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:w:103:MET:N	6:w:103:MET:SD	2.78	0.56
6:2:698:ILE:HD12	6:2:715:TYR:HD1	1.70	0.56
4:ay:463:ALA:HA	4:ay:466:LEU:HD23	1.87	0.56
7:As:0:MET:SD	7:As:0:MET:N	2.60	0.56
1:Au:207:DT:H2''	1:Au:208:DG:C8	2.40	0.56
1:Au:419:DG:OP1	6:0:502:LYS:NZ	2.29	0.56
1:Au:1046:DG:C4	1:Au:1047:DT:H72	2.40	0.56
1:Au:1254:DC:H2''	1:Au:1255:DC:C2	2.41	0.56
1:Au:1366:DT:OP2	4:T:2819:ARG:NH2	2.39	0.56
1:Au:1383:DT:O4	2:Av:734:DC:N4	2.35	0.56
1:Au:1659:DC:H2''	1:Au:1660:DA:C8	2.40	0.56
1:Au:1826:DA:H2''	1:Au:1827:DC:C2	2.41	0.56
1:Au:1827:DC:H1'	1:Au:1828:DA:C8	2.41	0.56
2:Av:1405:DC:P	7:Ao:128:ARG:HH22	2.28	0.56
2:Av:1636:DG:H2''	2:Av:1637:DG:C8	2.40	0.56
3:at:4361:LYS:HE2	3:at:4364:GLU:HG2	1.88	0.56
4:Ab:790:VAL:HG13	4:Ab:794:LEU:HD12	1.88	0.56
1:Au:1114:DG:C6	2:Av:1004:DA:N1	2.74	0.56
1:Au:1151:DC:H2''	1:Au:1152:DT:H5''	1.88	0.56
1:Au:1669:DA:H2'	1:Au:1670:DC:C4	2.39	0.56
1:Au:2018:DC:H2'	1:Au:2019:DT:H71	1.88	0.56
2:Av:396:DA:H2''	2:Av:397:DG:H5''	1.87	0.56
2:Av:1657:DT:H2'	2:Av:1658:DA:C5	2.41	0.56
2:Av:1748:DG:H2''	2:Av:1749:DG:C8	2.41	0.56
3:F:647:GLY:O	4:av:117:LYS:NZ	2.37	0.56
5:i:3270:MET:HG3	5:i:3272:LYS:H	1.70	0.56
6:z:434:ILE:HB	6:z:438:ILE:HD11	1.86	0.56
7:Ai:150:LYS:O	7:Ai:153:LYS:NZ	2.38	0.56
1:Au:418:DA:H2''	1:Au:419:DG:C5	2.41	0.56
1:Au:446:DT:O4	2:Av:1668:DG:C6	2.58	0.56
1:Au:681:DA:H2''	1:Au:682:DT:C2	2.41	0.56
1:Au:1919:DT:H2''	1:Au:1920:DA:C8	2.41	0.56
2:Av:361:DA:H5'	6:a2:409:ARG:HH21	1.71	0.56
2:Av:705:DC:H2''	2:Av:706:DG:C8	2.40	0.56
2:Av:740:DC:H2''	2:Av:741:DC:H5''	1.88	0.56
2:Av:809:DG:H5''	2:Av:810:DT:H72	1.88	0.56
2:Av:814:DA:H2''	2:Av:815:DG:C8	2.40	0.56
3:am:894:ILE:HD11	3:am:899:LEU:HD21	1.87	0.56
4:ax:268:ASP:N	4:ax:268:ASP:OD1	2.38	0.56
1:Au:95:DC:H2''	1:Au:96:DC:C5	2.40	0.56
1:Au:300:DT:H2''	1:Au:301:DC:C5	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Au:611:DA:H62	2:Av:1502:DA:H62	1.52	0.56
1:Au:1511:DC:O2	1:Au:1511:DC:H2'	2.05	0.56
1:Au:2001:DA:H2'	1:Au:2002:DG:N2	2.21	0.56
2:Av:1759:DC:H2''	2:Av:1760:DT:C2	2.41	0.56
2:Av:1989:DA:H2''	2:Av:1990:DG:C8	2.41	0.56
3:G:778:GLN:NE2	4:R:274:GLN:OE1	2.38	0.56
5:Y:224:HIS:HE1	5:k:225:LEU:HD22	1.70	0.56
7:Am:96:ALA:HB1	7:Am:100:LYS:HD3	1.88	0.56
7:An:72:ILE:O	7:An:76:LEU:HG	2.06	0.56
1:Au:706:DC:N3	1:Au:707:DC:N4	2.53	0.56
1:Au:1772:DA:H2''	1:Au:1773:DG:H5''	1.87	0.56
1:Au:2000:DT:H2''	1:Au:2001:DA:H8	1.71	0.56
2:Av:711:DT:H2''	2:Av:712:DG:C4	2.41	0.56
2:Av:1549:DC:H2'	2:Av:1550:DT:H71	1.88	0.56
2:Av:1678:DT:O4	7:Am:85:LYS:NZ	2.31	0.56
3:G:865:ILE:HD12	3:G:870:LEU:HD11	1.87	0.56
5:t:1205:LYS:HE2	5:t:1213:VAL:HG21	1.88	0.56
6:v:98:TYR:OH	4:av:65:ASP:OD2	2.23	0.56
6:0:553:THR:HG22	4:At:93:THR:HG23	1.87	0.56
7:Ai:159:LYS:HB2	7:Ai:163:ARG:HG2	1.88	0.56
1:Au:1004:DT:C6	1:Au:1005:DT:H72	2.41	0.55
1:Au:1641:DG:H2''	1:Au:1642:DG:C4	2.41	0.55
1:Au:1657:DA:H1'	1:Au:1658:DG:C8	2.41	0.55
1:Au:2112:DC:H2''	1:Au:2113:DA:C4	2.41	0.55
2:Av:138:DC:H2''	2:Av:139:DA:H5''	1.87	0.55
2:Av:289:DG:H5'	3:C:266:ARG:HH12	1.70	0.55
2:Av:799:DC:OP2	5:r:3007:ARG:NH2	2.38	0.55
2:Av:1023:DC:H5'	3:as:1784:ARG:HD3	1.87	0.55
2:Av:1286:DG:H2''	2:Av:1287:DT:H5''	1.88	0.55
2:Av:1393:DG:H2''	2:Av:1394:DG:C8	2.40	0.55
2:Av:1714:DC:H2''	2:Av:1715:DA:H8	1.71	0.55
5:X:90:MET:HE2	5:X:90:MET:HA	1.88	0.55
3:Ae:2984:PRO:O	3:Ae:2986:GLY:N	2.37	0.55
7:Al:249:PRO:HA	7:Al:252:ALA:HB3	1.88	0.55
1:Au:197:DA:H2'	1:Au:198:DG:C8	2.41	0.55
1:Au:735:DC:H2''	1:Au:736:DG:C8	2.42	0.55
1:Au:1682:DC:H2''	1:Au:1683:DT:H5''	1.87	0.55
1:Au:2019:DT:OP1	6:a2:394:LYS:NZ	2.31	0.55
2:Av:613:DG:OP2	6:a9:3317:ARG:NH1	2.39	0.55
2:Av:996:DT:H2''	2:Av:997:DG:C8	2.41	0.55
2:Av:1435:DT:H2''	2:Av:1436:DA:N7	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Av:1631:DG:H8	4:Aa:600:LYS:HZ1	1.54	0.55
2:Av:2102:DG:H2''	2:Av:2103:DG:N7	2.21	0.55
5:g:2198:LEU:HD12	6:4:2331:LEU:HD23	1.88	0.55
5:j:118:THR:HG22	6:7:45:ARG:HB2	1.89	0.55
5:s:2159:ARG:NH1	5:s:2164:GLU:OE1	2.38	0.55
6:CD:353:ARG:O	6:CD:357:THR:OG1	2.19	0.55
6:a5:742:THR:HG23	6:a5:744:MET:H	1.71	0.55
1:Au:344:DG:H2''	1:Au:345:DT:H5''	1.89	0.55
1:Au:949:DA:H2'	1:Au:950:DG:N1	2.22	0.55
1:Au:1333:DC:H2''	1:Au:1334:DC:C2	2.42	0.55
1:Au:1563:DC:H2''	1:Au:1564:DA:C8	2.42	0.55
1:Au:1858:DG:H22	2:Av:261:DG:H1	1.55	0.55
2:Av:290:DT:H5''	2:Av:290:DT:H6	1.72	0.55
2:Av:1282:DG:N3	2:Av:1282:DG:H5''	2.21	0.55
2:Av:1574:DT:C6	2:Av:1574:DT:H5''	2.42	0.55
2:Av:2074:DA:H2'	2:Av:2075:DG:N3	2.20	0.55
5:r:2987:PRO:O	5:r:2991:ALA:N	2.34	0.55
7:Ak:515:MET:HE3	7:Ak:579:LEU:HD11	1.88	0.55
3:D:399:ALA:HB2	4:P:598:TYR:HB2	1.88	0.55
5:b:506:LYS:HD3	5:b:509:LEU:HD21	1.89	0.55
5:u:3131:LEU:HD12	6:a9:3318:ARG:HB3	1.89	0.55
1:Au:1022:DG:O6	2:Av:1091:DG:N1	2.40	0.55
1:Au:1491:DA:H2	2:Av:629:DG:H1	1.54	0.55
2:Av:683:DA:H2''	2:Av:684:DG:N7	2.22	0.55
2:Av:742:DT:H2''	2:Av:743:DG:N7	2.21	0.55
2:Av:1725:DC:H2'	2:Av:1726:DC:C5	2.42	0.55
3:E:599:GLU:OE2	4:Q:705:GLU:N	2.39	0.55
3:I:2540:ILE:HB	4:T:2787:ILE:HD12	1.87	0.55
3:K:5332:ALA:O	3:K:5336:ASN:ND2	2.39	0.55
4:P:573:THR:HG23	6:y:375:THR:HG22	1.89	0.55
4:S:968:THR:HG22	4:S:969:SER:H	1.72	0.55
5:Y:136:ALA:HA	5:Y:140:ALA:HB3	1.87	0.55
4:Aa:665:THR:O	4:Aa:669:LEU:HB2	2.06	0.55
7:Ak:600:THR:HG22	7:Ak:604:LYS:HE2	1.87	0.55
1:Au:417:DT:H2'	1:Au:418:DA:C8	2.41	0.55
1:Au:1666:DT:H5''	6:1:648:LYS:HB2	1.89	0.55
3:I:2578:LEU:HG	5:r:2992:LEU:HD11	1.88	0.55
6:x:210:LYS:O	6:x:281:LYS:NZ	2.36	0.55
7:Aj:143:PRO:C	7:Aj:146:PRO:HD2	2.32	0.55
7:Al:316:LEU:HD22	7:Al:321:VAL:HG11	1.88	0.55
1:Au:717:DG:H2''	1:Au:718:DG:C8	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Au:899:DC:H42	2:Av:1213:DC:H42	1.53	0.55
2:Av:238:DG:OP1	6:9:196:LYS:NZ	2.39	0.55
2:Av:1310:DC:H2'	2:Av:1311:DG:C8	2.42	0.55
2:Av:1386:DT:H2''	2:Av:1387:DC:O2	2.05	0.55
2:Av:1631:DG:OP2	4:Aa:600:LYS:NZ	2.37	0.55
3:G:834:PRO:HA	3:G:837:LEU:HD12	1.89	0.55
3:L:5521:SER:H	7:As:66:LEU:HD22	1.70	0.55
5:Z:296:ALA:O	6:x:297:ARG:NH2	2.39	0.55
5:m:357:VAL:HA	5:m:360:ARG:HG3	1.88	0.55
5:r:2987:PRO:HA	5:r:2990:VAL:HB	1.87	0.55
3:ar:2710:SER:O	3:ar:2712:LEU:HD12	2.05	0.55
7:Ar:99:ASP:HB2	7:Ar:187:LYS:HE3	1.87	0.55
1:Au:204:DC:H6	2:Av:1913:DG:H22	1.54	0.55
1:Au:534:DG:H22	2:Av:1581:DG:N2	2.04	0.55
1:Au:1827:DC:H1'	1:Au:1828:DA:N7	2.21	0.55
2:Av:571:DC:H2'	2:Av:572:DT:H71	1.89	0.55
3:ar:2682:LEU:HA	3:ar:2705:LEU:HD11	1.89	0.55
3:at:4322:ILE:HG22	3:at:4324:ARG:H	1.70	0.55
1:Au:126:DC:H2'	1:Au:127:DT:H71	1.89	0.55
1:Au:199:DA:H2'	1:Au:199:DA:N3	2.22	0.55
1:Au:591:DC:H2''	1:Au:592:DT:H5''	1.89	0.55
3:F:652:VAL:HG13	3:F:673:PRO:HB2	1.89	0.55
4:W:2953:ALA:HA	4:W:2956:LEU:HD12	1.87	0.55
3:ao:1086:VAL:HG21	4:Aa:667:VAL:HG21	1.89	0.55
3:aq:4196:ILE:HG22	3:aq:4198:ARG:H	1.72	0.55
7:Ai:64:ALA:HA	7:Ai:67:GLN:HB2	1.88	0.55
7:Aq:0:MET:HG3	7:Aq:5:VAL:HG11	1.89	0.55
1:Au:299:DC:H2'	1:Au:300:DT:C6	2.41	0.55
1:Au:582:DC:N4	2:Av:1531:DT:O4	2.40	0.55
1:Au:1187:DC:H42	2:Av:931:DA:H61	1.55	0.55
1:Au:1915:DC:N4	2:Av:203:DC:H42	2.05	0.55
1:Au:2034:DC:H2''	1:Au:2035:DG:C8	2.42	0.55
2:Av:1265:DC:H2''	2:Av:1266:DA:C8	2.42	0.55
2:Av:1986:DA:H2'	2:Av:1986:DA:N3	2.22	0.55
5:o:657:ILE:HG21	6:a3:526:GLU:HG2	1.89	0.55
5:q:863:THR:OG1	6:a5:705:ARG:NH1	2.40	0.55
1:Au:897:DT:H2''	1:Au:898:DC:C5	2.42	0.54
1:Au:1557:DG:H1	2:Av:562:DG:N2	2.05	0.54
2:Av:121:DC:H6	2:Av:122:DA:H62	1.55	0.54
2:Av:480:DG:H2'	2:Av:481:DA:C8	2.41	0.54
2:Av:673:DG:H2''	2:Av:674:DG:N7	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Av:1621:DC:H5'	3:ao:1109:ARG:HD2	1.89	0.54
2:Av:1807:DA:H2'	2:Av:1808:DG:C8	2.42	0.54
2:Av:2036:DT:H2'	2:Av:2037:DG:C2	2.42	0.54
5:Z:263:ILE:HD11	5:Z:294:GLN:HG3	1.88	0.54
6:x:248:ILE:HB	6:x:252:ILE:HD11	1.88	0.54
7:Ai:47:ARG:O	7:Ai:51:GLN:HG2	2.07	0.54
7:Am:12:LYS:H	7:Am:12:LYS:HD2	1.73	0.54
7:Am:28:TYR:HA	7:Am:31:MET:SD	2.47	0.54
7:Aq:1:THR:O	7:Aq:5:VAL:HG13	2.07	0.54
7:Aq:140:LYS:HD2	7:Aq:143:LYS:HB2	1.87	0.54
1:Au:147:DC:H2''	1:Au:148:DA:C8	2.42	0.54
1:Au:192:DC:H2''	1:Au:193:DC:C2	2.42	0.54
1:Au:844:DG:H22	2:Av:1270:DG:N2	2.05	0.54
1:Au:2062:DG:H2''	1:Au:2063:DG:C8	2.41	0.54
2:Av:1420:DG:H3'	2:Av:1421:DG:H21	1.73	0.54
2:Av:1782:DA:H2'	2:Av:1783:DT:H71	1.89	0.54
3:C:323:ASN:OD1	3:C:326:ARG:NH1	2.41	0.54
3:E:562:LEU:HD22	4:Q:666:VAL:HG13	1.88	0.54
5:i:3212:ILE:O	5:i:3243:GLN:NE2	2.41	0.54
5:u:3176:ASP:OD2	5:u:3201:ARG:NH2	2.38	0.54
3:al:737:ASN:OD1	3:al:740:ARG:NH2	2.41	0.54
4:Aa:680:VAL:O	4:Aa:684:THR:HG23	2.07	0.54
7:An:33:ALA:HB1	7:An:37:ARG:NH2	2.22	0.54
7:Aq:61:GLY:HA2	7:Aq:64:ALA:HB3	1.89	0.54
1:Au:134:DC:H2''	1:Au:135:DA:H5''	1.89	0.54
1:Au:169:DG:H2''	2:Av:1949:DC:H1'	1.89	0.54
1:Au:278:DT:H2'	1:Au:279:DT:C5	2.43	0.54
1:Au:1000:DG:H2''	1:Au:1001:DG:C8	2.42	0.54
1:Au:1081:DG:H2''	1:Au:1082:DA:H8	1.72	0.54
1:Au:1887:DG:H2'	1:Au:1888:DA:C5	2.42	0.54
2:Av:108:DA:H3'	3:an:950:ARG:HH12	1.73	0.54
2:Av:298:DC:H2''	2:Av:299:DA:C8	2.42	0.54
2:Av:328:DC:H2''	2:Av:329:DA:C8	2.43	0.54
2:Av:1205:DG:OP1	3:at:4317:LYS:NZ	2.37	0.54
2:Av:1273:DT:H2''	2:Av:1274:DG:N7	2.22	0.54
2:Av:1460:DG:H2''	2:Av:1461:DG:C8	2.42	0.54
3:H:5263:SER:HB3	7:Ao:66:LEU:HB3	1.88	0.54
4:S:914:ASP:OD2	4:S:918:ARG:NH2	2.41	0.54
4:V:1037:SER:OG	6:a8:1557:GLY:O	2.23	0.54
5:X:116:ARG:NH2	5:X:123:ASP:OD1	2.28	0.54
5:o:569:LYS:HE2	5:o:569:LYS:HA	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:a2:445:LYS:NZ	6:a2:449:GLU:OE2	2.39	0.54
1:Au:771:DT:H2''	1:Au:772:DA:H5'	1.88	0.54
1:Au:1450:DG:H2''	1:Au:1451:DA:H8	1.72	0.54
1:Au:1738:DC:H2''	1:Au:1739:DA:C8	2.43	0.54
1:Au:1985:DC:H41	2:Av:132:DC:N4	2.06	0.54
2:Av:1184:DA:H2'	2:Av:1185:DA:C8	2.43	0.54
2:Av:1488:DG:H2''	2:Av:1489:DG:C8	2.43	0.54
2:Av:2044:DA:H2''	2:Av:2045:DG:N7	2.22	0.54
2:Av:2077:DG:H2''	2:Av:2078:DG:C8	2.43	0.54
5:g:2195:THR:OG1	3:as:1811:GLN:O	2.25	0.54
1:Au:198:DG:N2	2:Av:1919:DT:O2	2.40	0.54
1:Au:302:DC:H1'	1:Au:303:DC:C2	2.43	0.54
1:Au:438:DA:N6	2:Av:1676:DC:H41	2.05	0.54
1:Au:482:DA:H61	2:Av:1633:DC:N4	2.06	0.54
1:Au:882:DA:N6	2:Av:1231:DG:O6	2.40	0.54
1:Au:1288:DG:H2'	1:Au:1289:DT:C6	2.42	0.54
2:Av:2071:DT:H2''	2:Av:2072:DT:O5'	2.08	0.54
4:U:1889:ILE:HD12	3:Ae:3036:ILE:HB	1.89	0.54
1:Au:125:DC:H2''	1:Au:126:DC:C5	2.43	0.54
1:Au:273:DC:N3	2:Av:1844:DG:N2	2.55	0.54
1:Au:281:DT:H2''	1:Au:282:DA:C8	2.42	0.54
1:Au:455:DT:H2'	1:Au:456:DT:C5	2.42	0.54
1:Au:643:DA:H61	2:Av:1470:DC:H41	1.53	0.54
1:Au:949:DA:H2'	1:Au:950:DG:C6	2.42	0.54
1:Au:1076:DC:H2''	1:Au:1077:DC:C5	2.43	0.54
1:Au:1367:DA:N6	2:Av:750:DA:C2	2.76	0.54
1:Au:1929:DC:H2''	1:Au:1930:DT:C6	2.42	0.54
2:Av:172:DT:H4'	2:Av:173:DC:OP1	2.07	0.54
2:Av:1023:DC:H2''	2:Av:1024:DA:C8	2.43	0.54
2:Av:1285:DA:H2'	2:Av:1286:DG:C8	2.42	0.54
2:Av:1541:DT:H2''	2:Av:1542:DG:C8	2.43	0.54
2:Av:1762:DG:H2'	2:Av:1763:DG:C2	2.42	0.54
7:Am:46:SER:OG	7:Am:49:SER:OG	2.24	0.54
1:Au:113:DA:H2'	1:Au:114:DG:C8	2.43	0.54
1:Au:212:DA:OP2	3:D:395:ARG:NE	2.41	0.54
1:Au:873:DC:H41	2:Av:1240:DA:N6	2.06	0.54
2:Av:970:DT:H2''	2:Av:971:DA:C8	2.43	0.54
2:Av:2009:DG:H2'	2:Av:2010:DT:C6	2.43	0.54
3:C:371:LEU:HA	5:l:261:LEU:HD21	1.89	0.54
5:X:61:LEU:HD22	6:v:36:ARG:HB3	1.90	0.54
5:Y:151:ARG:HH22	3:ak:252:LYS:HZ1	1.56	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:j:62:ILE:HD12	6:7:29:ILE:HD12	1.89	0.54
5:k:219:MET:HG3	5:k:220:PRO:HD2	1.89	0.54
1:Au:502:DA:H62	2:Av:1613:DA:N6	2.06	0.54
2:Av:329:DA:H2''	2:Av:330:DG:N7	2.23	0.54
2:Av:1416:DC:H5'	7:Ar:12:LYS:HB2	1.90	0.54
2:Av:1485:DC:H4'	5:k:164:LEU:HD22	1.89	0.54
2:Av:1541:DT:H2''	2:Av:1542:DG:N7	2.23	0.54
3:F:736:ILE:HD11	3:F:741:LEU:HD13	1.90	0.54
5:j:47:ALA:O	5:j:51:ILE:HG12	2.08	0.54
5:l:293:THR:HG22	5:l:294:ASP:H	1.73	0.54
1:Au:961:DA:H5''	2:Av:1426:DG:H2''	1.88	0.54
1:Au:1253:DC:H2''	1:Au:1254:DC:C2	2.43	0.54
1:Au:1855:DC:H42	2:Av:264:DC:H41	1.54	0.54
2:Av:89:DT:H2''	2:Av:90:DG:H8	1.73	0.54
2:Av:194:DT:H2'	2:Av:195:DA:N3	2.22	0.54
2:Av:1637:DG:H2''	2:Av:1638:DG:C8	2.42	0.54
3:D:479:THR:HG21	6:CD:381:ARG:HH21	1.73	0.54
4:J:1992:GLN:HB3	4:S:962:LYS:HG2	1.90	0.54
4:Q:698:VAL:HG13	4:Q:702:LEU:HD12	1.89	0.54
5:Z:263:ILE:HG22	6:x:235:ALA:HB1	1.89	0.54
5:j:124:ILE:HG21	6:7:53:GLU:HG2	1.89	0.54
5:s:2114:ARG:HB3	6:a7:2361:THR:HB	1.90	0.54
7:Am:71:SER:O	7:Am:75:LEU:HG	2.07	0.54
1:Au:1631:DC:H41	2:Av:489:DC:H42	1.56	0.53
2:Av:430:DG:H2'	2:Av:431:DA:N3	2.23	0.53
2:Av:946:DG:H2''	2:Av:947:DG:C8	2.43	0.53
2:Av:1517:DG:C4	2:Av:1518:DT:H71	2.43	0.53
2:Av:1810:DC:H2''	2:Av:1811:DT:O2	2.08	0.53
3:E:570:LEU:HD22	4:Q:645:LEU:HD13	1.90	0.53
5:t:1259:ASP:OD1	6:a8:1473:ARG:NH2	2.41	0.53
3:ar:2661:GLU:O	3:ar:2665:ASN:ND2	2.39	0.53
7:Al:251:PRO:O	7:Al:255:LYS:NZ	2.41	0.53
7:Al:285:GLY:HA3	7:Al:334:PHE:H	1.73	0.53
7:An:113:ARG:HD3	7:An:114:ARG:N	2.22	0.53
1:Au:62:DC:H2'	1:Au:63:DT:H71	1.90	0.53
1:Au:71:DC:H2'	1:Au:72:DT:H71	1.88	0.53
1:Au:1174:DA:N1	2:Av:944:DG:C6	2.76	0.53
1:Au:1397:DC:H2''	1:Au:1398:DC:O2	2.08	0.53
2:Av:193:DA:C4	2:Av:194:DT:H71	2.43	0.53
2:Av:443:DT:H2''	2:Av:444:DG:C8	2.44	0.53
2:Av:1044:DC:H3'	7:Aq:60:VAL:HB	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:h:1393:THR:HG23	6:5:1450:ARG:HG2	1.90	0.53
5:m:375:LYS:HG3	5:m:401:MET:HE1	1.91	0.53
3:am:911:SER:OG	3:am:912:LYS:N	2.38	0.53
4:At:119:THR:HA	4:At:122:LYS:NZ	2.22	0.53
1:Au:643:DA:H61	2:Av:1470:DC:N4	2.07	0.53
1:Au:1615:DA:H61	2:Av:505:DC:H42	1.55	0.53
2:Av:286:DG:H5''	2:Av:286:DG:H8	1.74	0.53
2:Av:930:DG:H2''	2:Av:931:DA:H5''	1.89	0.53
5:n:527:LEU:O	5:n:531:THR:OG1	2.24	0.53
3:al:732:LEU:HB3	4:ax:288:LEU:HD12	1.90	0.53
7:Ai:119:LYS:HG2	7:Ai:130:PRO:HG2	1.90	0.53
1:Au:212:DA:OP1	3:D:395:ARG:N	2.41	0.53
1:Au:648:DG:H2''	1:Au:649:DA:H5''	1.91	0.53
1:Au:1245:DT:C2	1:Au:1245:DT:H5'	2.43	0.53
2:Av:129:DC:H2''	2:Av:130:DG:H8	1.74	0.53
2:Av:1253:DG:H4'	2:Av:1254:DT:OP1	2.07	0.53
2:Av:1694:DG:C8	2:Av:1695:DT:H72	2.44	0.53
2:Av:2072:DT:H2'	2:Av:2073:DG:N2	2.24	0.53
3:C:277:GLY:O	4:W:2976:LYS:NZ	2.33	0.53
3:G:876:SER:O	3:G:883:LYS:NZ	2.36	0.53
3:L:5457:GLU:OE2	4:O:480:LYS:HD2	2.07	0.53
4:W:2937:ALA:HB2	4:W:2945:ILE:HD11	1.90	0.53
5:b:474:ALA:HA	6:z:427:ARG:NH2	2.22	0.53
3:am:846:LEU:HD11	4:ay:407:VAL:HG13	1.89	0.53
3:ap:4127:LYS:HD2	7:An:66:LEU:HD21	1.89	0.53
7:Aq:36:ILE:HG21	7:Aq:95:LEU:H	1.72	0.53
7:Ar:122:ALA:HB2	7:Ar:136:ALA:HB2	1.89	0.53
7:As:16:VAL:HB	7:As:57:HIS:CE1	2.44	0.53
1:Au:141:DG:O6	2:Av:1974:DA:N7	2.41	0.53
1:Au:1509:DC:H2''	1:Au:1510:DC:O4'	2.09	0.53
2:Av:264:DC:H2''	2:Av:265:DG:H8	1.73	0.53
2:Av:437:DC:H2''	2:Av:438:DG:N7	2.23	0.53
2:Av:914:DG:H4'	2:Av:915:DT:OP1	2.08	0.53
2:Av:918:DC:H2''	2:Av:919:DT:C6	2.44	0.53
2:Av:1728:DC:H2'	2:Av:1729:DG:C8	2.44	0.53
2:Av:1932:DG:N3	2:Av:1932:DG:H2'	2.23	0.53
2:Av:1995:DT:H2''	2:Av:1996:DA:C8	2.43	0.53
5:j:74:ILE:HD12	6:7:62:LEU:HD23	1.91	0.53
6:a2:412:ILE:HD12	6:a2:415:ILE:HD13	1.91	0.53
1:Au:9:DG:N7	2:Av:2108:DG:N2	2.57	0.53
1:Au:573:DT:OP2	3:B:168:ARG:NE	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Au:1164:DT:H2'	1:Au:1165:DT:H71	1.90	0.53
1:Au:1174:DA:H2	2:Av:944:DG:C2	2.26	0.53
1:Au:1233:DC:H2''	1:Au:1234:DG:C8	2.43	0.53
1:Au:1334:DC:N3	1:Au:1335:DC:N4	2.57	0.53
1:Au:1552:DG:N2	2:Av:567:DG:H22	2.06	0.53
1:Au:1923:DT:H2'	1:Au:1924:DA:C5	2.43	0.53
2:Av:198:DT:H2'	2:Av:199:DG:C8	2.44	0.53
2:Av:740:DC:OP2	3:I:2475:LYS:NZ	2.34	0.53
2:Av:1543:DA:H5''	3:B:137:ARG:NH1	2.23	0.53
2:Av:1830:DC:H2''	2:Av:1831:DG:C8	2.44	0.53
5:i:3196:VAL:HG23	5:i:3199:ARG:HE	1.74	0.53
3:as:1787:PRO:HA	3:as:1790:LEU:HD13	1.89	0.53
1:Au:381:DC:H2''	1:Au:382:DG:N7	2.23	0.53
1:Au:969:DA:H2''	1:Au:970:DC:H5''	1.89	0.53
1:Au:1016:DC:H2'	1:Au:1017:DT:C6	2.44	0.53
1:Au:1682:DC:H41	2:Av:437:DC:H42	1.56	0.53
1:Au:2092:DC:OP2	4:Q:615:LYS:NZ	2.39	0.53
2:Av:347:DG:N7	7:An:14:LYS:NZ	2.57	0.53
2:Av:428:DG:H2''	2:Av:429:DG:C8	2.43	0.53
2:Av:642:DT:H2''	2:Av:643:DG:C8	2.43	0.53
2:Av:782:DG:H2''	2:Av:783:DG:C8	2.44	0.53
2:Av:1076:DG:OP1	6:a6:3215:ARG:NH2	2.41	0.53
2:Av:1249:DG:H4'	2:Av:1250:DG:O5'	2.09	0.53
2:Av:1264:DA:H2''	2:Av:1265:DC:C5	2.44	0.53
2:Av:1344:DT:H2''	2:Av:1345:DA:C8	2.44	0.53
2:Av:1920:DC:H5''	3:D:453:LYS:HZ1	1.74	0.53
2:Av:2074:DA:H2''	2:Av:2075:DG:O5'	2.09	0.53
3:B:176:TYR:OH	4:N:213:VAL:HA	2.08	0.53
5:c:595:ILE:HD12	6:O:511:ILE:HD12	1.90	0.53
1:Au:1017:DT:H2'	1:Au:1018:DC:C6	2.44	0.53
1:Au:1043:DC:N4	2:Av:1071:DA:H61	2.07	0.53
1:Au:1172:DC:O2	2:Av:947:DG:N2	2.42	0.53
1:Au:1481:DG:H22	2:Av:638:DG:H22	1.57	0.53
1:Au:1502:DG:H22	2:Av:617:DA:H2	1.57	0.53
1:Au:1552:DG:H22	2:Av:567:DG:H22	1.57	0.53
1:Au:1684:DG:H2'	1:Au:1685:DT:H71	1.91	0.53
2:Av:1960:DT:H2''	2:Av:1961:DG:C8	2.43	0.53
5:k:182:ARG:HB2	6:8:166:THR:HG22	1.91	0.53
7:Ar:100:LYS:O	7:Ar:103:ARG:NE	2.42	0.53
1:Au:503:DT:H2''	1:Au:504:DA:O4'	2.08	0.53
1:Au:1222:DT:H2''	1:Au:1223:DG:C8	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Av:441:DC:H2'	2:Av:442:DG:C8	2.43	0.53
2:Av:1087:DA:H2''	2:Av:1088:DC:O5'	2.09	0.53
2:Av:1230:DC:H2''	2:Av:1231:DG:C8	2.43	0.53
5:u:3096:ARG:HD3	5:u:3096:ARG:N	2.24	0.53
6:6:3300:LEU:O	6:6:3304:LEU:HG	2.09	0.53
6:7:68:ASP:HB3	6:7:89:ALA:HB1	1.91	0.53
6:8:132:ILE:HG21	6:8:136:ILE:HG21	1.90	0.53
6:a7:2303:LEU:HG	6:a7:2306:ASN:HD21	1.74	0.53
3:at:4248:LYS:N	3:at:4248:LYS:HD3	2.23	0.53
7:Al:309:ILE:O	7:Al:313:ILE:HG12	2.09	0.53
1:Au:756:DG:N2	2:Av:1359:DC:O2	2.40	0.53
1:Au:1139:DC:H2'	1:Au:1140:DG:C8	2.44	0.53
1:Au:1531:DG:H21	2:Av:589:DG:N2	2.07	0.53
2:Av:37:DA:H2'	2:Av:38:DG:C8	2.44	0.53
2:Av:211:DT:H2''	2:Av:212:DG:H8	1.74	0.53
2:Av:384:DT:H2''	2:Av:385:DG:C8	2.43	0.53
2:Av:881:DC:H2''	2:Av:882:DC:H5'	1.90	0.53
2:Av:1679:DA:OP1	7:Am:69:LYS:NZ	2.40	0.53
3:K:5295:ARG:NH2	4:V:1008:GLU:OE2	2.42	0.53
3:am:859:THR:HG23	3:am:860:ARG:HD2	1.91	0.53
7:Ah:383:ILE:O	7:Ah:387:ILE:HG12	2.09	0.53
7:Am:160:ALA:C	7:Am:167:LYS:HB2	2.34	0.53
7:Ar:8:PRO:HA	7:Ar:11:ALA:HB3	1.91	0.53
1:Au:790:DG:H4'	5:q:865:MET:HE1	1.90	0.52
1:Au:1569:DT:H2''	1:Au:1570:DA:C8	2.45	0.52
1:Au:1676:DT:H2''	1:Au:1677:DA:N7	2.24	0.52
2:Av:912:DA:H2''	2:Av:913:DC:H5''	1.90	0.52
5:Y:211:LEU:HD11	6:w:161:LEU:HD12	1.91	0.52
4:ax:284:VAL:HG11	4:ax:305:MET:HG2	1.90	0.52
7:Ap:64:ALA:HA	7:Ap:67:GLN:HG2	1.92	0.52
1:Au:480:DC:C6	1:Au:481:DT:H72	2.44	0.52
1:Au:736:DG:O6	2:Av:1378:DA:N1	2.43	0.52
1:Au:768:DC:H2'	1:Au:769:DT:C6	2.44	0.52
1:Au:1878:DC:N4	2:Av:240:DT:O4	2.41	0.52
2:Av:71:DC:H5'	7:Al:328:VAL:HA	1.90	0.52
2:Av:1223:DG:H5'	7:Ar:175:LYS:HE3	1.90	0.52
4:O:470:VAL:HG13	4:O:474:LEU:HD12	1.92	0.52
5:i:3261:ALA:HB2	5:i:3269:ILE:HG22	1.91	0.52
5:t:1285:THR:HB	5:t:1297:ILE:HD11	1.92	0.52
7:Ak:568:THR:OG1	7:Ak:578:ARG:NH1	2.42	0.52
4:At:100:PRO:O	4:At:101:GLY:C	2.50	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:At:118:TYR:HD2	4:At:119:THR:HG23	1.74	0.52
1:Au:266:DC:H41	2:Av:1850:DG:H22	1.57	0.52
1:Au:572:DC:H2'	1:Au:573:DT:H71	1.91	0.52
1:Au:912:DC:H2''	1:Au:913:DG:H8	1.75	0.52
2:Av:26:DC:H2''	2:Av:27:DA:H8	1.74	0.52
2:Av:1481:DA:H2'	2:Av:1481:DA:N3	2.24	0.52
5:s:2093:ILE:HD11	5:s:2124:GLN:HG3	1.91	0.52
6:x:298:THR:HB	3:al:769:VAL:HG12	1.90	0.52
6:2:723:LYS:NZ	6:2:727:GLU:OE2	2.42	0.52
6:a5:728:ASP:OD2	6:a5:752:ARG:NH1	2.43	0.52
7:Ah:397:SER:OG	7:Ah:398:ARG:N	2.42	0.52
7:Ak:531:ARG:HH22	7:Ak:574:SER:HB3	1.75	0.52
7:Ak:556:ILE:O	7:Ak:560:LEU:HD23	2.10	0.52
1:Au:48:DG:H2'	1:Au:49:DG:N2	2.23	0.52
1:Au:730:DA:H2''	1:Au:731:DA:O4'	2.08	0.52
1:Au:948:DT:H2''	1:Au:949:DA:C8	2.45	0.52
1:Au:1311:DT:H2''	1:Au:1312:DT:C6	2.44	0.52
1:Au:1399:DT:H2''	1:Au:1400:DG:C8	2.44	0.52
1:Au:1553:DG:OP1	3:L:5428:ARG:NH1	2.41	0.52
1:Au:1716:DT:OP1	5:p:707:ARG:NH1	2.43	0.52
1:Au:1883:DA:OP2	5:l:276:ARG:NH1	2.41	0.52
2:Av:367:DT:H2'	2:Av:368:DG:N2	2.24	0.52
2:Av:427:DG:H2''	2:Av:428:DG:N7	2.24	0.52
2:Av:965:DG:H21	7:Aq:86:GLY:HA2	1.74	0.52
2:Av:1593:DC:H4'	2:Av:1593:DC:OP1	2.09	0.52
2:Av:1920:DC:N3	2:Av:1921:DC:N4	2.58	0.52
2:Av:2093:DT:H2'	2:Av:2094:DT:C6	2.45	0.52
3:G:818:GLU:OE1	4:R:276:HIS:NE2	2.43	0.52
3:H:5234:ARG:NH2	5:e:857:GLY:O	2.42	0.52
3:L:5405:ALA:HB1	3:L:5408:LYS:HB2	1.92	0.52
4:V:1063:THR:OG1	4:V:1066:GLU:OE1	2.23	0.52
5:m:443:GLY:O	3:am:882:ARG:NH2	2.43	0.52
6:a3:503:THR:HG23	6:a3:505:PRO:HD2	1.92	0.52
7:Ai:128:ARG:NH1	7:Ai:128:ARG:HB2	2.24	0.52
7:An:49:SER:HA	7:An:52:LYS:HE2	1.92	0.52
7:As:42:ARG:O	7:As:94:ARG:NH2	2.42	0.52
1:Au:970:DC:H41	2:Av:1143:DC:N4	2.06	0.52
1:Au:1182:DT:H2''	1:Au:1183:DA:C8	2.45	0.52
1:Au:1287:DG:H2''	1:Au:1288:DG:C8	2.44	0.52
1:Au:1557:DG:H22	2:Av:562:DG:H21	1.57	0.52
2:Av:179:DC:OP1	5:Z:253:ARG:NH2	2.41	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Av:580:DA:H2''	2:Av:581:DA:N7	2.25	0.52
2:Av:1343:DC:H2'	2:Av:1344:DT:H71	1.91	0.52
2:Av:1405:DC:OP1	7:Ao:128:ARG:NH2	2.33	0.52
2:Av:1984:DA:H2''	2:Av:1985:DG:N7	2.25	0.52
4:T:2787:ILE:HG12	4:T:2792:MET:HE2	1.92	0.52
5:l:344:ARG:HE	5:l:346:GLU:CD	2.17	0.52
6:a6:3231:ARG:NH1	6:a6:3236:LYS:O	2.43	0.52
7:Am:74:ARG:NE	7:Am:74:ARG:O	2.42	0.52
1:Au:117:DG:H2''	1:Au:118:DA:C8	2.45	0.52
1:Au:438:DA:H2'	1:Au:439:DC:C6	2.45	0.52
1:Au:597:DC:H2''	1:Au:598:DA:N7	2.24	0.52
1:Au:863:DC:H2''	1:Au:864:DA:C8	2.44	0.52
2:Av:19:DT:H2''	2:Av:20:DA:C8	2.44	0.52
3:I:2558:LEU:HD22	4:T:2839:LEU:HD21	1.91	0.52
4:O:441:VAL:O	4:O:445:ILE:HG22	2.10	0.52
5:o:628:ALA:O	6:a3:568:ARG:NH2	2.43	0.52
5:u:3131:LEU:HD11	6:a9:3319:LEU:HD23	1.91	0.52
4:Ad:2943:PRO:HD2	4:Ad:2946:LEU:HB2	1.92	0.52
7:Aj:207:ARG:HH11	7:Aj:207:ARG:C	2.15	0.52
1:Au:513:DC:H2''	1:Au:514:DT:C2	2.44	0.52
1:Au:1325:DG:N7	5:r:2981:LYS:NZ	2.58	0.52
1:Au:1537:DA:H5'	1:Au:1537:DA:C8	2.45	0.52
1:Au:1777:DC:OP2	2:Av:339:DG:N2	2.43	0.52
2:Av:181:DG:H2''	2:Av:182:DG:H8	1.75	0.52
2:Av:270:DT:H2'	2:Av:271:DT:H72	1.91	0.52
2:Av:372:DA:H2'	2:Av:373:DT:H71	1.90	0.52
2:Av:390:DG:H2''	2:Av:391:DA:O4'	2.09	0.52
2:Av:1273:DT:H2''	2:Av:1274:DG:C8	2.44	0.52
2:Av:1978:DG:H2''	2:Av:1979:DC:C5	2.44	0.52
4:N:197:GLN:NE2	4:N:213:VAL:HG13	2.24	0.52
5:i:3251:VAL:HG11	6:6:3282:ARG:HD2	1.91	0.52
6:y:399:ARG:NH2	3:am:883:VAL:O	2.43	0.52
4:Ag:3163:ALA:HA	4:Ag:3166:LEU:HD12	1.91	0.52
7:As:48:GLN:O	7:As:52:LYS:HG3	2.09	0.52
1:Au:33:DC:H2''	1:Au:34:DG:N7	2.25	0.52
1:Au:57:DC:H2''	1:Au:58:DA:C8	2.44	0.52
1:Au:230:DT:H2''	1:Au:231:DA:C8	2.45	0.52
1:Au:1833:DT:H2''	1:Au:1834:DA:H8	1.74	0.52
1:Au:1911:DG:H2''	1:Au:1912:DT:H5''	1.91	0.52
1:Au:1964:DT:H2''	1:Au:1965:DG:N7	2.24	0.52
2:Av:416:DG:H3'	5:p:673:PRO:HB2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Av:656:DT:H2''	2:Av:657:DG:H5''	1.91	0.52
2:Av:693:DG:N3	2:Av:693:DG:H2'	2.24	0.52
2:Av:915:DT:H2''	2:Av:916:DG:H5'	1.92	0.52
2:Av:1646:DC:H6	2:Av:1646:DC:H5''	1.75	0.52
3:E:607:VAL:HG13	6:a2:484:TYR:CE1	2.45	0.52
4:U:1907:ARG:NH1	6:a7:2379:TYR:OH	2.42	0.52
5:Z:262:LEU:HD11	6:x:242:ARG:HE	1.74	0.52
5:l:272:GLU:OE1	5:l:272:GLU:N	2.41	0.52
3:ak:186:LEU:HD13	4:aw:165:LEU:HB2	1.90	0.52
7:Ai:2:GLU:O	7:Ai:7:SER:OG	2.24	0.52
1:Au:435:DC:H5	7:Am:85:LYS:HD2	1.74	0.52
1:Au:1104:DT:H4'	1:Au:1105:DC:OP1	2.10	0.52
1:Au:1182:DT:H2''	1:Au:1183:DA:H8	1.75	0.52
1:Au:1628:DA:H62	2:Av:492:DC:H42	1.56	0.52
2:Av:207:DT:H2''	2:Av:208:DG:C8	2.45	0.52
2:Av:1573:DA:C8	2:Av:1573:DA:H5''	2.44	0.52
2:Av:1647:DC:H2''	2:Av:1648:DC:C6	2.44	0.52
2:Av:1680:DC:H2''	2:Av:1681:DG:N7	2.25	0.52
4:J:2006:ILE:HG23	6:4:2392:TYR:HB3	1.92	0.52
4:Q:697:ALA:O	4:Q:701:LEU:HD12	2.10	0.52
4:T:2823:THR:HG23	4:T:2825:ARG:H	1.75	0.52
3:aq:4156:TYR:HB3	4:Ac:870:SER:HB2	1.92	0.52
3:at:4328:LEU:HA	3:at:4351:LEU:HD11	1.91	0.52
4:Ad:2865:ASP:HB2	4:Ad:2868:LYS:HB2	1.91	0.52
1:Au:26:DC:N3	2:Av:2091:DG:N2	2.57	0.52
1:Au:55:DG:N2	2:Av:2062:DT:O2	2.43	0.52
1:Au:855:DC:H2''	1:Au:856:DA:H5''	1.92	0.52
1:Au:1662:DC:H2''	1:Au:1663:DG:C8	2.44	0.52
2:Av:931:DA:H2''	2:Av:932:DG:C8	2.45	0.52
2:Av:1249:DG:H1'	2:Av:1250:DG:C8	2.45	0.52
2:Av:1352:DT:H2''	2:Av:1353:DC:C2	2.45	0.52
5:c:609:GLN:NE2	5:c:613:THR:O	2.43	0.52
5:l:247:GLY:HA2	5:l:250:LYS:HG2	1.92	0.52
3:an:927:SER:O	3:an:927:SER:OG	2.22	0.52
7:Aj:232:ASP:OD1	7:Aj:233:LYS:N	2.43	0.52
1:Au:461:DC:H5'	4:At:25:LYS:HD2	1.92	0.51
1:Au:617:DG:H2'	1:Au:618:DC:C6	2.45	0.51
1:Au:1129:DA:H61	2:Av:989:DC:H42	1.57	0.51
1:Au:1339:DG:H2'	1:Au:1340:DT:H71	1.92	0.51
4:O:468:THR:HG23	6:x:273:THR:HG22	1.92	0.51
5:m:371:LEU:HD21	5:m:405:GLU:HG2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:o:565:THR:OG1	5:o:566:GLY:N	2.44	0.51
5:s:2137:ASP:OD2	5:s:2162:ARG:NH1	2.42	0.51
3:ak:238:LEU:HG	3:ak:239:LEU:HD12	1.91	0.51
7:Ah:352:THR:OG1	7:Ah:353:GLU:OE1	2.18	0.51
7:Aj:193:VAL:HG23	7:Aj:194:GLY:H	1.74	0.51
1:Au:637:DA:N6	2:Av:1477:DG:H1	2.08	0.51
1:Au:821:DA:H2''	1:Au:822:DG:H5''	1.92	0.51
1:Au:1362:DT:H2''	1:Au:1363:DC:C6	2.45	0.51
2:Av:717:DA:H2''	2:Av:718:DG:H8	1.75	0.51
2:Av:1965:DA:OP1	6:0:495:GLY:HA2	2.11	0.51
5:c:653:MET:N	5:c:656:ASP:OD2	2.43	0.51
5:f:3152:VAL:HG21	6:3:3194:ARG:HD2	1.92	0.51
5:o:608:ALA:HB1	5:o:615:LEU:HD13	1.92	0.51
7:Aq:0:MET:HE2	7:Aq:5:VAL:HG12	1.91	0.51
1:Au:965:DA:H5'	6:a8:1501:ARG:HG2	1.92	0.51
1:Au:1014:DG:OP2	3:K:5283:ARG:NH2	2.27	0.51
1:Au:2031:DA:H61	2:Av:87:DC:N4	2.08	0.51
2:Av:50:DA:H2''	2:Av:51:DT:C2	2.45	0.51
2:Av:1453:DA:H2'	2:Av:1454:DG:N3	2.25	0.51
2:Av:1611:DA:N6	2:Av:1612:DT:O4	2.44	0.51
2:Av:1783:DT:H2'	2:Av:1784:DG:N3	2.24	0.51
2:Av:2042:DT:H4'	6:v:45:ARG:HE	1.75	0.51
2:Av:2076:DC:H2''	2:Av:2077:DG:H8	1.76	0.51
3:B:218:GLU:CB	4:N:208:LEU:HD11	2.34	0.51
5:a:365:HIS:HA	5:a:368:ARG:HE	1.75	0.51
5:e:834:LEU:HD11	5:q:874:ARG:HH11	1.74	0.51
5:j:70:LEU:O	5:j:74:ILE:HG13	2.11	0.51
5:m:418:THR:HG21	5:m:435:ILE:HG12	1.92	0.51
5:n:545:PRO:HG3	6:a2:435:LEU:HD23	1.91	0.51
6:a4:661:ARG:NH1	4:Ab:792:LEU:O	2.43	0.51
3:ar:2618:ALA:HB2	4:Ad:2961:TYR:HB2	1.92	0.51
7:Ak:596:VAL:O	7:Ak:600:THR:OG1	2.23	0.51
1:Au:34:DG:H2''	1:Au:35:DA:C8	2.45	0.51
1:Au:425:DC:N4	2:Av:1689:DA:N6	2.55	0.51
1:Au:454:DG:H2'	1:Au:455:DT:C6	2.46	0.51
1:Au:696:DC:H2''	1:Au:697:DA:H8	1.74	0.51
1:Au:964:DC:H2''	1:Au:965:DA:O5'	2.11	0.51
1:Au:1896:DC:H2''	1:Au:1897:DT:C6	2.45	0.51
2:Av:274:DA:H2'	2:Av:275:DG:C8	2.46	0.51
2:Av:1222:DC:H2''	2:Av:1223:DG:O5'	2.10	0.51
2:Av:1473:DT:H2''	2:Av:1474:DG:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Av:1779:DA:H2''	2:Av:1780:DG:C8	2.45	0.51
2:Av:1969:DG:OP2	5:X:26:ARG:NH2	2.41	0.51
3:B:239:SER:O	3:B:241:LEU:N	2.41	0.51
5:g:2191:TYR:HA	5:g:2194:SER:HB3	1.92	0.51
5:h:1380:GLU:OE1	3:at:4353:ASN:ND2	2.42	0.51
6:v:58:LEU:O	6:v:62:LEU:HG	2.10	0.51
6:9:217:ILE:O	6:9:243:ARG:NH2	2.40	0.51
6:9:263:HIS:HE1	4:ax:336:GLU:HG3	1.76	0.51
6:a3:533:VAL:O	6:a3:537:ASN:ND2	2.43	0.51
4:aw:237:ALA:HA	4:aw:240:LYS:HE2	1.91	0.51
7:Ai:115:SER:HB2	7:Ar:20:ARG:NH2	2.25	0.51
7:Ai:148:SER:HB2	7:Ai:152:ALA:HB2	1.92	0.51
1:Au:150:DA:OP1	5:X:39:HIS:NE2	2.44	0.51
1:Au:293:DG:H2''	1:Au:294:DG:C8	2.45	0.51
1:Au:496:DT:H2''	1:Au:497:DG:C8	2.45	0.51
1:Au:1734:DG:O5'	3:ap:4011:ARG:NH1	2.43	0.51
1:Au:1835:DG:O6	2:Av:283:DA:C6	2.63	0.51
1:Au:1886:DG:H2''	1:Au:1887:DG:H5''	1.92	0.51
2:Av:108:DA:OP1	4:az:554:THR:OG1	2.28	0.51
2:Av:283:DA:H2''	2:Av:284:DG:H5''	1.92	0.51
2:Av:429:DG:H2''	2:Av:430:DG:O5'	2.09	0.51
2:Av:710:DC:H2''	2:Av:711:DT:C6	2.46	0.51
2:Av:1672:DA:OP1	5:o:579:VAL:HG12	2.10	0.51
3:K:5297:LEU:HA	3:K:5302:TYR:HD2	1.76	0.51
5:Y:153:ARG:O	5:Y:156:THR:OG1	2.28	0.51
5:j:116:ARG:NH2	5:j:123:ASP:OD2	2.31	0.51
5:t:1238:LEU:HD12	5:t:1242:LYS:HE3	1.93	0.51
3:ap:4123:SER:N	3:ap:4128:SER:O	2.42	0.51
7:Al:272:MET:HB3	7:Al:295:ILE:HG21	1.93	0.51
1:Au:262:DC:H2''	1:Au:263:DG:H8	1.76	0.51
1:Au:499:DC:H2''	1:Au:500:DA:C8	2.45	0.51
1:Au:533:DA:H2''	1:Au:534:DG:C8	2.46	0.51
1:Au:1779:DG:H5'	7:As:129:SER:HB3	1.92	0.51
2:Av:165:DG:H5''	2:Av:166:DC:N4	2.26	0.51
2:Av:579:DT:H2''	2:Av:580:DA:C8	2.45	0.51
2:Av:1125:DT:H4'	2:Av:1126:DT:OP1	2.10	0.51
2:Av:1187:DT:H2'	2:Av:1188:DG:N3	2.26	0.51
3:H:5261:ALA:HB3	7:Ao:66:LEU:HD21	1.93	0.51
5:f:3182:ARG:HD3	5:r:3074:ILE:HG22	1.93	0.51
6:0:560:ARG:NH2	6:0:567:ASP:OD2	2.44	0.51
7:Ao:84:THR:HG23	7:Ao:94:ARG:NH2	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:At:78:ALA:HB2	4:At:86:ILE:HD11	1.93	0.51
1:Au:489:DA:H2''	1:Au:490:DG:C8	2.45	0.51
1:Au:614:DT:H2''	1:Au:615:DA:H8	1.76	0.51
1:Au:786:DG:N2	2:Av:1329:DG:H1	2.09	0.51
4:U:1901:VAL:HG13	3:Ae:3013:LEU:HD22	1.92	0.51
5:u:3153:ARG:HB3	6:a9:3362:THR:HA	1.92	0.51
3:aj:31:HIS:NE2	3:aj:48:PRO:HG3	2.26	0.51
3:aj:63:LEU:HD11	4:av:38:VAL:HG13	1.92	0.51
7:Ar:181:GLY:HA2	7:Ar:184:LYS:HG2	1.92	0.51
1:Au:28:DG:H2'	1:Au:28:DG:N3	2.25	0.51
1:Au:899:DC:H2''	1:Au:900:DC:O2	2.11	0.51
1:Au:1160:DG:H1	2:Av:958:DG:H22	1.59	0.51
1:Au:1340:DT:H2'	1:Au:1341:DT:C4	2.45	0.51
1:Au:1435:DG:H2''	1:Au:1436:DA:C8	2.46	0.51
1:Au:1489:DT:H2''	1:Au:1490:DA:C8	2.46	0.51
1:Au:1594:DG:H2''	1:Au:1595:DA:C8	2.45	0.51
2:Av:2004:DT:H2''	2:Av:2005:DG:H8	1.76	0.51
2:Av:2010:DT:H2'	2:Av:2011:DT:C5	2.46	0.51
3:C:319:GLU:OE2	3:C:323:ASN:ND2	2.38	0.51
3:K:5326:LEU:HD22	4:V:1018:LEU:HD13	1.93	0.51
4:Q:675:GLY:O	4:Q:679:ARG:NH1	2.43	0.51
5:Z:319:THR:HG22	6:x:247:ARG:HB3	1.93	0.51
5:b:497:LEU:HD13	6:z:415:GLN:HE22	1.74	0.51
5:i:3263:HIS:HE1	5:u:3186:ARG:HH21	1.58	0.51
6:z:452:ASN:OD1	6:z:455:ARG:NH2	2.43	0.51
3:ak:205:HIS:HA	3:ak:208:LEU:HD12	1.92	0.51
7:Am:132:LYS:O	7:Am:132:LYS:HD2	2.10	0.51
1:Au:116:DG:C2	1:Au:117:DG:C6	2.98	0.51
1:Au:523:DG:H2'	1:Au:524:DC:C2	2.46	0.51
1:Au:1235:DG:H22	2:Av:883:DG:N2	2.06	0.51
1:Au:1426:DG:OP2	1:Au:1426:DG:N2	2.43	0.51
1:Au:1711:DA:C6	2:Av:408:DC:N4	2.78	0.51
1:Au:1805:DA:H62	2:Av:314:DG:H21	1.59	0.51
2:Av:560:DG:H4'	3:L:5425:ARG:HH11	1.76	0.51
2:Av:609:DC:H2''	2:Av:610:DA:C8	2.45	0.51
2:Av:923:DG:H5'	2:Av:923:DG:C8	2.46	0.51
2:Av:1920:DC:H5''	3:D:453:LYS:NZ	2.25	0.51
2:Av:1989:DA:H5''	4:av:25:LYS:HD2	1.92	0.51
4:W:2936:LEU:HD21	6:6:3314:TYR:HE1	1.75	0.51
5:n:486:ILE:HG22	5:n:517:GLN:HE21	1.75	0.51
6:4:2317:ARG:HG3	6:4:2318:ASP:H	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:ao:1095:LEU:HD22	4:Aa:614:LEU:HD13	1.93	0.51
3:ap:4021:ALA:HB2	4:Ab:813:TYR:HB2	1.93	0.51
1:Au:1047:DT:H2''	1:Au:1048:DT:O2	2.11	0.51
1:Au:1284:DA:H3'	4:Ad:2874:LYS:NZ	2.26	0.51
1:Au:1719:DC:N4	2:Av:400:DA:H62	2.09	0.51
1:Au:1733:DC:H1'	3:ap:4011:ARG:HH12	1.76	0.51
1:Au:2097:DA:H62	2:Av:20:DA:N6	2.08	0.51
2:Av:214:DA:H2''	2:Av:215:DG:C8	2.46	0.51
2:Av:650:DA:H2''	2:Av:651:DC:H5''	1.92	0.51
2:Av:952:DA:H2''	2:Av:953:DA:H8	1.75	0.51
2:Av:1328:DT:H2'	2:Av:1329:DG:C8	2.46	0.51
2:Av:1974:DA:H2''	2:Av:1975:DC:C2	2.46	0.51
3:C:258:ARG:HH11	3:C:262:GLY:HA3	1.75	0.51
3:F:654:ARG:NH2	4:At:32:GLU:OE1	2.44	0.51
4:S:942:THR:HG21	6:2:739:HIS:HB2	1.93	0.51
5:g:2198:LEU:HD13	6:4:2330:ARG:HB3	1.93	0.51
7:Ak:566:LYS:HB3	7:Ak:578:ARG:HH21	1.76	0.51
7:Al:306:ASP:OD1	7:Al:306:ASP:N	2.41	0.51
7:Am:134:PRO:HG2	7:Am:135:LYS:HZ1	1.76	0.51
1:Au:390:DG:H2''	1:Au:391:DG:H8	1.77	0.50
1:Au:642:DC:H41	2:Av:1471:DC:N4	2.09	0.50
1:Au:738:DT:H3	2:Av:1376:DG:H22	1.59	0.50
1:Au:892:DC:H42	2:Av:1222:DC:H41	1.58	0.50
1:Au:937:DG:H2'	1:Au:938:DT:H71	1.93	0.50
1:Au:1151:DC:H2'	1:Au:1152:DT:H71	1.93	0.50
1:Au:1375:DG:H2''	1:Au:1376:DG:H8	1.75	0.50
2:Av:111:DT:H2'	2:Av:112:DG:N2	2.26	0.50
2:Av:375:DT:H2''	2:Av:376:DG:C8	2.46	0.50
2:Av:510:DG:H22	7:An:120:LYS:HE2	1.75	0.50
2:Av:1537:DC:OP1	4:N:188:ARG:NH2	2.30	0.50
2:Av:1669:DG:H2'	2:Av:1669:DG:N3	2.25	0.50
5:i:3258:ASN:ND2	6:6:3284:GLY:O	2.44	0.50
5:n:543:ILE:HG23	6:a2:436:ILE:HG13	1.93	0.50
7:Am:153:LYS:CE	7:Am:160:ALA:HB2	2.41	0.50
7:Aq:158:VAL:HG22	7:As:14:LYS:HD3	1.92	0.50
1:Au:465:DC:N4	2:Av:1649:DT:O4	2.44	0.50
1:Au:1399:DT:H2''	1:Au:1400:DG:N7	2.25	0.50
1:Au:1799:DG:H4'	1:Au:1800:DT:OP1	2.11	0.50
1:Au:2098:DT:H2'	1:Au:2099:DA:N3	2.26	0.50
2:Av:114:DC:H2''	2:Av:115:DT:O2	2.10	0.50
2:Av:2087:DC:H2''	2:Av:2088:DC:H5''	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:H:5214:ILE:HG12	3:H:5217:HIS:CE1	2.46	0.50
5:i:3269:ILE:HG12	6:6:3288:ILE:HG22	1.93	0.50
1:Au:1001:DG:O6	2:Av:1112:DA:N6	2.45	0.50
1:Au:1288:DG:H1	2:Av:830:DA:H61	1.57	0.50
1:Au:1327:DG:H2'	1:Au:1328:DC:C5	2.45	0.50
1:Au:1393:DA:N6	2:Av:725:DT:O4	2.43	0.50
1:Au:1637:DA:H2''	1:Au:1638:DA:C8	2.46	0.50
1:Au:1711:DA:H61	2:Av:408:DC:N4	2.08	0.50
2:Av:1170:DA:H2''	2:Av:1171:DG:C8	2.46	0.50
3:A:32:ARG:NH2	4:M:32:GLU:OE1	2.33	0.50
4:J:2046:LEU:HA	6:a7:2373:ARG:HH21	1.77	0.50
5:u:3118:LEU:HD23	5:u:3121:ILE:HD11	1.93	0.50
6:a6:3283:LYS:HG2	6:a6:3288:THR:HG23	1.92	0.50
3:aj:87:VAL:HG12	3:aj:88:ARG:HD2	1.92	0.50
3:ar:2699:ILE:HG23	4:Ad:2901:ILE:HG21	1.92	0.50
7:Am:55:LYS:HA	7:Am:59:LYS:HD2	1.93	0.50
1:Au:3:DG:H4'	1:Au:4:DC:OP1	2.11	0.50
1:Au:12:DT:H2''	1:Au:13:DC:C5	2.46	0.50
1:Au:75:DA:H2''	1:Au:76:DA:C8	2.47	0.50
1:Au:469:DG:H1	2:Av:1646:DC:H42	1.59	0.50
1:Au:1013:DA:N6	2:Av:1101:DA:H61	2.09	0.50
1:Au:1774:DC:H42	2:Av:346:DG:H22	1.59	0.50
1:Au:1908:DC:H2''	1:Au:1909:DA:C5	2.47	0.50
4:J:2021:GLU:OE2	4:J:2024:ARG:NH2	2.44	0.50
6:CD:376:LEU:HB3	6:CD:381:ARG:O	2.12	0.50
6:a6:3284:ARG:NH2	4:Ad:2940:LEU:O	2.45	0.50
3:aq:4172:LEU:HD22	4:Ac:858:VAL:HG13	1.92	0.50
7:Am:17:LYS:HE3	7:Am:58:TYR:HE2	1.75	0.50
1:Au:737:DG:H4'	1:Au:738:DT:OP1	2.12	0.50
1:Au:1425:DG:H2''	1:Au:1426:DG:C2	2.46	0.50
1:Au:1425:DG:H2''	1:Au:1426:DG:N2	2.26	0.50
1:Au:1801:DG:H4'	1:Au:1802:DC:OP1	2.11	0.50
1:Au:2081:DC:H42	2:Av:37:DA:H61	1.60	0.50
2:Av:74:DG:H2''	2:Av:75:DG:N7	2.26	0.50
2:Av:168:DC:H2'	2:Av:169:DG:C8	2.47	0.50
2:Av:592:DG:C2	2:Av:593:DG:C5	2.99	0.50
2:Av:777:DC:H2''	2:Av:778:DG:C8	2.46	0.50
2:Av:1653:DC:H5''	5:o:616:ARG:HH11	1.76	0.50
2:Av:1787:DT:H2''	2:Av:1788:DA:C8	2.45	0.50
3:E:531:GLN:N	3:E:563:GLU:OE2	2.44	0.50
3:H:5258:SER:OG	3:H:5259:LYS:N	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:o:575:ARG:N	5:o:578:THR:OG1	2.44	0.50
5:u:3086:PRO:HD2	7:Aq:102:LYS:HD3	1.94	0.50
6:CD:311:ASN:O	6:CD:312:ILE:HG22	2.10	0.50
7:An:60:VAL:HG23	7:An:61:GLY:H	1.76	0.50
7:Ar:36:ILE:HG21	7:Ar:95:LEU:H	1.77	0.50
1:Au:266:DC:N4	2:Av:1850:DG:H1	2.10	0.50
1:Au:600:DC:H2'	1:Au:601:DG:C8	2.46	0.50
1:Au:1191:DG:H21	2:Av:928:DG:H22	1.60	0.50
1:Au:1264:DC:OP2	5:f:3090:HIS:ND1	2.45	0.50
2:Av:1198:DG:H2'	2:Av:1199:DG:C8	2.46	0.50
2:Av:1384:DA:H2''	2:Av:1385:DT:H5''	1.94	0.50
2:Av:2070:DA:H2''	2:Av:2071:DT:C2	2.47	0.50
4:R:260:ARG:NH1	4:R:261:LYS:O	2.45	0.50
5:b:546:ILE:HB	6:z:434:ILE:HG22	1.93	0.50
5:n:461:LYS:HD2	5:n:462:PRO:HD2	1.93	0.50
6:a9:3345:GLU:OE2	6:a9:3349:ARG:NH2	2.44	0.50
3:as:1786:ILE:HG13	3:as:1788:ARG:H	1.75	0.50
7:Ah:431:VAL:HG13	7:Ah:432:LEU:HD23	1.94	0.50
7:Am:6:LEU:HD23	7:Am:9:ALA:HB3	1.92	0.50
7:Ap:46:SER:O	7:Ap:50:ILE:HG13	2.11	0.50
1:Au:115:DG:H2''	1:Au:116:DG:C8	2.46	0.50
1:Au:1028:DG:H22	2:Av:1087:DA:H61	1.60	0.50
2:Av:309:DC:H2'	2:Av:310:DC:C6	2.47	0.50
2:Av:548:DT:H2''	2:Av:549:DA:C8	2.47	0.50
2:Av:606:DG:H2'	2:Av:607:DG:N3	2.27	0.50
2:Av:1528:DG:H2'	2:Av:1529:DT:H71	1.92	0.50
2:Av:1768:DG:H3'	2:Av:1769:DG:C8	2.46	0.50
4:Q:690:THR:OG1	4:Q:691:SER:N	2.40	0.50
5:b:506:LYS:HB3	5:b:509:LEU:HD11	1.94	0.50
5:n:532:ASN:ND2	6:a2:428:GLY:O	2.44	0.50
6:y:395:LYS:HA	6:y:400:THR:HG22	1.93	0.50
6:9:247:LYS:NZ	6:9:251:GLU:OE2	2.43	0.50
1:Au:50:DT:H2''	1:Au:51:DC:H5''	1.93	0.50
1:Au:118:DA:OP1	3:aj:45:ALA:N	2.45	0.50
1:Au:405:DC:H2'	1:Au:406:DG:C8	2.46	0.50
1:Au:563:DC:H2''	1:Au:564:DC:C4	2.47	0.50
1:Au:1132:DG:H4'	6:a7:2298:ARG:HA	1.92	0.50
1:Au:1140:DG:H1	2:Av:978:DT:H3	1.60	0.50
1:Au:1426:DG:H2''	1:Au:1427:DA:C8	2.47	0.50
1:Au:1661:DC:H2''	1:Au:1662:DC:O2	2.11	0.50
2:Av:757:DA:H2'	2:Av:758:DA:C8	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Av:1642:DA:H2'	2:Av:1643:DA:N7	2.27	0.50
3:I:2574:GLN:HG2	5:r:3056:ILE:HD13	1.94	0.50
5:X:126:LEU:HD22	5:j:113:HIS:CG	2.47	0.50
5:u:3186:ARG:NH1	5:u:3188:THR:O	2.45	0.50
7:Aq:33:ALA:CB	7:Aq:37:ARG:HH12	2.22	0.50
1:Au:271:DC:H6	1:Au:271:DC:H5''	1.77	0.50
1:Au:673:DT:H2''	1:Au:674:DG:H5''	1.92	0.50
1:Au:1757:DC:N4	2:Av:362:DC:H41	2.05	0.50
2:Av:1926:DG:H2''	2:Av:1927:DA:C8	2.47	0.50
5:k:159:LEU:HD11	5:k:192:GLN:HB3	1.94	0.50
5:l:263:GLU:OE1	6:9:227:ARG:NE	2.42	0.50
6:w:137:ILE:HD12	6:w:154:TYR:HD1	1.76	0.50
6:6:3332:LEU:HB3	6:6:3337:ARG:O	2.12	0.50
3:ap:4087:VAL:HG23	3:ap:4088:ARG:HD2	1.92	0.50
3:au:4441:ILE:HG13	3:au:4443:ARG:H	1.76	0.50
3:au:4473:ILE:HD11	3:au:4477:LEU:HB2	1.94	0.50
4:ax:288:LEU:HD13	4:ax:297:ILE:HD11	1.94	0.50
7:Ap:81:LEU:HD23	7:Ap:95:LEU:HA	1.94	0.50
1:Au:205:DG:N7	2:Av:1912:DG:N1	2.59	0.49
1:Au:1097:DA:N1	2:Av:1021:DG:C6	2.79	0.49
1:Au:1450:DG:H2''	1:Au:1451:DA:C8	2.47	0.49
2:Av:120:DC:H4'	4:az:493:LYS:HD2	1.94	0.49
2:Av:456:DT:H2'	2:Av:457:DG:C5	2.47	0.49
2:Av:859:DC:H2''	2:Av:860:DA:H5''	1.94	0.49
2:Av:1334:DT:H2''	2:Av:1335:DA:N7	2.27	0.49
2:Av:1444:DC:H2'	2:Av:1445:DG:N2	2.26	0.49
3:L:5448:LEU:HD22	4:W:2922:VAL:HG13	1.93	0.49
6:9:226:ALA:HB1	6:9:231:VAL:HB	1.94	0.49
6:9:263:HIS:HB2	4:ax:339:THR:HG21	1.93	0.49
3:am:794:ARG:O	3:am:795:ALA:HB2	2.12	0.49
1:Au:65:DG:H22	2:Av:2052:DT:H3	1.59	0.49
1:Au:156:DA:H2''	1:Au:157:DT:C6	2.47	0.49
1:Au:588:DC:H2''	1:Au:589:DA:C8	2.47	0.49
1:Au:731:DA:H2	2:Av:1383:DG:H22	1.59	0.49
1:Au:934:DG:H2''	1:Au:935:DT:C6	2.47	0.49
1:Au:1072:DG:N7	1:Au:1073:DA:N6	2.59	0.49
1:Au:1586:DC:OP1	5:u:3096:ARG:NH2	2.45	0.49
1:Au:1642:DG:N2	2:Av:476:DA:N7	2.50	0.49
1:Au:1745:DA:H2'	1:Au:1746:DT:C6	2.47	0.49
1:Au:1774:DC:H2''	1:Au:1775:DA:C8	2.47	0.49
2:Av:42:DA:H2''	2:Av:43:DG:C8	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Av:1096:DT:H2''	2:Av:1097:DG:H8	1.77	0.49
2:Av:1716:DA:H2'	2:Av:1717:DT:H71	1.94	0.49
4:M:56:MET:HE2	4:M:56:MET:HA	1.94	0.49
4:N:198:THR:HG23	6:w:174:THR:HG22	1.95	0.49
4:N:218:LYS:O	4:N:222:LYS:HG2	2.12	0.49
3:ap:4026:PRO:HG3	4:Ab:732:TYR:CZ	2.47	0.49
7:As:51:GLN:O	7:As:55:LYS:HB2	2.11	0.49
1:Au:26:DC:H2''	1:Au:27:DC:C2	2.47	0.49
1:Au:33:DC:H2''	1:Au:34:DG:C8	2.48	0.49
1:Au:522:DT:H2''	1:Au:523:DG:C4	2.46	0.49
1:Au:1266:DC:H42	2:Av:851:DG:H1	1.60	0.49
2:Av:300:DA:C8	2:Av:301:DT:H72	2.46	0.49
2:Av:453:DC:H2'	2:Av:454:DG:N3	2.27	0.49
2:Av:728:DA:OP2	3:I:2539:ARG:NE	2.45	0.49
2:Av:1748:DG:H2''	2:Av:1749:DG:N7	2.27	0.49
2:Av:1919:DT:H2''	2:Av:1920:DC:H5	1.78	0.49
3:F:675:TYR:OH	4:At:108:VAL:HA	2.12	0.49
4:S:908:MET:O	4:S:912:VAL:HG23	2.12	0.49
5:d:701:LEU:HD22	6:l:598:ILE:HD11	1.94	0.49
6:2:722:LEU:O	6:2:726:LEU:HG	2.12	0.49
3:aq:4195:ILE:HB	4:Ac:846:ILE:HD12	1.94	0.49
3:ar:2615:SER:OG	3:ar:2622:PHE:O	2.22	0.49
4:Aa:694:LYS:HD2	4:Aa:694:LYS:C	2.37	0.49
7:Ak:538:ILE:HG13	7:Ak:543:LYS:HE2	1.93	0.49
1:Au:221:DA:H2''	1:Au:222:DA:C8	2.47	0.49
1:Au:780:DT:H2'	1:Au:781:DT:C6	2.48	0.49
1:Au:1132:DG:N2	2:Av:986:DG:H1	2.10	0.49
1:Au:1536:DT:H2''	1:Au:1537:DA:C8	2.47	0.49
1:Au:1663:DG:H5''	4:Ab:721:ARG:HD2	1.94	0.49
1:Au:1672:DC:O2	1:Au:1672:DC:H2'	2.13	0.49
2:Av:330:DG:H2''	2:Av:331:DG:H5''	1.93	0.49
2:Av:610:DA:H2''	2:Av:611:DG:C8	2.48	0.49
2:Av:1152:DG:H2''	2:Av:1153:DC:C6	2.47	0.49
2:Av:1661:DA:H4'	2:Av:1662:DC:OP1	2.12	0.49
2:Av:1781:DG:H2''	2:Av:1782:DA:N3	2.28	0.49
2:Av:1914:DG:H2''	2:Av:1915:DA:H5''	1.93	0.49
3:E:570:LEU:HD13	4:Q:645:LEU:HB2	1.93	0.49
4:N:194:ARG:NH2	6:w:177:GLU:O	2.42	0.49
5:k:198:TYR:HB2	6:8:181:ARG:HH12	1.77	0.49
5:q:796:ILE:HG22	6:a5:699:ARG:O	2.13	0.49
3:an:930:GLY:O	3:an:932:GLN:NE2	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:Ao:84:THR:HG23	7:Ao:94:ARG:HH12	1.77	0.49
7:As:70:LEU:O	7:As:74:ARG:HG2	2.12	0.49
1:Au:261:DA:H5'	1:Au:261:DA:C8	2.47	0.49
1:Au:365:DA:H4'	1:Au:366:DT:OP1	2.11	0.49
1:Au:680:DT:H2'	1:Au:681:DA:C2	2.47	0.49
1:Au:1769:DC:H4'	1:Au:1770:DC:OP1	2.12	0.49
2:Av:581:DA:H4'	5:i:3233:ARG:HD3	1.95	0.49
2:Av:1013:DG:H2''	2:Av:1014:DC:C6	2.47	0.49
2:Av:1939:DG:C5	2:Av:1940:DG:N1	2.81	0.49
3:C:380:SER:O	3:C:383:SER:OG	2.29	0.49
3:G:809:LEU:O	3:G:813:THR:HG23	2.12	0.49
3:G:817:LEU:HD11	4:R:268:VAL:HG13	1.93	0.49
4:J:1970:ASP:OD1	4:J:1971:GLY:N	2.45	0.49
4:N:163:ILE:HG13	6:8:185:GLY:HA2	1.94	0.49
5:d:754:ASP:OD1	5:p:748:HIS:NE2	2.39	0.49
5:h:1322:ALA:O	5:h:1326:ILE:HG12	2.12	0.49
7:Al:287:SER:HA	7:Al:332:GLY:HA3	1.93	0.49
7:Am:153:LYS:HD3	7:Am:154:LYS:N	2.28	0.49
7:Aq:142:ARG:NH2	7:As:18:ALA:HA	2.28	0.49
7:As:19:SER:H	7:As:23:ALA:HB2	1.76	0.49
1:Au:665:DC:N3	1:Au:666:DA:N6	2.61	0.49
1:Au:690:DC:H2''	1:Au:691:DT:C6	2.47	0.49
1:Au:822:DG:N2	1:Au:824:DG:N7	2.60	0.49
1:Au:1247:DC:N3	2:Av:872:DT:O4	2.45	0.49
1:Au:1985:DC:H42	2:Av:133:DC:H41	1.61	0.49
2:Av:388:DT:H2''	2:Av:389:DG:C8	2.47	0.49
2:Av:551:DA:H5'	2:Av:551:DA:H8	1.77	0.49
2:Av:836:DG:H2''	2:Av:837:DC:H5''	1.94	0.49
2:Av:1202:DC:H2'	2:Av:1203:DC:C6	2.46	0.49
2:Av:1440:DG:H2''	2:Av:1441:DA:C8	2.48	0.49
4:U:1932:ALA:HA	4:U:1935:LEU:HD12	1.94	0.49
5:n:448:ALA:HB2	5:n:455:ALA:HB3	1.95	0.49
7:Am:99:ASP:N	7:Am:99:ASP:OD1	2.45	0.49
7:Ao:5:VAL:O	7:Ao:8:PRO:HD2	2.12	0.49
1:Au:389:DA:H2''	1:Au:390:DG:C8	2.47	0.49
1:Au:403:DG:H5''	1:Au:403:DG:H8	1.78	0.49
1:Au:836:DA:H2''	1:Au:837:DG:C8	2.48	0.49
1:Au:972:DC:P	7:Ar:47:ARG:HH22	2.35	0.49
1:Au:1262:DA:H61	2:Av:856:DC:H42	1.61	0.49
1:Au:1582:DA:H1'	1:Au:1583:DG:C8	2.47	0.49
1:Au:1727:DC:OP2	4:Ab:779:SER:OG	2.30	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Au:2069:DC:H3'	1:Au:2070:DT:H71	1.95	0.49
2:Av:74:DG:H2''	2:Av:75:DG:C5	2.48	0.49
2:Av:93:DT:H2''	2:Av:94:DT:C2	2.48	0.49
2:Av:459:DT:H2''	2:Av:460:DA:C2	2.47	0.49
2:Av:563:DC:H5'	2:Av:563:DC:C6	2.47	0.49
2:Av:879:DG:H5''	2:Av:879:DG:H8	1.78	0.49
2:Av:965:DG:H2'	2:Av:966:DC:C6	2.48	0.49
2:Av:1220:DT:H2''	2:Av:1221:DC:H5''	1.94	0.49
2:Av:1959:DA:H2'	7:Ah:363:LYS:HZ2	1.76	0.49
3:E:516:LYS:HB3	3:E:519:ALA:HB3	1.94	0.49
5:e:847:LYS:HB3	5:q:858:HIS:HE1	1.77	0.49
5:g:2227:MET:HE2	5:g:2227:MET:HA	1.93	0.49
5:t:1210:THR:HG21	5:t:1215:LYS:HD2	1.93	0.49
5:t:1213:VAL:O	5:t:1215:LYS:NZ	2.45	0.49
7:Aq:48:GLN:OE1	7:Aq:48:GLN:N	2.45	0.49
1:Au:488:DC:H2''	1:Au:489:DA:C8	2.48	0.49
1:Au:1656:DT:H2''	1:Au:1657:DA:C8	2.47	0.49
2:Av:164:DT:H2'	2:Av:165:DG:C8	2.48	0.49
2:Av:872:DT:H2''	2:Av:873:DG:C8	2.48	0.49
2:Av:1089:DA:H2''	2:Av:1090:DC:O2	2.13	0.49
2:Av:1489:DG:H2''	2:Av:1490:DG:C8	2.47	0.49
5:b:496:ARG:HH11	5:b:496:ARG:HG3	1.77	0.49
5:e:780:GLN:O	3:aq:4198:ARG:NH2	2.46	0.49
5:k:146:ALA:O	5:k:150:ILE:N	2.44	0.49
5:p:744:LEU:O	5:p:747:ILE:HG22	2.13	0.49
7:Am:133:LYS:HE3	7:Am:138:ALA:HA	1.95	0.49
1:Au:881:DG:H2''	1:Au:882:DA:C8	2.48	0.49
1:Au:1027:DT:H2''	1:Au:1028:DG:O4'	2.13	0.49
1:Au:1127:DG:H5'	4:U:1851:LYS:HE2	1.95	0.49
1:Au:1310:DC:N4	2:Av:807:DC:H41	2.11	0.49
1:Au:1535:DT:H2''	1:Au:1536:DT:H5''	1.95	0.49
2:Av:10:DG:H2'	2:Av:11:DG:N2	2.28	0.49
2:Av:152:DA:H2'	2:Av:153:DG:C2	2.48	0.49
2:Av:1062:DC:O4'	7:Ar:55:LYS:NZ	2.42	0.49
2:Av:1494:DC:H2''	2:Av:1495:DA:H8	1.78	0.49
2:Av:1885:DT:H1'	6:y:320:LYS:NZ	2.28	0.49
2:Av:2028:DC:O5'	5:j:37:LYS:NZ	2.45	0.49
5:s:2110:LYS:HE3	5:s:2113:LEU:HD12	1.94	0.49
1:Au:44:DA:H2''	1:Au:45:DA:C8	2.48	0.49
1:Au:249:DT:H2''	1:Au:250:DT:C6	2.48	0.49
1:Au:355:DG:H2'	1:Au:356:DA:N3	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Au:686:DC:H2''	1:Au:687:DA:C4	2.47	0.49
1:Au:1732:DA:H2'	1:Au:1732:DA:N3	2.28	0.49
1:Au:2080:DC:OP1	4:Q:686:ARG:NH2	2.46	0.49
2:Av:745:DA:H2''	2:Av:746:DG:O5'	2.12	0.49
2:Av:1725:DC:H2'	2:Av:1726:DC:C6	2.48	0.49
2:Av:1947:DC:H2''	2:Av:1948:DA:C4	2.48	0.49
4:J:1974:ARG:O	4:J:1975:ARG:NH1	2.46	0.49
5:Z:324:ASP:OD1	5:l:326:HIS:NE2	2.45	0.49
5:c:584:ILE:O	5:c:588:GLN:HG2	2.13	0.49
5:f:3113:ILE:HD11	6:3:3191:LEU:HD11	1.95	0.49
6:v:90:LEU:HB3	6:v:95:ARG:O	2.12	0.49
6:3:3219:VAL:HG22	6:3:3247:GLN:HE22	1.77	0.49
4:ay:382:LYS:NZ	4:ay:392:GLY:H	2.10	0.49
7:Ah:352:THR:HA	7:Ah:356:VAL:HG12	1.95	0.49
7:Am:76:LEU:HD23	7:Am:81:LEU:HB2	1.95	0.49
1:Au:376:DA:H3'	3:F:702:ARG:HH11	1.77	0.48
1:Au:481:DT:H2''	1:Au:482:DA:N7	2.28	0.48
1:Au:988:DT:H2''	1:Au:989:DT:O5'	2.13	0.48
1:Au:1148:DG:H1	2:Av:970:DT:H3	1.61	0.48
1:Au:1873:DT:OP1	6:9:233:ARG:HG2	2.13	0.48
1:Au:1976:DG:H2'	1:Au:1977:DT:H72	1.95	0.48
2:Av:1330:DC:H2''	2:Av:1331:DG:C8	2.48	0.48
2:Av:1703:DC:C2	2:Av:1704:DT:H71	2.49	0.48
3:H:5257:SER:HB2	3:H:5262:LYS:C	2.38	0.48
5:a:399:GLU:HB3	6:y:326:LEU:HD23	1.94	0.48
5:k:167:GLN:HG2	5:k:188:VAL:HG11	1.95	0.48
6:v:16:LYS:O	6:v:17:ARG:NH1	2.46	0.48
6:7:63:GLU:OE1	6:7:67:ARG:NH2	2.45	0.48
6:8:108:LEU:HD13	6:8:111:ASN:HD22	1.78	0.48
6:a3:555:THR:HG22	6:a3:557:MET:H	1.78	0.48
7:Am:59:LYS:HG3	7:Am:61:GLY:H	1.78	0.48
1:Au:17:DT:H2''	1:Au:18:DG:C8	2.48	0.48
1:Au:232:DG:H2'	1:Au:233:DA:C8	2.48	0.48
1:Au:412:DA:H2''	1:Au:413:DG:C8	2.48	0.48
1:Au:494:DC:H2''	1:Au:495:DG:C8	2.48	0.48
1:Au:1167:DA:H2''	1:Au:1168:DA:N7	2.27	0.48
1:Au:1240:DG:H2''	1:Au:1241:DA:C8	2.48	0.48
1:Au:1298:DG:N1	2:Av:820:DG:O6	2.46	0.48
1:Au:1419:DG:H8	2:Av:700:DG:H22	1.61	0.48
2:Av:309:DC:H2'	2:Av:310:DC:H6	1.78	0.48
2:Av:601:DG:H5''	5:i:3268:THR:HB	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Av:1309:DG:O4'	6:2:682:HIS:NE2	2.44	0.48
2:Av:2074:DA:H2'	2:Av:2075:DG:C2	2.48	0.48
3:A:79:ILE:HD11	3:A:81:ARG:HB3	1.95	0.48
3:E:518:ARG:HB3	3:E:527:ARG:HH21	1.76	0.48
4:O:419:GLN:HB3	4:W:2972:LYS:HG2	1.93	0.48
4:U:1875:TYR:CD2	3:Ae:2984:PRO:HD3	2.47	0.48
5:Y:169:THR:HG21	3:ak:204:ARG:HB2	1.95	0.48
5:u:3188:THR:HG22	6:a9:3327:ARG:HB2	1.95	0.48
6:8:136:ILE:HG12	6:8:140:THR:HG23	1.94	0.48
6:8:178:ARG:NH2	4:aw:220:LEU:O	2.46	0.48
7:Al:265:SER:HB2	7:Al:299:TYR:HE2	1.77	0.48
7:Ao:47:ARG:NH1	7:Ao:47:ARG:HB2	2.28	0.48
7:As:16:VAL:O	7:As:16:VAL:HG12	2.13	0.48
1:Au:282:DA:H2''	1:Au:283:DA:H8	1.78	0.48
1:Au:696:DC:H2''	1:Au:697:DA:C8	2.48	0.48
1:Au:810:DT:H2''	1:Au:811:DT:C5	2.49	0.48
1:Au:1245:DT:O2	1:Au:1245:DT:H2'	2.13	0.48
1:Au:1561:DC:H2''	1:Au:1562:DA:C8	2.47	0.48
1:Au:1659:DC:H2''	1:Au:1660:DA:N7	2.27	0.48
2:Av:264:DC:H2''	2:Av:265:DG:C8	2.48	0.48
2:Av:1126:DT:H2'	2:Av:1127:DA:H8	1.78	0.48
2:Av:1300:DG:H2''	2:Av:1301:DG:H8	1.77	0.48
2:Av:1919:DT:H2''	2:Av:1920:DC:C5	2.48	0.48
2:Av:1980:DC:H2''	2:Av:1981:DT:C5	2.48	0.48
2:Av:2051:DC:H2''	2:Av:2052:DT:C6	2.49	0.48
3:L:5456:LEU:HD13	4:W:2901:LEU:HB2	1.95	0.48
5:n:508:PHE:HA	6:a2:467:VAL:HG22	1.95	0.48
5:u:3170:LEU:HB2	6:a9:3319:LEU:HD13	1.95	0.48
3:am:911:SER:HB2	7:Ak:550:LEU:HA	1.94	0.48
4:av:99:LEU:HB2	4:av:104:ALA:HB2	1.95	0.48
1:Au:16:DC:H2'	1:Au:17:DT:H71	1.95	0.48
1:Au:300:DT:H2''	1:Au:301:DC:H5	1.78	0.48
1:Au:348:DC:N4	2:Av:1768:DG:H1	2.10	0.48
1:Au:426:DT:OP2	5:c:577:GLY:N	2.47	0.48
1:Au:477:DT:H2'	3:ao:1045:LYS:HG2	1.95	0.48
1:Au:954:DC:H2''	1:Au:955:DG:C8	2.48	0.48
1:Au:1160:DG:H1	2:Av:958:DG:N2	2.10	0.48
1:Au:1203:DG:H1	2:Av:915:DT:H3	1.60	0.48
1:Au:1331:DT:H2''	1:Au:1332:DC:OP1	2.12	0.48
1:Au:1359:DT:OP2	4:Ad:2869:ARG:NH1	2.29	0.48
1:Au:1413:DA:H62	2:Av:705:DC:H42	1.62	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Au:1484:DC:H2''	1:Au:1485:DC:H5''	1.96	0.48
1:Au:1739:DA:H62	2:Av:379:DA:N6	2.11	0.48
1:Au:1781:DA:H4'	1:Au:1782:DT:OP1	2.12	0.48
1:Au:1847:DC:H4'	1:Au:1848:DG:OP1	2.12	0.48
1:Au:2020:DT:H2''	1:Au:2021:DA:C8	2.48	0.48
2:Av:354:DC:H2''	2:Av:355:DA:C8	2.48	0.48
2:Av:564:DC:H2'	2:Av:565:DT:H71	1.94	0.48
2:Av:621:DG:H5''	5:u:3135:LEU:HB3	1.95	0.48
2:Av:1352:DT:H2''	2:Av:1353:DC:O2	2.13	0.48
2:Av:1352:DT:H5'	4:S:859:GLY:HA3	1.95	0.48
2:Av:1515:DC:OP1	6:w:133:THR:OG1	2.26	0.48
4:R:323:THR:HG23	6:1:640:THR:HG22	1.96	0.48
4:V:1077:GLY:C	4:V:1079:LEU:H	2.21	0.48
4:W:2928:ARG:NH2	6:a9:3380:TYR:OH	2.47	0.48
5:h:1354:LYS:HB2	5:h:1357:LEU:HD11	1.95	0.48
6:5:1424:ARG:NH1	6:5:1429:ASP:OD2	2.45	0.48
4:ax:264:THR:OG1	4:ax:267:LYS:O	2.30	0.48
3:Ae:3008:TYR:O	3:Ae:3012:VAL:HG23	2.13	0.48
7:Aj:183:ILE:O	7:Aj:187:ILE:HD12	2.12	0.48
7:Al:250:ALA:HB3	7:Al:251:PRO:HD3	1.94	0.48
7:Am:46:SER:O	7:Am:50:ILE:HG13	2.13	0.48
1:Au:326:DT:H2''	1:Au:327:DA:C8	2.49	0.48
1:Au:593:DC:H2''	1:Au:594:DT:O5'	2.14	0.48
1:Au:1003:DA:N6	2:Av:1111:DA:N1	2.60	0.48
1:Au:1487:DC:H2''	1:Au:1488:DT:C5	2.48	0.48
1:Au:2026:DC:H2''	1:Au:2027:DA:C8	2.48	0.48
2:Av:382:DC:H5'	3:ap:4013:LYS:HE3	1.94	0.48
2:Av:437:DC:H2''	2:Av:438:DG:C8	2.49	0.48
2:Av:1046:DG:H8	7:Aq:58:TYR:HE1	1.61	0.48
2:Av:1356:DC:H2''	2:Av:1357:DG:C8	2.49	0.48
3:I:2516:VAL:HG22	4:T:2843:ALA:HB1	1.94	0.48
5:l:313:LEU:HD11	6:9:246:LEU:HD13	1.95	0.48
6:3:3200:ILE:HB	6:3:3204:ILE:HG21	1.95	0.48
3:an:919:ARG:HD2	3:an:920:ALA:H	1.79	0.48
1:Au:81:DC:H2'	1:Au:82:DG:C2	2.48	0.48
1:Au:393:DC:H2''	1:Au:394:DG:C8	2.49	0.48
1:Au:644:DA:OP1	4:aw:206:ARG:HD2	2.12	0.48
1:Au:1481:DG:H22	2:Av:638:DG:N2	2.11	0.48
1:Au:1538:DC:H42	2:Av:581:DA:H61	1.60	0.48
2:Av:195:DA:H2'	2:Av:196:DT:H71	1.95	0.48
2:Av:308:DG:H2'	2:Av:309:DC:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Av:365:DG:H2''	2:Av:366:DA:H8	1.78	0.48
2:Av:790:DG:C8	2:Av:790:DG:H5''	2.48	0.48
2:Av:1367:DG:H2''	2:Av:1368:DC:C6	2.48	0.48
2:Av:2114:DT:H2''	2:Av:2115:DC:C2	2.49	0.48
3:I:2488:PRO:HB2	3:I:2491:ARG:HG3	1.95	0.48
4:N:206:GLY:C	4:N:208:LEU:N	2.68	0.48
5:Z:254:ARG:O	5:Z:258:SER:OG	2.30	0.48
5:i:3263:HIS:NE2	5:u:3193:ASP:OD1	2.47	0.48
5:r:3019:ALA:HB1	5:r:3026:LEU:HD23	1.94	0.48
6:1:596:GLN:HG3	6:1:624:ARG:HB3	1.94	0.48
3:an:962:VAL:HG21	4:az:564:VAL:HG21	1.95	0.48
4:aw:127:ALA:C	4:aw:129:ALA:H	2.22	0.48
7:Al:276:ALA:HB1	7:Al:294:TYR:CD2	2.48	0.48
7:Aq:145:SER:O	7:Aq:146:ARG:NE	2.43	0.48
7:Ar:5:VAL:C	7:Ar:8:PRO:HD2	2.38	0.48
1:Au:418:DA:H4'	6:0:502:LYS:HE3	1.96	0.48
1:Au:438:DA:H2'	1:Au:439:DC:H6	1.79	0.48
1:Au:515:DG:O6	2:Av:1599:DA:N6	2.47	0.48
1:Au:772:DA:H2''	1:Au:773:DG:C8	2.49	0.48
1:Au:988:DT:H4'	1:Au:989:DT:OP1	2.13	0.48
1:Au:1082:DA:H2'	1:Au:1083:DG:C8	2.48	0.48
1:Au:1215:DT:H2''	1:Au:1216:DA:C8	2.49	0.48
1:Au:1267:DG:H2'	1:Au:1268:DG:C5	2.49	0.48
1:Au:1335:DC:H2''	1:Au:1336:DC:C6	2.48	0.48
1:Au:1451:DA:H2''	1:Au:1452:DG:C8	2.48	0.48
2:Av:274:DA:H2''	2:Av:275:DG:O5'	2.12	0.48
2:Av:319:DG:H2'	2:Av:320:DG:C8	2.49	0.48
2:Av:438:DG:H5''	2:Av:438:DG:C8	2.44	0.48
2:Av:813:DT:H2''	2:Av:814:DA:H8	1.79	0.48
2:Av:1330:DC:OP1	5:q:791:VAL:HB	2.13	0.48
2:Av:1614:DT:H2'	2:Av:1615:DG:C8	2.48	0.48
4:N:209:ALA:O	4:N:210:LYS:C	2.56	0.48
5:d:749:THR:HG22	6:1:614:ARG:HB2	1.96	0.48
5:l:245:THR:OG1	5:l:246:GLY:N	2.45	0.48
4:aw:125:LYS:HE3	4:aw:128:PRO:HD3	1.95	0.48
7:Aj:181:GLN:H	7:Aj:181:GLN:CD	2.22	0.48
7:An:54:ILE:O	7:An:58:TYR:HB3	2.14	0.48
7:Ao:125:ARG:O	7:Ao:131:ALA:HB2	2.14	0.48
7:Ap:36:ILE:HD13	7:Ap:95:LEU:HD13	1.95	0.48
1:Au:546:DC:H42	2:Av:1568:DA:N6	2.11	0.48
1:Au:764:DA:H5'	1:Au:764:DA:C8	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Au:854:DA:H2''	1:Au:855:DC:C6	2.48	0.48
1:Au:961:DA:H2''	1:Au:962:DC:C6	2.49	0.48
1:Au:1088:DC:H42	2:Av:1030:DA:H61	1.61	0.48
1:Au:1326:DC:H1'	6:a6:3237:ARG:NH2	2.28	0.48
1:Au:1371:DT:H2''	1:Au:1372:DC:C2	2.49	0.48
2:Av:418:DT:H2'	2:Av:419:DA:C8	2.49	0.48
2:Av:1276:DA:H2''	2:Av:1277:DG:C8	2.48	0.48
3:B:247:GLU:HG3	3:B:249:SER:H	1.77	0.48
3:C:318:LEU:HD13	4:O:417:LEU:HB2	1.96	0.48
3:F:678:ALA:HB1	4:At:110:GLU:HG3	1.96	0.48
3:K:5281:SER:OG	3:K:5286:LEU:O	2.32	0.48
3:K:5284:ALA:HB2	4:V:1094:TYR:HB2	1.96	0.48
5:c:651:THR:HG23	6:O:527:ARG:HG2	1.96	0.48
5:p:696:LEU:HD13	6:a4:606:LEU:HD23	1.96	0.48
6:1:670:GLY:O	4:Ab:756:SER:OG	2.30	0.48
4:aw:168:VAL:HG23	4:aw:169:HIS:CD2	2.48	0.48
4:ax:289:LYS:NZ	4:ax:295:THR:O	2.47	0.48
1:Au:487:DC:H2''	1:Au:488:DC:H5''	1.96	0.48
1:Au:1019:DC:H42	2:Av:1095:DC:N4	2.11	0.48
1:Au:1518:DT:H3	2:Av:601:DG:H1	1.62	0.48
1:Au:1731:DC:C2	1:Au:1732:DA:C8	3.02	0.48
1:Au:2107:DT:H2''	1:Au:2108:DG:N7	2.28	0.48
2:Av:470:DA:C2	3:G:767:LYS:HD2	2.49	0.48
2:Av:851:DG:H2''	2:Av:852:DG:C8	2.49	0.48
2:Av:1100:DG:H2''	2:Av:1101:DA:C8	2.48	0.48
2:Av:1259:DA:H2'	2:Av:1260:DT:C6	2.48	0.48
2:Av:1380:DC:H4'	2:Av:1381:DG:OP1	2.12	0.48
2:Av:1405:DC:OP2	7:Ao:128:ARG:NH1	2.38	0.48
2:Av:1656:DT:H2'	2:Av:1657:DT:C6	2.49	0.48
5:Y:227:ARG:HH22	5:k:212:HIS:CE1	2.32	0.48
6:y:326:LEU:HG	6:y:329:ASN:HD21	1.79	0.48
7:Ah:353:GLU:OE1	7:Ah:353:GLU:N	2.47	0.48
7:Al:241:MET:HE3	7:Al:245:LEU:HD11	1.95	0.48
1:Au:127:DT:H3	2:Av:1990:DG:N2	2.04	0.48
1:Au:355:DG:H2'	1:Au:356:DA:C2	2.49	0.48
1:Au:602:DC:H42	2:Av:1512:DA:N6	2.11	0.48
1:Au:681:DA:H2''	1:Au:682:DT:O2	2.14	0.48
1:Au:990:DA:H2''	1:Au:991:DA:H8	1.79	0.48
1:Au:1318:DC:H41	2:Av:799:DC:H41	1.61	0.48
1:Au:1443:DC:H2''	1:Au:1444:DG:C8	2.49	0.48
2:Av:458:DC:H2'	2:Av:459:DT:C5	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Av:2038:DC:H1'	2:Av:2039:DG:C4	2.49	0.48
3:F:744:LYS:NZ	3:F:747:SER:O	2.47	0.48
5:a:364:PRO:O	5:a:366:ARG:NH1	2.47	0.48
5:p:696:LEU:N	5:p:732:GLU:OE2	2.45	0.48
6:a8:1548:ARG:NE	4:Af:1147:GLU:OE2	2.43	0.48
3:am:801:SER:O	3:am:806:LEU:N	2.46	0.48
4:az:499:ARG:HG3	4:az:501:GLU:H	1.78	0.48
1:Au:22:DA:H2'	1:Au:23:DA:C8	2.49	0.47
1:Au:188:DA:H2''	1:Au:189:DT:O2	2.14	0.47
1:Au:232:DG:H2'	1:Au:233:DA:H8	1.78	0.47
1:Au:319:DT:H4'	1:Au:320:DG:OP1	2.13	0.47
1:Au:514:DT:H2'	1:Au:514:DT:O2	2.14	0.47
1:Au:607:DA:H2''	1:Au:608:DC:H5''	1.95	0.47
1:Au:1303:DA:H61	2:Av:815:DG:H1	1.62	0.47
1:Au:1603:DG:N2	1:Au:1604:DA:H62	2.12	0.47
1:Au:1650:DC:H2''	1:Au:1651:DA:C8	2.48	0.47
1:Au:1733:DC:C2	1:Au:1734:DG:C8	3.02	0.47
2:Av:62:DG:C8	2:Av:63:DT:H72	2.49	0.47
2:Av:592:DG:H2''	2:Av:593:DG:H8	1.79	0.47
2:Av:859:DC:H2''	2:Av:860:DA:C8	2.49	0.47
2:Av:1283:DG:N3	2:Av:1283:DG:H2'	2.29	0.47
2:Av:1312:DG:N3	2:Av:1312:DG:H5''	2.29	0.47
2:Av:2028:DC:H2''	2:Av:2029:DG:C4	2.49	0.47
5:X:83:ARG:N	6:v:79:LYS:O	2.40	0.47
5:a:342:PRO:O	5:a:343:ARG:NE	2.44	0.47
5:b:527:LEU:HD23	6:z:425:LEU:HD13	1.94	0.47
5:j:71:VAL:HG12	6:7:62:LEU:HD21	1.96	0.47
5:n:514:MET:HE2	5:n:514:MET:HA	1.96	0.47
5:u:3091:ALA:HB2	5:u:3104:GLY:H	1.79	0.47
6:a8:1522:ILE:O	6:a8:1526:VAL:HG12	2.14	0.47
4:av:53:SER:HA	4:av:56:MET:HB2	1.96	0.47
7:Aj:150:LYS:HE3	7:Aj:192:LYS:NZ	2.29	0.47
1:Au:448:DC:H3'	1:Au:449:DC:C6	2.49	0.47
1:Au:1138:DA:H2''	1:Au:1139:DC:C6	2.48	0.47
1:Au:1711:DA:H2'	1:Au:1712:DT:C5	2.49	0.47
2:Av:495:DC:H2''	2:Av:496:DG:C8	2.49	0.47
2:Av:1157:DT:H2''	2:Av:1158:DA:O5'	2.14	0.47
2:Av:1834:DT:H2''	2:Av:1835:DA:H5''	1.96	0.47
5:a:344:LYS:HG2	7:Ak:490:LEU:HD11	1.95	0.47
6:z:410:LEU:HG	6:z:411:ARG:H	1.79	0.47
7:Am:115:SER:OG	7:Am:116:THR:N	2.46	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:Ao:17:LYS:HB2	7:Ao:58:TYR:HB2	1.95	0.47
7:Aq:64:ALA:HA	7:Aq:67:GLN:HB2	1.96	0.47
1:Au:369:DC:N4	2:Av:1745:DA:H62	2.13	0.47
1:Au:1234:DG:H5''	7:Aq:116:THR:HB	1.95	0.47
1:Au:1316:DC:H5'	5:r:3007:ARG:HD3	1.96	0.47
1:Au:1488:DT:H2''	1:Au:1489:DT:H71	1.96	0.47
1:Au:1687:DC:H42	2:Av:433:DA:H61	1.62	0.47
2:Av:593:DG:H4'	6:6:3257:ALA:HB3	1.96	0.47
2:Av:823:DT:H2''	2:Av:824:DA:C8	2.49	0.47
2:Av:1071:DA:H2''	2:Av:1072:DG:C8	2.49	0.47
2:Av:1129:DA:H2''	2:Av:1130:DA:O4'	2.14	0.47
2:Av:1459:DG:H2''	2:Av:1460:DG:N7	2.29	0.47
3:G:817:LEU:HD13	4:R:272:LEU:HB2	1.97	0.47
5:p:703:GLN:HG2	5:p:707:ARG:HE	1.79	0.47
6:x:270:ASP:HB3	6:x:291:ALA:HB1	1.95	0.47
6:7:82:THR:OG1	6:7:85:ASP:OD1	2.32	0.47
6:a8:1543:VAL:HG21	6:a8:1557:GLY:HA3	1.96	0.47
1:Au:26:DC:H5''	1:Au:26:DC:H6	1.79	0.47
1:Au:73:DT:O2	5:X:40:ARG:NH1	2.41	0.47
1:Au:709:DG:H2''	1:Au:710:DA:N9	2.30	0.47
1:Au:761:DT:H2''	1:Au:762:DA:O5'	2.14	0.47
1:Au:773:DG:H22	2:Av:1341:DT:H3	1.62	0.47
1:Au:871:DT:H1'	1:Au:872:DC:C6	2.49	0.47
1:Au:908:DA:N6	2:Av:1205:DG:O6	2.48	0.47
1:Au:1071:DG:H21	2:Av:1047:DG:H1	1.60	0.47
1:Au:1132:DG:N2	2:Av:986:DG:H22	2.12	0.47
1:Au:1352:DA:N6	2:Av:766:DG:C6	2.82	0.47
1:Au:1486:DG:H21	4:W:2885:ARG:HH22	1.62	0.47
1:Au:1676:DT:H5'	5:d:694:ARG:HH11	1.79	0.47
2:Av:998:DT:H2''	2:Av:999:DC:C5	2.49	0.47
2:Av:1434:DA:H2''	2:Av:1435:DT:C2	2.48	0.47
2:Av:1769:DG:H2'	2:Av:1770:DC:C6	2.49	0.47
4:V:1080:ALA:O	4:V:1084:VAL:HG23	2.14	0.47
5:n:550:LEU:O	5:n:554:ILE:HG12	2.15	0.47
6:w:105:GLY:HA3	6:w:113:LEU:HD21	1.96	0.47
6:2:682:HIS:CD2	6:2:682:HIS:C	2.92	0.47
6:3:3175:VAL:HG13	6:3:3177:ARG:HE	1.79	0.47
3:aq:4235:LYS:O	3:aq:4236:LYS:HD2	2.13	0.47
7:Ah:360:ALA:HB3	7:Ah:361:PRO:HD3	1.96	0.47
7:Ar:55:LYS:HE2	7:Ar:55:LYS:HA	1.96	0.47
1:Au:24:DT:H2''	1:Au:25:DC:C5	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Au:53:DT:H2''	1:Au:54:DA:C8	2.50	0.47
1:Au:370:DC:H42	2:Av:1744:DC:H42	1.62	0.47
1:Au:520:DA:H2''	1:Au:521:DG:H22	1.80	0.47
1:Au:736:DG:N1	2:Av:1378:DA:C2	2.82	0.47
1:Au:837:DG:H2''	1:Au:838:DT:H71	1.96	0.47
1:Au:1357:DA:N6	2:Av:760:DC:H42	2.13	0.47
1:Au:1883:DA:N3	1:Au:1883:DA:H2'	2.29	0.47
2:Av:55:DC:H2'	2:Av:56:DT:C6	2.50	0.47
3:H:5208:ASN:HD22	3:H:5217:HIS:CD2	2.32	0.47
5:d:743:ILE:HD13	3:ap:4114:VAL:HG11	1.96	0.47
5:j:119:ILE:HG22	6:7:50:ILE:HG13	1.95	0.47
6:z:487:GLY:HA2	4:az:527:ILE:HD13	1.96	0.47
6:a9:3344:LEU:O	6:a9:3348:ILE:HG23	2.14	0.47
4:Ab:712:LYS:N	4:Ab:712:LYS:HD3	2.30	0.47
7:Ak:600:THR:O	7:Ak:604:LYS:HG3	2.14	0.47
1:Au:32:DC:H2''	1:Au:33:DC:O4'	2.14	0.47
1:Au:237:DC:H2'	1:Au:238:DT:O2	2.15	0.47
1:Au:567:DG:H3'	3:B:137:ARG:HH21	1.80	0.47
1:Au:1651:DA:H2''	1:Au:1652:DG:C4	2.50	0.47
1:Au:1735:DT:H2'	1:Au:1736:DG:H8	1.77	0.47
2:Av:14:DG:O3'	3:E:584:ARG:NH1	2.36	0.47
2:Av:73:DG:H2''	2:Av:74:DG:C8	2.50	0.47
2:Av:110:DC:H2''	2:Av:111:DT:O2	2.15	0.47
2:Av:1405:DC:H5''	7:Ao:128:ARG:NH2	2.30	0.47
2:Av:1596:DT:H3'	2:Av:1597:DG:C8	2.49	0.47
2:Av:1841:DC:H2''	2:Av:1842:DG:C8	2.49	0.47
3:I:2480:SER:O	3:I:2484:GLY:N	2.47	0.47
4:W:2931:GLY:O	4:W:2935:ARG:NH1	2.47	0.47
5:Y:227:ARG:HH22	5:k:212:HIS:HE1	1.61	0.47
5:e:769:GLY:O	6:2:708:LYS:NZ	2.47	0.47
5:k:217:THR:HG23	6:8:131:ARG:O	2.15	0.47
3:am:797:ALA:O	3:am:798:LYS:C	2.55	0.47
3:an:927:SER:OG	3:an:931:LEU:O	2.30	0.47
3:Ae:2982:GLN:N	3:Ae:3014:GLU:OE2	2.46	0.47
1:Au:249:DT:H73	7:Ak:561:ALA:HB1	1.96	0.47
1:Au:495:DG:H2'	1:Au:496:DT:C6	2.49	0.47
1:Au:588:DC:H2''	1:Au:589:DA:H5''	1.95	0.47
1:Au:736:DG:N2	2:Av:1379:DC:O2	2.48	0.47
1:Au:1048:DT:H2''	1:Au:1049:DC:O5'	2.14	0.47
1:Au:1262:DA:N6	2:Av:856:DC:H42	2.13	0.47
1:Au:1286:DT:H2'	1:Au:1287:DG:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Au:1407:DT:H2''	1:Au:1408:DG:O5'	2.15	0.47
1:Au:1824:DA:H61	2:Av:295:DG:N2	2.13	0.47
1:Au:2073:DC:H2''	1:Au:2074:DT:C2	2.49	0.47
2:Av:50:DA:H2''	2:Av:51:DT:N3	2.29	0.47
2:Av:83:DC:H2''	2:Av:84:DG:C8	2.50	0.47
2:Av:218:DT:H2'	2:Av:219:DA:C8	2.50	0.47
2:Av:268:DC:H2''	2:Av:269:DG:C8	2.50	0.47
2:Av:285:DA:H2''	2:Av:286:DG:H5''	1.97	0.47
2:Av:732:DG:H2''	2:Av:733:DA:H5''	1.95	0.47
2:Av:863:DG:N2	2:Av:864:DG:O6	2.47	0.47
2:Av:907:DG:H2''	2:Av:908:DT:C6	2.48	0.47
2:Av:967:DG:H2''	2:Av:968:DC:C5	2.50	0.47
2:Av:1395:DG:H5''	2:Av:1395:DG:C8	2.50	0.47
2:Av:1471:DC:H2'	2:Av:1472:DT:H71	1.96	0.47
2:Av:1568:DA:H5''	2:Av:1569:DG:N2	2.30	0.47
2:Av:2114:DT:O2	2:Av:2114:DT:H2'	2.13	0.47
3:B:227:THR:HG21	6:8:181:ARG:NH2	2.26	0.47
4:J:1990:LEU:HB2	3:as:1770:LEU:HD13	1.96	0.47
3:K:5370:VAL:HG21	5:t:1279:VAL:HG11	1.96	0.47
3:L:5516:SER:OG	3:L:5517:LYS:N	2.45	0.47
4:V:1035:MET:O	4:V:1039:VAL:HG23	2.15	0.47
4:V:1069:THR:HG23	6:5:1476:THR:HG22	1.96	0.47
5:e:843:THR:HG22	6:2:709:ARG:HB2	1.97	0.47
5:k:208:LEU:O	5:k:211:ILE:HG22	2.15	0.47
6:w:125:LEU:HD22	6:w:128:ASN:HD21	1.79	0.47
6:0:512:THR:OG1	6:0:513:LYS:N	2.48	0.47
6:a2:391:LYS:HG3	6:a2:400:GLY:N	2.29	0.47
6:a9:3308:ILE:HG22	6:a9:3310:GLY:H	1.80	0.47
3:ap:4073:ASN:HD22	3:ap:4082:HIS:CD2	2.33	0.47
3:ap:4127:LYS:O	7:An:66:LEU:HD23	2.15	0.47
3:as:1725:SER:OG	3:as:1732:PHE:O	2.24	0.47
4:Ab:703:LYS:HD2	4:Ab:703:LYS:HA	1.64	0.47
3:Ae:3025:GLY:HA2	3:Ae:3036:ILE:HD11	1.96	0.47
7:Ah:471:LYS:HD2	7:Ah:471:LYS:C	2.40	0.47
7:Ai:118:PRO:HD2	7:Ai:119:LYS:H	1.79	0.47
7:Ak:567:GLN:HG2	7:Ak:577:PHE:HD1	1.80	0.47
7:Aq:84:THR:OG1	7:Aq:92:SER:OG	2.31	0.47
7:Ar:3:SER:O	7:Ar:3:SER:OG	2.33	0.47
1:Au:1080:DG:N2	6:2:674:LEU:HB2	2.29	0.47
1:Au:1523:DC:OP1	6:6:3277:ARG:NH1	2.48	0.47
1:Au:1860:DT:H2''	1:Au:1861:DG:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Av:43:DG:H2'	2:Av:44:DG:O4'	2.15	0.47
2:Av:312:DC:H2''	2:Av:313:DG:C4	2.50	0.47
2:Av:604:DG:H2''	3:L:5517:LYS:HZ2	1.80	0.47
2:Av:1511:DT:H2'	2:Av:1512:DA:C2	2.50	0.47
2:Av:1579:DA:H3'	7:Ai:14:LYS:HE3	1.96	0.47
2:Av:1791:DT:H2''	2:Av:1792:DG:C8	2.50	0.47
2:Av:1987:DC:H2''	2:Av:1988:DT:C2	2.50	0.47
5:a:409:ARG:O	6:y:384:THR:HA	2.15	0.47
5:f:3164:HIS:NE2	5:r:3067:ASP:OD1	2.43	0.47
5:q:785:ARG:HG2	5:q:785:ARG:O	2.15	0.47
5:r:3010:PRO:HA	5:r:3013:ARG:HE	1.79	0.47
6:z:485:LEU:HG	6:z:487:GLY:H	1.80	0.47
7:Ar:84:THR:HG23	7:Ar:94:ARG:HH22	1.80	0.47
1:Au:377:DA:H8	3:F:702:ARG:HH12	1.63	0.47
1:Au:934:DG:H5'	3:at:4285:ARG:HG3	1.97	0.47
1:Au:982:DC:H2''	1:Au:983:DG:C4	2.50	0.47
1:Au:1711:DA:N6	2:Av:408:DC:C4	2.83	0.47
2:Av:51:DT:O2	2:Av:51:DT:H2'	2.13	0.47
2:Av:831:DA:C4	2:Av:832:DT:H71	2.50	0.47
2:Av:1515:DC:H4'	6:w:135:PRO:HG3	1.97	0.47
2:Av:1568:DA:H3'	2:Av:1569:DG:C2	2.49	0.47
2:Av:2038:DC:H6	7:Ah:427:LEU:HD21	1.79	0.47
3:K:5366:ALA:HB3	4:V:1034:ILE:HD11	1.96	0.47
5:j:103:LEU:O	5:j:107:THR:OG1	2.29	0.47
4:av:40:LYS:O	4:av:44:GLN:HG2	2.15	0.47
4:az:522:SER:HA	4:az:525:MET:HG3	1.97	0.47
7:Ai:68:ILE:O	7:Ai:72:ILE:HG13	2.15	0.47
1:Au:67:DA:C6	2:Av:2050:DG:N1	2.83	0.47
1:Au:493:DA:C8	1:Au:494:DC:C4	3.02	0.47
1:Au:970:DC:OP2	7:Ar:83:GLN:NE2	2.48	0.47
1:Au:1162:DG:H5'	1:Au:1162:DG:H8	1.80	0.47
1:Au:1246:DC:N4	2:Av:873:DG:H22	2.10	0.47
1:Au:1389:DA:N6	2:Av:729:DT:O4	2.34	0.47
1:Au:1497:DC:H2''	1:Au:1498:DG:C8	2.49	0.47
1:Au:1595:DA:H3'	1:Au:1596:DG:H21	1.80	0.47
2:Av:75:DG:H2''	2:Av:76:DG:O5'	2.15	0.47
2:Av:248:DC:H5''	7:Aj:180:ARG:NH2	2.29	0.47
2:Av:508:DG:H2''	2:Av:509:DG:H5''	1.97	0.47
2:Av:1798:DC:H2''	2:Av:1799:DG:C8	2.50	0.47
6:v:38:ALA:HB1	6:v:43:VAL:HB	1.97	0.47
6:0:532:ILE:O	6:0:536:THR:OG1	2.24	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:a9:3316:ILE:HD12	6:a9:3333:TYR:HD1	1.80	0.47
7:Aj:195:HIS:ND1	7:Aj:199:LEU:HG	2.30	0.47
7:An:50:ILE:HA	7:An:53:TYR:CD2	2.50	0.47
7:Ao:51:GLN:HG2	7:Ao:55:LYS:HZ3	1.80	0.47
7:Ap:74:ARG:HH12	7:Ap:78:ALA:HB2	1.79	0.47
7:Ar:17:LYS:HA	7:Ar:24:SER:HB3	1.96	0.47
1:Au:279:DT:H1'	1:Au:280:DT:H5'	1.97	0.46
1:Au:363:DG:H2''	1:Au:364:DG:C8	2.50	0.46
1:Au:369:DC:H42	2:Av:1745:DA:H62	1.63	0.46
1:Au:614:DT:O4	2:Av:1499:DC:N4	2.47	0.46
1:Au:809:DT:H2''	1:Au:810:DT:C6	2.50	0.46
1:Au:896:DA:H4'	7:Ar:136:ALA:O	2.15	0.46
1:Au:1102:DG:H22	2:Av:1016:DG:H22	1.62	0.46
2:Av:63:DT:H5'	5:b:463:LYS:HZ3	1.80	0.46
2:Av:319:DG:H2''	2:Av:320:DG:O5'	2.15	0.46
2:Av:340:DA:H4'	2:Av:341:DT:OP1	2.16	0.46
2:Av:403:DA:H2''	2:Av:404:DA:N7	2.29	0.46
2:Av:1185:DA:C8	2:Av:1186:DT:H71	2.50	0.46
2:Av:2072:DT:H2'	2:Av:2073:DG:H21	1.79	0.46
4:U:1945:ALA:HB1	3:Ae:3012:VAL:HG13	1.96	0.46
5:Y:153:ARG:O	5:Y:157:VAL:HG23	2.15	0.46
5:d:686:GLN:O	3:ap:4081:ARG:NH2	2.41	0.46
5:t:1281:LEU:HD21	5:t:1302:ILE:HD11	1.97	0.46
6:0:534:GLU:OE2	6:0:537:ARG:NH2	2.44	0.46
7:As:57:HIS:ND1	7:As:58:TYR:N	2.63	0.46
7:As:119:LYS:O	7:As:123:ARG:HG3	2.15	0.46
1:Au:63:DT:H2''	1:Au:64:DA:N7	2.30	0.46
1:Au:1095:DC:H2''	1:Au:1096:DG:N7	2.31	0.46
1:Au:1149:DC:H2''	1:Au:1150:DG:H8	1.79	0.46
1:Au:1337:DG:N1	2:Av:781:DG:C6	2.84	0.46
1:Au:1824:DA:H61	2:Av:295:DG:H22	1.61	0.46
2:Av:69:DC:N4	2:Av:70:DG:O6	2.48	0.46
2:Av:126:DG:H2'	2:Av:127:DA:C8	2.50	0.46
2:Av:410:DT:H3'	2:Av:411:DT:H71	1.97	0.46
2:Av:800:DG:C4	2:Av:801:DT:H72	2.51	0.46
2:Av:991:DA:H2''	2:Av:992:DG:N7	2.31	0.46
2:Av:1333:DT:C6	2:Av:1333:DT:H5'	2.51	0.46
4:T:2758:ASP:N	4:T:2758:ASP:OD1	2.48	0.46
5:g:2263:LEU:HD22	5:s:2144:HIS:CG	2.50	0.46
7:Ak:578:ARG:HE	7:Ak:578:ARG:HB2	1.47	0.46
7:Am:160:ALA:O	7:Am:167:LYS:N	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Au:260:DT:H2''	1:Au:261:DA:C8	2.50	0.46
1:Au:276:DC:H2''	1:Au:277:DG:H8	1.79	0.46
1:Au:399:DA:H61	2:Av:1716:DA:H61	1.64	0.46
1:Au:538:DC:H5''	6:CD:292:GLY:HA2	1.97	0.46
1:Au:893:DC:H2'	1:Au:894:DG:C4	2.50	0.46
1:Au:938:DT:H2''	1:Au:939:DA:C8	2.50	0.46
1:Au:1156:DC:N4	2:Av:962:DA:H61	2.13	0.46
1:Au:1289:DT:H2''	1:Au:1290:DC:C6	2.50	0.46
1:Au:1455:DC:H42	2:Av:664:DC:N4	2.13	0.46
1:Au:1806:DG:H2''	1:Au:1807:DG:C8	2.51	0.46
1:Au:1826:DA:N3	1:Au:1826:DA:H2'	2.29	0.46
1:Au:1842:DT:H2'	1:Au:1843:DT:H71	1.96	0.46
2:Av:546:DT:H6	2:Av:546:DT:H2'	1.58	0.46
2:Av:1435:DT:H2''	2:Av:1436:DA:C8	2.50	0.46
2:Av:1892:DA:H2''	2:Av:1893:DA:C8	2.51	0.46
2:Av:2009:DG:H2'	2:Av:2010:DT:C7	2.43	0.46
2:Av:2070:DA:N3	2:Av:2070:DA:H2'	2.30	0.46
3:B:218:GLU:HB3	4:N:208:LEU:CD1	2.34	0.46
3:E:523:THR:H	3:E:526:SER:HG	1.63	0.46
6:5:1435:THR:HG22	6:5:1436:LYS:H	1.81	0.46
3:aq:4171:VAL:HG21	4:Ac:890:VAL:HG21	1.97	0.46
3:at:4249:GLN:HE22	4:Af:1196:LYS:NZ	2.12	0.46
1:Au:55:DG:H5''	1:Au:55:DG:H8	1.79	0.46
1:Au:72:DT:H1'	1:Au:73:DT:H5'	1.98	0.46
1:Au:351:DA:H62	2:Av:1766:DC:N4	2.13	0.46
1:Au:454:DG:H2'	1:Au:455:DT:H6	1.81	0.46
1:Au:481:DT:H2''	1:Au:482:DA:C8	2.51	0.46
1:Au:507:DT:H2'	1:Au:508:DA:C8	2.49	0.46
1:Au:2022:DA:N6	2:Av:95:DT:O4	2.48	0.46
2:Av:152:DA:H2'	2:Av:153:DG:N2	2.30	0.46
2:Av:1068:DA:H2''	2:Av:1069:DA:H5''	1.98	0.46
2:Av:1351:DG:H2''	2:Av:1352:DT:O5'	2.16	0.46
2:Av:1531:DT:H2''	2:Av:1532:DA:C8	2.51	0.46
2:Av:1685:DG:H2'	2:Av:1686:DT:H71	1.97	0.46
3:E:550:VAL:HA	4:Q:689:ILE:HG22	1.98	0.46
4:J:1973:LYS:HD2	4:J:1973:LYS:HA	1.80	0.46
4:P:559:HIS:HE1	3:am:821:ASN:HD22	1.63	0.46
5:b:477:GLU:OE1	6:z:427:ARG:NH2	2.49	0.46
5:s:2092:LEU:HD12	6:a7:2318:LEU:HD23	1.98	0.46
6:3:3252:TYR:HE2	3:ar:2697:VAL:HG21	1.80	0.46
6:7:68:ASP:OD2	6:7:92:ARG:NE	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CD:370:MET:O	6:CD:373:VAL:HG12	2.14	0.46
3:at:4277:LEU:HD13	3:at:4286:VAL:HG11	1.98	0.46
4:aw:138:VAL:HG21	4:aw:140:LYS:NZ	2.30	0.46
7:Ak:519:ALA:HB3	7:Ak:579:LEU:HD22	1.97	0.46
1:Au:254:DC:H2''	1:Au:255:DG:C8	2.50	0.46
1:Au:435:DC:H2''	1:Au:436:DG:C8	2.51	0.46
1:Au:488:DC:H2''	1:Au:489:DA:H8	1.80	0.46
1:Au:1075:DC:H2'	1:Au:1076:DC:C6	2.50	0.46
1:Au:1341:DT:C6	1:Au:1341:DT:H5''	2.50	0.46
1:Au:2047:DG:H2'	1:Au:2048:DT:C6	2.50	0.46
2:Av:1301:DG:H2''	2:Av:1302:DT:C5	2.50	0.46
2:Av:1309:DG:C4'	6:2:682:HIS:HE2	2.28	0.46
2:Av:1516:DG:H2'	2:Av:1517:DG:C8	2.51	0.46
2:Av:2029:DG:H5''	5:j:39:HIS:CD2	2.50	0.46
4:N:202:LEU:O	6:w:195:ARG:NH2	2.49	0.46
4:O:433:ILE:HG13	6:9:287:GLY:HA2	1.97	0.46
4:O:465:GLU:HA	6:x:277:HIS:CE1	2.51	0.46
5:a:453:ALA:O	5:a:457:ARG:HG3	2.16	0.46
6:1:589:LYS:HG3	6:1:591:LEU:H	1.81	0.46
6:CD:302:LYS:HE2	6:CD:302:LYS:HA	1.98	0.46
6:a9:3312:THR:OG1	6:a9:3313:LYS:N	2.48	0.46
7:Aj:143:PRO:HD2	7:Aj:144:ALA:N	2.31	0.46
7:An:12:LYS:HB2	7:An:13:PRO:HD3	1.98	0.46
7:As:11:ALA:HA	7:As:14:LYS:HE2	1.95	0.46
1:Au:138:DC:H2''	1:Au:139:DA:C8	2.50	0.46
1:Au:438:DA:H2''	1:Au:439:DC:OP1	2.14	0.46
1:Au:849:DG:H2''	1:Au:850:DT:C6	2.51	0.46
1:Au:1934:DC:H2''	1:Au:1935:DC:C2	2.51	0.46
1:Au:2053:DA:H2''	1:Au:2054:DC:O4'	2.16	0.46
2:Av:369:DT:H2''	2:Av:370:DA:C8	2.51	0.46
2:Av:608:DA:H5''	2:Av:608:DA:C8	2.51	0.46
2:Av:1392:DG:H4'	2:Av:1393:DG:OP1	2.16	0.46
2:Av:1684:DC:OP2	5:c:651:THR:N	2.29	0.46
2:Av:2022:DG:H2'	2:Av:2023:DG:C8	2.50	0.46
3:B:216:ASP:HB3	3:B:219:LEU:HD12	1.96	0.46
5:a:363:LYS:HD2	5:a:363:LYS:O	2.15	0.46
5:q:786:TYR:OH	5:q:794:ARG:NH2	2.48	0.46
6:z:486:TYR:CZ	3:an:1008:VAL:HG11	2.50	0.46
6:4:2311:ARG:HG3	4:Ag:3171:GLU:OE2	2.15	0.46
4:Ac:819:LYS:HD2	4:Ac:819:LYS:C	2.41	0.46
7:Ah:400:SER:HB3	7:Ah:404:TYR:OH	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:Ao:39:GLU:HG2	7:Ao:41:SER:H	1.81	0.46
7:Ap:59:LYS:HE2	7:Ap:67:GLN:HE22	1.80	0.46
4:At:40:LYS:O	4:At:44:GLN:HG2	2.16	0.46
4:At:87:THR:OG1	4:At:88:SER:N	2.48	0.46
1:Au:616:DC:H2''	1:Au:617:DG:C8	2.51	0.46
1:Au:1212:DA:H2'	1:Au:1213:DT:H71	1.97	0.46
1:Au:1333:DC:H2''	1:Au:1334:DC:N3	2.31	0.46
1:Au:1631:DC:H41	2:Av:489:DC:N4	2.13	0.46
1:Au:1639:DT:H2''	1:Au:1640:DT:N3	2.30	0.46
1:Au:1654:DT:H2''	1:Au:1655:DC:C6	2.50	0.46
1:Au:1991:DA:H2''	1:Au:1992:DA:H5'	1.98	0.46
2:Av:45:DG:H2'	2:Av:46:DA:N3	2.31	0.46
2:Av:272:DT:OP2	5:Z:284:ARG:NE	2.48	0.46
2:Av:289:DG:H2''	2:Av:290:DT:OP1	2.15	0.46
2:Av:1803:DC:H2''	2:Av:1804:DT:O4'	2.15	0.46
2:Av:2038:DC:C6	7:Ah:427:LEU:HD21	2.51	0.46
3:G:818:GLU:OE2	3:G:822:ASN:ND2	2.49	0.46
3:L:5435:ARG:HB2	4:W:2944:THR:HG22	1.96	0.46
3:L:5472:ILE:HG12	3:L:5475:HIS:CE1	2.51	0.46
5:j:126:LEU:O	5:j:130:ILE:HG22	2.16	0.46
5:q:791:VAL:O	5:q:795:GLU:N	2.45	0.46
6:0:513:LYS:HG3	6:0:533:TYR:CZ	2.51	0.46
4:ay:456:THR:OG1	4:ay:457:SER:N	2.49	0.46
7:Ai:5:VAL:HG12	7:Ar:170:LYS:HE3	1.98	0.46
7:Ai:153:LYS:HA	7:Ar:21:ARG:NH1	2.31	0.46
7:Aj:182:SER:O	7:Aj:186:TYR:HD1	1.99	0.46
7:Al:276:ALA:HB1	7:Al:294:TYR:HD2	1.79	0.46
7:Am:32:ILE:O	7:Am:36:ILE:HG12	2.16	0.46
7:As:65:ASP:N	7:As:65:ASP:OD1	2.47	0.46
1:Au:536:DA:H62	2:Av:1577:DG:H1	1.62	0.46
1:Au:659:DA:H61	2:Av:1454:DG:H22	1.63	0.46
1:Au:851:DG:H2'	1:Au:852:DT:H71	1.98	0.46
1:Au:868:DT:H2''	1:Au:869:DG:C5	2.51	0.46
1:Au:990:DA:C4	1:Au:991:DA:C8	3.03	0.46
1:Au:1150:DG:C6	2:Av:969:DG:N2	2.84	0.46
1:Au:1342:DT:O4	2:Av:775:DA:N6	2.49	0.46
1:Au:1390:DT:H3	2:Av:728:DA:N6	2.14	0.46
1:Au:1517:DT:H2'	1:Au:1518:DT:H72	1.98	0.46
1:Au:1610:DT:H3	7:An:120:LYS:CE	2.28	0.46
1:Au:1681:DG:C8	1:Au:1681:DG:H5'	2.51	0.46
1:Au:1682:DC:H41	2:Av:437:DC:N4	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Au:1998:DC:H2''	1:Au:1999:DG:O5'	2.15	0.46
2:Av:217:DC:H2''	2:Av:218:DT:O5'	2.16	0.46
2:Av:1571:DG:H2''	2:Av:1572:DG:C8	2.51	0.46
2:Av:2037:DG:H2''	2:Av:2038:DC:H5'	1.98	0.46
3:G:775:ALA:HB2	4:R:348:TYR:HB2	1.96	0.46
4:S:900:ILE:HD13	4:S:905:MET:SD	2.55	0.46
4:V:1055:HIS:CE1	3:at:4280:GLY:HA2	2.51	0.46
5:Z:264:ARG:HB3	5:Z:267:PRO:HD2	1.98	0.46
5:g:2193:LYS:C	3:as:1788:ARG:HH22	2.24	0.46
4:ax:254:LYS:HG2	4:ax:257:SER:HB2	1.98	0.46
4:Aa:631:MET:HA	4:Aa:634:PHE:HB3	1.97	0.46
7:An:28:TYR:OH	7:An:67:GLN:HB3	2.16	0.46
7:Ar:187:LYS:O	7:Ar:188:LYS:HD2	2.16	0.46
1:Au:292:DG:H4'	3:am:825:ARG:HD2	1.97	0.46
1:Au:376:DA:H3'	3:F:702:ARG:NH1	2.31	0.46
1:Au:381:DC:H2''	1:Au:382:DG:C8	2.51	0.46
1:Au:826:DA:H2''	1:Au:827:DT:C2	2.51	0.46
1:Au:970:DC:N4	1:Au:971:DG:O6	2.49	0.46
1:Au:1779:DG:H2'	1:Au:1780:DG:H5''	1.98	0.46
2:Av:829:DC:H2''	2:Av:830:DA:C8	2.50	0.46
2:Av:1310:DC:H2'	2:Av:1311:DG:N7	2.31	0.46
2:Av:1311:DG:H5''	6:2:674:LEU:HG	1.97	0.46
2:Av:1349:DC:H6	2:Av:1349:DC:H5''	1.81	0.46
4:J:2038:GLU:HA	6:a7:2356:HIS:HE1	1.81	0.46
5:o:636:LEU:HD22	6:a3:530:VAL:HG11	1.98	0.46
6:w:150:SER:HB3	6:w:153:ILE:HG12	1.98	0.46
3:aq:4180:LEU:HD11	4:Ac:833:VAL:HG13	1.97	0.46
7:Ai:123:ARG:HG2	7:Ai:128:ARG:HG2	1.98	0.46
7:Aj:196:ASN:ND2	7:Aj:200:GLN:OE1	2.33	0.46
1:Au:117:DG:C5	1:Au:118:DA:C6	3.04	0.46
1:Au:743:DA:H2''	1:Au:744:DG:C8	2.51	0.46
1:Au:1357:DA:H2'	1:Au:1358:DT:O4'	2.15	0.46
1:Au:1516:DG:H2''	1:Au:1517:DT:H5''	1.98	0.46
1:Au:1634:DC:N4	2:Av:485:DG:O6	2.49	0.46
1:Au:1687:DC:H2''	1:Au:1688:DC:C5	2.51	0.46
1:Au:1769:DC:N4	2:Av:350:DC:H41	2.13	0.46
1:Au:2004:DC:H2''	1:Au:2005:DA:C5	2.50	0.46
1:Au:2114:DG:H2''	1:Au:2115:DT:O5'	2.16	0.46
2:Av:18:DA:H2''	2:Av:19:DT:H5''	1.98	0.46
2:Av:78:DC:OP2	5:n:466:ARG:NE	2.44	0.46
2:Av:181:DG:H2''	2:Av:182:DG:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Av:653:DA:H2''	2:Av:654:DA:H8	1.81	0.46
2:Av:1073:DG:C5	2:Av:1074:DA:N6	2.84	0.46
2:Av:1251:DA:C2'	2:Av:1252:DT:H71	2.46	0.46
2:Av:1267:DC:H2''	2:Av:1268:DG:C8	2.51	0.46
2:Av:1686:DT:H2''	2:Av:1687:DT:O5'	2.16	0.46
2:Av:2009:DG:H4'	4:M:26:ARG:HH12	1.81	0.46
3:F:636:ARG:NH2	4:At:122:LYS:OXT	2.49	0.46
3:L:5469:THR:O	4:W:2909:GLY:N	2.41	0.46
5:X:107:THR:HG23	5:X:123:ASP:HB2	1.98	0.46
5:f:3181:ILE:HD12	5:r:3050:ASP:HB3	1.98	0.46
6:a8:1476:LYS:HD2	6:a8:1476:LYS:C	2.41	0.46
3:ap:4040:ALA:HB2	4:Ab:781:ILE:HD12	1.98	0.46
7:Am:78:ALA:HB3	7:Ao:98:SER:HA	1.98	0.46
7:Ar:106:GLY:O	7:Ar:108:LYS:HD3	2.16	0.46
1:Au:358:DC:H42	2:Av:1758:DG:H22	1.61	0.45
1:Au:448:DC:OP1	6:a3:509:ARG:NH2	2.48	0.45
1:Au:684:DT:H5'	1:Au:959:DA:H4'	1.97	0.45
1:Au:715:DC:H5	2:Av:1400:DG:H1	1.62	0.45
1:Au:1374:DA:H2''	1:Au:1375:DG:H8	1.81	0.45
1:Au:1683:DT:H2''	1:Au:1684:DG:H8	1.80	0.45
1:Au:1769:DC:H2''	1:Au:1770:DC:O5'	2.16	0.45
1:Au:1965:DG:C8	1:Au:1965:DG:H5''	2.51	0.45
2:Av:418:DT:H3	5:p:675:ARG:HH12	1.64	0.45
2:Av:465:DT:C6	2:Av:465:DT:H5'	2.51	0.45
2:Av:1046:DG:H5''	7:Aq:58:TYR:CE1	2.51	0.45
2:Av:1104:DA:H2'	2:Av:1105:DG:H8	1.80	0.45
2:Av:1126:DT:H2'	2:Av:1127:DA:C8	2.51	0.45
2:Av:1300:DG:H2''	2:Av:1301:DG:C8	2.51	0.45
2:Av:1526:DC:C6	2:Av:1527:DT:H72	2.51	0.45
3:B:177:LEU:HD21	4:N:172:PHE:HD1	1.81	0.45
4:P:574:ALA:HA	4:P:577:LEU:HD12	1.98	0.45
4:U:1925:THR:OG1	4:U:1926:SER:N	2.49	0.45
5:u:3168:ALA:HA	5:u:3171:VAL:HB	1.98	0.45
6:a2:391:LYS:HZ2	6:a2:400:GLY:HA2	1.81	0.45
3:an:1020:GLN:H	3:an:1023:LEU:HD12	1.80	0.45
3:aq:4219:ILE:HG22	3:aq:4222:GLY:H	1.80	0.45
7:Am:17:LYS:HG3	7:Am:18:ALA:H	1.81	0.45
7:As:103:ARG:NH1	7:As:105:PRO:HA	2.31	0.45
7:As:122:ALA:O	7:As:125:ARG:HG3	2.16	0.45
1:Au:478:DC:OP1	3:ao:1049:ARG:N	2.40	0.45
1:Au:819:DC:H2''	1:Au:820:DA:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Au:940:DG:H2''	1:Au:941:DA:O4'	2.16	0.45
1:Au:1872:DT:H5'	5:l:333:MET:HE1	1.98	0.45
2:Av:1043:DT:H2''	2:Av:1044:DC:H5''	1.98	0.45
2:Av:1592:DG:H3'	2:Av:1593:DC:H5''	1.99	0.45
2:Av:1639:DA:H2'	2:Av:1640:DG:C2	2.51	0.45
2:Av:1974:DA:H2'	2:Av:1974:DA:N3	2.30	0.45
5:Y:151:ARG:HH12	3:ak:252:LYS:HD2	1.81	0.45
5:n:466:ARG:H	5:n:469:THR:HB	1.81	0.45
5:s:2073:ARG:CZ	3:Ae:3079:GLU:HG2	2.46	0.45
3:ao:1134:ILE:HG23	4:Aa:630:ILE:HG21	1.98	0.45
3:aq:4172:LEU:HD11	4:Ac:862:PHE:HB2	1.97	0.45
7:Ai:84:THR:O	7:Ai:92:SER:OG	2.28	0.45
7:Aq:12:LYS:HB2	7:Aq:13:PRO:HD3	1.98	0.45
7:As:16:VAL:HB	7:As:57:HIS:HE1	1.80	0.45
1:Au:389:DA:H62	2:Av:1726:DC:H42	1.64	0.45
1:Au:546:DC:H42	2:Av:1568:DA:H61	1.64	0.45
1:Au:1037:DA:P	5:t:1227:ARG:HH22	2.40	0.45
1:Au:1243:DC:H2''	1:Au:1244:DA:O4'	2.15	0.45
1:Au:1309:DG:H2''	1:Au:1310:DC:C5	2.51	0.45
1:Au:1329:DT:H2''	1:Au:1330:DG:O4'	2.16	0.45
1:Au:1377:DC:H6	1:Au:1377:DC:H5''	1.81	0.45
1:Au:1434:DG:H2''	1:Au:1435:DG:C8	2.51	0.45
1:Au:1495:DC:H2''	1:Au:1496:DA:N7	2.32	0.45
1:Au:1664:DC:H2''	1:Au:1665:DT:C6	2.51	0.45
1:Au:1768:DC:N4	2:Av:351:DC:H42	2.14	0.45
1:Au:1825:DG:H8	1:Au:1825:DG:H5''	1.81	0.45
2:Av:89:DT:H2''	2:Av:90:DG:C8	2.50	0.45
2:Av:196:DT:H2''	2:Av:197:DA:N7	2.31	0.45
2:Av:427:DG:H2''	2:Av:428:DG:C8	2.51	0.45
2:Av:473:DA:N7	4:R:258:LYS:HE3	2.32	0.45
2:Av:1590:DC:H2'	2:Av:1591:DG:O4'	2.16	0.45
2:Av:2023:DG:OP1	6:7:31:LYS:NZ	2.48	0.45
3:F:688:LEU:HD11	4:At:38:VAL:HG13	1.99	0.45
4:M:61:SER:OG	6:7:101:GLY:O	2.25	0.45
6:2:695:LYS:HG3	6:2:715:TYR:CE1	2.51	0.45
3:an:987:ILE:HG12	3:an:990:HIS:CD2	2.51	0.45
3:ao:1095:LEU:HD13	4:Aa:614:LEU:HB2	1.99	0.45
7:Ak:499:ARG:HG3	7:Ak:541:HIS:NE2	2.31	0.45
7:An:33:ALA:O	7:An:37:ARG:HG2	2.16	0.45
7:Ap:74:ARG:NH1	7:Ap:78:ALA:HB2	2.31	0.45
1:Au:145:DC:H2''	1:Au:146:DA:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1: Au:389:DA:N6	2: Av:1726:DC:H42	2.15	0.45
1: Au:520:DA:H2''	1: Au:521:DG:C2	2.51	0.45
1: Au:720:DT:H3	2: Av:1394:DG:H22	1.63	0.45
1: Au:853:DC:H2''	1: Au:854:DA:C8	2.51	0.45
1: Au:1386:DC:H2''	1: Au:1387:DA:C8	2.52	0.45
1: Au:1755:DT:OP1	3: ap:4074:LYS:NZ	2.44	0.45
1: Au:1791:DG:O6	2: Av:327:DC:N4	2.49	0.45
2: Av:185:DC:H2''	2: Av:186:DA:H8	1.81	0.45
2: Av:197:DA:H2'	2: Av:198:DT:H71	1.98	0.45
2: Av:248:DC:H5''	7: Aj:180:ARG:HH22	1.80	0.45
2: Av:338:DG:H2''	2: Av:339:DG:C2	2.50	0.45
2: Av:807:DC:H2''	2: Av:808:DG:H8	1.82	0.45
2: Av:1069:DA:H2''	2: Av:1070:DC:C5	2.51	0.45
4: P:570:GLU:HG3	6: y:379:HIS:CE1	2.52	0.45
5: h:1397:LYS:HE2	5: t:1291:HIS:HA	1.97	0.45
5: u:3189:ILE:HD11	6: a9:3328:ILE:HG13	1.98	0.45
7: Ap:92:SER:O	7: Ap:92:SER:OG	2.30	0.45
4: At:12:LYS:HB2	4: At:12:LYS:HE3	1.72	0.45
1: Au:372:DG:H2''	1: Au:373:DG:O5'	2.16	0.45
1: Au:531:DC:H2'	1: Au:532:DG:C5	2.51	0.45
1: Au:1235:DG:H22	2: Av:883:DG:H1	1.63	0.45
1: Au:1313:DA:H61	2: Av:805:DA:N6	2.15	0.45
1: Au:2062:DG:H2'	1: Au:2062:DG:N3	2.30	0.45
2: Av:61:DG:H2'	2: Av:62:DG:H8	1.81	0.45
2: Av:813:DT:H2''	2: Av:814:DA:C8	2.51	0.45
2: Av:1526:DC:OP1	5: Y:183:ARG:NH2	2.50	0.45
2: Av:2032:DT:OP1	5: j:117:VAL:N	2.46	0.45
2: Av:2085:DC:H2''	2: Av:2086:DA:C8	2.51	0.45
5: c:652:ILE:HD13	6: 0:525:VAL:HG21	1.98	0.45
5: j:68:GLN:O	5: j:72:ARG:HG3	2.17	0.45
6: CD:311:ASN:C	6: CD:313:GLN:H	2.22	0.45
4: az:561:GLN:HE21	4: az:577:VAL:HG13	1.82	0.45
7: As:34:ALA:HA	7: As:37:ARG:HD2	1.97	0.45
1: Au:16:DC:H2''	1: Au:17:DT:H5'	1.98	0.45
1: Au:111:DC:H5''	4: M:10:GLY:O	2.17	0.45
1: Au:246:DC:H2''	1: Au:247:DG:H8	1.82	0.45
1: Au:292:DG:H2''	1: Au:293:DG:H8	1.81	0.45
1: Au:827:DT:H4'	1: Au:828:DT:OP1	2.17	0.45
2: Av:8:DC:H2'	2: Av:9:DA:C2	2.51	0.45
2: Av:94:DT:O3'	6: a2:403:ARG:NH2	2.40	0.45
2: Av:731:DT:H2''	2: Av:732:DG:N7	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Av:834:DG:H2''	2:Av:835:DA:C8	2.52	0.45
2:Av:985:DG:H1'	2:Av:986:DG:N7	2.31	0.45
2:Av:1372:DC:H2'	2:Av:1373:DT:H71	1.99	0.45
2:Av:1412:DC:H3'	7:Ai:125:ARG:HD3	1.97	0.45
2:Av:1456:DC:H2'	2:Av:1457:DT:O4'	2.16	0.45
5:h:1330:GLN:OE1	3:at:4350:VAL:HG23	2.17	0.45
3:ao:1050:SER:OG	3:ao:1057:PHE:O	2.28	0.45
3:au:4475:SER:HA	3:au:4478:LEU:HD12	1.98	0.45
7:Ao:19:SER:O	7:Ao:19:SER:OG	2.30	0.45
7:As:7:SER:O	7:As:10:PRO:HD2	2.16	0.45
7:As:32:ILE:O	7:As:36:ILE:HG12	2.17	0.45
1:Au:575:DA:H2'	1:Au:576:DA:C8	2.51	0.45
1:Au:831:DT:OP2	3:H:5170:ARG:NH1	2.43	0.45
1:Au:964:DC:N4	2:Av:1149:DC:H41	2.12	0.45
1:Au:1034:DT:H2''	1:Au:1035:DA:O5'	2.16	0.45
1:Au:1433:DT:H2''	1:Au:1434:DG:C8	2.52	0.45
1:Au:1487:DC:H2''	1:Au:1488:DT:C6	2.52	0.45
1:Au:1911:DG:H2'	1:Au:1912:DT:H71	1.99	0.45
2:Av:215:DG:H2''	2:Av:216:DA:C8	2.52	0.45
2:Av:465:DT:H1'	2:Av:466:DG:C5	2.51	0.45
2:Av:840:DC:H2''	2:Av:841:DC:H5'	1.98	0.45
2:Av:1659:DA:H2'	2:Av:1659:DA:N3	2.30	0.45
2:Av:1796:DC:H2''	2:Av:1797:DA:H5'	1.98	0.45
2:Av:1854:DG:N3	5:m:351:ARG:NH2	2.64	0.45
2:Av:1984:DA:H2''	2:Av:1985:DG:C8	2.51	0.45
2:Av:1994:DG:H2''	2:Av:1995:DT:O2	2.17	0.45
4:W:2924:ASP:OD2	4:W:2928:ARG:NH2	2.50	0.45
5:m:378:PHE:HB3	5:m:404:GLN:HE21	1.82	0.45
5:m:380:ARG:HD3	6:CD:307:VAL:HG21	1.98	0.45
5:t:1229:ILE:HG22	6:a8:1495:ARG:O	2.17	0.45
6:a2:420:ILE:HD13	6:a2:437:TYR:HA	1.98	0.45
3:aq:4211:ASN:OD1	3:aq:4212:LYS:N	2.50	0.45
3:au:4425:LEU:HD11	4:Ag:3107:VAL:HG13	1.98	0.45
7:Ai:9:ALA:HB3	7:Ai:10:PRO:HD3	1.98	0.45
7:Am:97:LYS:CA	7:Ao:37:ARG:HH12	2.25	0.45
1:Au:89:DC:H2''	1:Au:90:DT:C6	2.51	0.45
1:Au:866:DC:H2''	1:Au:867:DC:N1	2.31	0.45
1:Au:925:DG:H2'	1:Au:926:DC:O2	2.17	0.45
1:Au:1226:DC:H1'	1:Au:1227:DC:C5	2.51	0.45
1:Au:1342:DT:H6	1:Au:1342:DT:H2'	1.60	0.45
1:Au:1533:DG:H2''	1:Au:1534:DA:H8	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Au:1758:DC:H41	2:Av:361:DA:H61	1.65	0.45
1:Au:1830:DC:H6	1:Au:1830:DC:H2'	1.63	0.45
1:Au:1901:DC:H2''	1:Au:1902:DT:H5''	1.98	0.45
2:Av:73:DG:H2''	2:Av:74:DG:N7	2.32	0.45
2:Av:102:DT:H2''	2:Av:103:DG:C8	2.52	0.45
2:Av:347:DG:H2''	2:Av:348:DG:C2	2.52	0.45
2:Av:682:DC:H2''	2:Av:683:DA:N7	2.32	0.45
2:Av:908:DT:H2''	2:Av:909:DG:C8	2.52	0.45
2:Av:1084:DG:N3	2:Av:1084:DG:H2'	2.31	0.45
2:Av:1435:DT:OP2	5:Y:160:ARG:NE	2.36	0.45
2:Av:1477:DG:H2''	2:Av:1478:DG:O4'	2.17	0.45
2:Av:1551:DC:H2''	2:Av:1552:DG:C5	2.51	0.45
2:Av:1857:DC:H2''	2:Av:1858:DG:C8	2.51	0.45
2:Av:2028:DC:H2''	2:Av:2029:DG:C5	2.51	0.45
3:L:5478:LEU:O	3:L:5482:ASN:ND2	2.49	0.45
4:S:946:LEU:O	6:2:756:ARG:NH2	2.49	0.45
5:l:260:ALA:O	5:l:264:ILE:HG12	2.17	0.45
5:q:866:PRO:HA	5:q:869:ILE:HG22	1.98	0.45
5:t:1205:LYS:HD2	5:t:1205:LYS:HA	1.79	0.45
6:z:478:LEU:HB3	6:z:483:ARG:O	2.17	0.45
6:2:755:LYS:NZ	4:Ac:860:ASP:OD1	2.40	0.45
6:3:3253:GLY:O	4:Ad:2900:SER:OG	2.33	0.45
4:ax:336:GLU:OE1	4:ax:336:GLU:N	2.50	0.45
7:Aj:173:LYS:O	7:Aj:175:ARG:NH1	2.50	0.45
7:Am:133:LYS:HE2	7:Am:138:ALA:H	1.82	0.45
7:Aq:143:LYS:O	7:Aq:144:LYS:HD2	2.16	0.45
7:Aq:147:ALA:HB3	7:Aq:150:LYS:NZ	2.31	0.45
1:Au:57:DC:H2''	1:Au:58:DA:N7	2.32	0.45
1:Au:249:DT:H4'	5:a:362:LYS:HE3	1.99	0.45
1:Au:448:DC:H5''	1:Au:449:DC:H5	1.81	0.45
1:Au:1649:DA:H62	2:Av:470:DA:N6	2.15	0.45
1:Au:1876:DA:H4'	1:Au:1877:DC:OP1	2.17	0.45
1:Au:2013:DC:H41	2:Av:104:DC:N4	2.15	0.45
2:Av:62:DG:H3'	7:Al:241:MET:HB2	1.99	0.45
2:Av:478:DT:H2''	2:Av:479:DT:O2	2.16	0.45
2:Av:553:DG:H2'	2:Av:554:DT:C6	2.52	0.45
2:Av:737:DG:C8	2:Av:738:DT:H72	2.52	0.45
2:Av:1251:DA:C4	2:Av:1252:DT:H73	2.51	0.45
2:Av:1455:DA:H5''	2:Av:1455:DA:C8	2.52	0.45
2:Av:2049:DT:H2''	2:Av:2050:DG:C8	2.51	0.45
2:Av:2071:DT:H4'	2:Av:2072:DT:OP1	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:t:1247:ARG:HH11	6:a8:1482:ILE:HD11	1.81	0.45
6:x:246:LYS:HG2	6:x:247:ARG:HG3	1.99	0.45
7:Ah:362:ALA:HA	7:Ah:365:LYS:HB2	1.99	0.45
7:As:13:PRO:HB2	7:As:17:LYS:HB2	1.99	0.45
1:Au:250:DT:H2''	1:Au:251:DA:C8	2.52	0.45
1:Au:262:DC:H2''	1:Au:263:DG:H5''	1.98	0.45
1:Au:443:DC:H2'	1:Au:444:DT:O2	2.17	0.45
2:Av:604:DG:H1'	2:Av:605:DG:C8	2.52	0.45
2:Av:651:DC:H2''	2:Av:652:DC:C6	2.52	0.45
2:Av:666:DC:H2''	2:Av:667:DG:C8	2.52	0.45
2:Av:960:DG:H2''	2:Av:961:DG:C8	2.52	0.45
2:Av:965:DG:H21	7:Aq:86:GLY:CA	2.29	0.45
2:Av:1663:DG:H2'	2:Av:1664:DC:O2	2.17	0.45
5:i:3270:MET:HG3	5:i:3272:LYS:N	2.31	0.45
5:r:3029:GLN:NE2	5:r:3031:SER:OG	2.50	0.45
6:a5:735:HIS:HD2	4:Ac:872:LEU:HD12	1.81	0.45
6:a7:2319:ALA:HB1	6:a7:2324:VAL:HB	1.98	0.45
3:an:927:SER:HG	3:an:931:LEU:C	2.21	0.45
4:Aa:684:THR:HA	4:Aa:687:VAL:HG12	1.99	0.45
4:Ab:782:THR:OG1	4:Ab:783:SER:N	2.50	0.45
7:Al:322:LEU:HB2	7:Al:335:ARG:O	2.17	0.45
7:Ar:50:ILE:O	7:Ar:54:ILE:HG13	2.17	0.45
1:Au:14:DC:OP1	5:j:49:ARG:NH1	2.50	0.44
1:Au:155:DC:H2''	1:Au:156:DA:C8	2.52	0.44
1:Au:333:DA:H2''	1:Au:334:DT:H71	1.99	0.44
1:Au:459:DA:H2'	1:Au:460:DA:N3	2.32	0.44
1:Au:487:DC:C2	1:Au:488:DC:C5	3.06	0.44
1:Au:488:DC:C2	1:Au:489:DA:N7	2.85	0.44
1:Au:1112:DT:C2	1:Au:1113:DC:C5	3.05	0.44
1:Au:1118:DA:H2''	1:Au:1119:DC:C5	2.53	0.44
1:Au:1268:DG:H5''	1:Au:1268:DG:C8	2.52	0.44
1:Au:1588:DG:H2''	1:Au:1589:DG:C8	2.52	0.44
2:Av:9:DA:H2''	2:Av:10:DG:O4'	2.18	0.44
2:Av:429:DG:H4'	2:Av:430:DG:OP1	2.17	0.44
2:Av:611:DG:H5''	6:a9:3329:SER:HA	1.99	0.44
2:Av:969:DG:H2''	2:Av:970:DT:H72	1.99	0.44
2:Av:1063:DA:H2''	2:Av:1064:DC:H5''	1.99	0.44
2:Av:1088:DC:H2''	2:Av:1089:DA:C2	2.52	0.44
2:Av:1260:DT:H2''	2:Av:1261:DG:C8	2.52	0.44
2:Av:1283:DG:H2''	2:Av:1284:DG:N3	2.32	0.44
2:Av:1653:DC:OP2	6:a3:553:THR:N	2.43	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Av:2084:DG:H4'	2:Av:2085:DC:OP1	2.17	0.44
3:B:250:LYS:HD3	3:B:250:LYS:HA	1.86	0.44
4:J:2046:LEU:HG	4:J:2047:LEU:HD23	1.99	0.44
5:f:3162:ALA:HB2	5:f:3170:ILE:HD13	1.98	0.44
5:i:3279:ARG:HG2	5:u:3179:LEU:HD13	1.97	0.44
5:n:548:ILE:HG21	6:a2:439:GLU:HG2	1.99	0.44
6:4:2315:VAL:O	6:4:2315:VAL:HG13	2.17	0.44
7:Ai:62:HIS:CG	7:Ai:62:HIS:O	2.70	0.44
7:Aq:97:LYS:C	7:As:37:ARG:HH22	2.25	0.44
1:Au:464:DC:H2''	1:Au:465:DC:O5'	2.15	0.44
1:Au:1176:DG:H2'	1:Au:1177:DG:H8	1.83	0.44
1:Au:1274:DA:H62	2:Av:843:DC:H42	1.65	0.44
1:Au:1325:DG:H5''	1:Au:1325:DG:C8	2.52	0.44
1:Au:1418:DA:H2''	1:Au:1419:DG:C4	2.51	0.44
1:Au:1444:DG:H1	2:Av:675:DG:N2	2.14	0.44
1:Au:1524:DC:H2''	1:Au:1525:DG:C8	2.52	0.44
1:Au:1928:DC:O2	1:Au:1928:DC:H2'	2.17	0.44
1:Au:2100:DT:O4	2:Av:16:DA:N6	2.50	0.44
1:Au:2112:DC:H2''	1:Au:2113:DA:C5	2.53	0.44
2:Av:217:DC:H2'	2:Av:218:DT:C6	2.52	0.44
2:Av:1353:DC:O2	2:Av:1353:DC:H2'	2.16	0.44
2:Av:1403:DT:H2''	2:Av:1404:DG:O5'	2.17	0.44
3:C:370:LEU:HD11	5:l:321:ASN:HD21	1.82	0.44
3:K:5282:SER:C	3:K:5285:GLY:H	2.25	0.44
5:X:119:ILE:HG13	6:v:50:ILE:CD1	2.48	0.44
5:l:236:LYS:HA	5:l:236:LYS:HE3	1.98	0.44
5:o:594:LEU:HD13	6:a3:509:ARG:HB3	1.99	0.44
5:r:3027:ARG:HB3	6:a6:3272:THR:HG22	2.00	0.44
7:Ai:153:LYS:HA	7:Ar:21:ARG:HH12	1.81	0.44
7:Ak:541:HIS:HD2	7:Ak:542:TYR:HD2	1.65	0.44
7:Al:241:MET:O	7:Al:241:MET:HG2	2.16	0.44
7:Am:47:ARG:HH21	7:Am:93:PHE:HZ	1.65	0.44
7:Aq:140:LYS:HA	7:Aq:143:LYS:HB2	1.98	0.44
1:Au:126:DC:H2'	1:Au:127:DT:C6	2.52	0.44
1:Au:442:DG:H5''	5:o:567:GLY:HA3	1.98	0.44
1:Au:727:DG:H22	2:Av:1387:DC:H5	1.63	0.44
1:Au:1661:DC:N3	1:Au:1662:DC:N4	2.65	0.44
1:Au:1668:DA:H2''	1:Au:1669:DA:C8	2.52	0.44
1:Au:1881:DC:H2''	1:Au:1882:DA:O4'	2.17	0.44
1:Au:2011:DA:N1	2:Av:107:DG:C6	2.85	0.44
2:Av:55:DC:H2''	2:Av:56:DT:OP1	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Av:178:DA:H2'	2:Av:179:DC:O4'	2.17	0.44
2:Av:1133:DC:H2''	2:Av:1134:DG:C8	2.53	0.44
2:Av:1191:DC:H2''	2:Av:1192:DG:C8	2.52	0.44
2:Av:1707:DC:H2''	2:Av:1708:DT:C6	2.53	0.44
2:Av:1722:DC:OP2	3:F:637:ALA:N	2.47	0.44
2:Av:1928:DT:H2''	2:Av:1929:DC:C2	2.52	0.44
3:C:275:ARG:NH1	4:O:497:LYS:OXT	2.50	0.44
4:J:1986:VAL:HG13	3:as:1770:LEU:HD11	1.99	0.44
5:Y:171:LEU:HB2	5:Y:175:LYS:NZ	2.33	0.44
5:a:442:ARG:NH1	5:a:446:MET:HG3	2.33	0.44
5:c:592:GLU:O	6:0:522:ARG:NH2	2.51	0.44
6:8:149:GLU:HA	6:8:152:ILE:HG22	2.00	0.44
7:Aj:177:GLY:HA3	7:Aj:225:SER:HB3	1.99	0.44
7:Aj:207:ARG:NH1	7:Aj:211:ALA:HB2	2.17	0.44
7:Ao:33:ALA:O	7:Ao:37:ARG:HG3	2.17	0.44
1:Au:387:DC:H42	2:Av:1728:DC:H41	1.65	0.44
1:Au:439:DC:H5''	5:o:576:PRO:HD2	1.99	0.44
1:Au:961:DA:C5	2:Av:1426:DG:H5'	2.52	0.44
1:Au:1445:DG:H1	2:Av:674:DG:N2	2.12	0.44
1:Au:1658:DG:C2	1:Au:1659:DC:C4	3.05	0.44
1:Au:1672:DC:H2''	1:Au:1673:DA:C4	2.50	0.44
1:Au:1674:DC:H2''	1:Au:1675:DG:C8	2.52	0.44
1:Au:1804:DG:N2	1:Au:1805:DA:C4	2.86	0.44
2:Av:71:DC:H2''	2:Av:72:DG:C8	2.52	0.44
2:Av:638:DG:C2	2:Av:639:DA:C6	3.05	0.44
2:Av:1183:DC:H2'	2:Av:1184:DA:N3	2.32	0.44
2:Av:1423:DA:H2''	2:Av:1424:DC:N3	2.32	0.44
2:Av:1462:DA:H2''	2:Av:1463:DG:H5''	2.00	0.44
2:Av:1686:DT:OP2	5:c:575:ARG:NE	2.49	0.44
2:Av:1841:DC:H2''	2:Av:1842:DG:H8	1.83	0.44
2:Av:1987:DC:H2''	2:Av:1988:DT:O4'	2.16	0.44
4:T:2752:THR:O	4:T:2753:LYS:HG2	2.17	0.44
4:V:994:THR:OG1	4:V:998:ASP:OD1	2.26	0.44
5:e:856:ARG:NE	5:e:858:GLU:OE2	2.51	0.44
5:r:3005:LEU:HD23	6:a6:3228:ARG:HB3	1.99	0.44
6:a8:1483:GLN:HE22	6:a8:1511:ARG:HB3	1.82	0.44
7:Ai:39:GLU:HG3	7:Ai:41:SER:HB3	1.99	0.44
7:Aj:153:ARG:O	7:Aj:154:ARG:HG2	2.18	0.44
1:Au:698:DG:H5'	7:Ai:121:ALA:HB2	2.00	0.44
1:Au:1058:DG:H2''	1:Au:1059:DA:O4'	2.18	0.44
1:Au:1077:DC:OP1	7:Aq:11:ALA:N	2.44	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Au:1235:DG:H1	2:Av:883:DG:H1	1.65	0.44
1:Au:1759:DA:N6	2:Av:360:DA:H62	2.13	0.44
1:Au:2007:DC:C6	1:Au:2007:DC:H5''	2.52	0.44
2:Av:605:DG:O3'	7:As:47:ARG:NH2	2.48	0.44
2:Av:757:DA:H2'	2:Av:758:DA:H8	1.83	0.44
2:Av:1148:DA:H3'	5:t:1215:LYS:NZ	2.27	0.44
2:Av:1561:DA:H2''	2:Av:1562:DT:OP1	2.16	0.44
2:Av:1641:DT:H2''	2:Av:1642:DA:C8	2.52	0.44
2:Av:1920:DC:C2	2:Av:1921:DC:C4	3.06	0.44
2:Av:1957:DG:H2''	2:Av:1958:DG:C8	2.52	0.44
5:Y:224:HIS:CE1	5:k:225:LEU:HD22	2.51	0.44
6:5:1449:LYS:HB2	3:at:4358:LEU:HD22	1.99	0.44
7:Ah:434:GLN:OE1	7:Ah:444:PHE:HA	2.18	0.44
7:Ai:84:THR:HG23	7:Ai:94:ARG:HD2	1.99	0.44
7:Ao:7:SER:O	7:Ao:10:PRO:HD2	2.17	0.44
7:Aq:82:LYS:HD2	7:Aq:96:ALA:HA	2.00	0.44
7:As:119:LYS:HD3	7:As:119:LYS:HA	1.86	0.44
1:Au:356:DA:H62	2:Av:1761:DC:N4	2.16	0.44
1:Au:371:DT:H72	2:Av:1742:DT:C4	2.53	0.44
1:Au:419:DG:N3	1:Au:419:DG:H5''	2.33	0.44
1:Au:699:DT:H2''	1:Au:700:DG:C8	2.52	0.44
1:Au:1274:DA:H62	2:Av:843:DC:N4	2.15	0.44
1:Au:1382:DG:H2'	1:Au:1382:DG:N3	2.32	0.44
1:Au:1612:DG:H2''	1:Au:1613:DA:C8	2.52	0.44
1:Au:1741:DA:H2''	1:Au:1742:DT:H5''	1.99	0.44
1:Au:1974:DC:H2''	1:Au:1975:DG:C4	2.53	0.44
1:Au:2116:DG:O6	2:Av:1:DA:N6	2.50	0.44
2:Av:38:DG:H2''	2:Av:39:DA:O5'	2.18	0.44
2:Av:364:DG:H2'	2:Av:365:DG:C8	2.53	0.44
2:Av:783:DG:H2''	2:Av:784:DG:C5	2.53	0.44
2:Av:792:DG:H2''	2:Av:793:DT:O2	2.17	0.44
2:Av:974:DT:H2''	2:Av:975:DG:C8	2.51	0.44
2:Av:1041:DG:H2''	2:Av:1042:DA:N7	2.33	0.44
2:Av:1114:DC:H2''	2:Av:1115:DC:O5'	2.17	0.44
2:Av:1382:DG:H2''	2:Av:1383:DG:C8	2.52	0.44
3:C:273:SER:HB2	3:C:282:VAL:HG22	2.00	0.44
4:Q:696:THR:HG23	6:z:459:THR:HG22	1.99	0.44
5:g:2174:LYS:HG3	7:Aq:0:MET:HB3	1.99	0.44
5:n:461:LYS:HG3	5:n:463:HIS:H	1.81	0.44
5:r:3024:THR:HG21	6:a6:3200:LYS:HD2	1.99	0.44
5:t:1205:LYS:HG3	5:t:1206:SER:H	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:Ar:105:PRO:O	7:Ar:108:LYS:NZ	2.49	0.44
7:Ar:135:LYS:HB2	7:Ar:135:LYS:HE2	1.82	0.44
1:Au:10:DG:N2	2:Av:2107:DC:O2	2.51	0.44
1:Au:47:DT:C2	1:Au:48:DG:C8	3.06	0.44
1:Au:88:DG:H1'	1:Au:89:DC:H5'	2.00	0.44
1:Au:1090:DG:H2''	1:Au:1091:DG:C5	2.53	0.44
1:Au:1375:DG:OP1	3:I:2482:ARG:NH2	2.39	0.44
1:Au:1401:DT:H2''	1:Au:1402:DT:O2	2.18	0.44
1:Au:1511:DC:H5'	5:u:3187:VAL:HB	1.99	0.44
1:Au:1669:DA:H2'	1:Au:1670:DC:C5	2.52	0.44
1:Au:2022:DA:H2''	1:Au:2023:DA:O4'	2.17	0.44
1:Au:2060:DA:N6	1:Au:2061:DG:O6	2.50	0.44
2:Av:771:DT:H2''	2:Av:772:DT:C4	2.53	0.44
2:Av:1260:DT:H2''	2:Av:1261:DG:N7	2.33	0.44
2:Av:1282:DG:OP1	3:H:5142:GLY:N	2.43	0.44
2:Av:1338:DC:H2''	2:Av:1339:DG:H8	1.83	0.44
2:Av:1609:DA:OP2	5:c:574:TYR:HA	2.18	0.44
2:Av:2049:DT:H2''	2:Av:2050:DG:N7	2.33	0.44
3:L:5440:ALA:HB2	4:W:2946:THR:HA	1.99	0.44
3:L:5456:LEU:O	3:L:5457:GLU:C	2.59	0.44
5:c:595:ILE:HD13	5:c:595:ILE:HA	1.86	0.44
5:d:672:TYR:H	5:d:672:TYR:HD1	1.66	0.44
5:p:719:PHE:HA	6:a4:650:VAL:HG22	1.99	0.44
6:w:190:VAL:HG21	6:w:204:GLY:HA3	2.00	0.44
6:x:212:LEU:O	6:x:212:LEU:HD23	2.18	0.44
6:6:3277:ARG:O	6:6:3281:ARG:HG2	2.17	0.44
6:7:90:LEU:HB3	6:7:95:ARG:O	2.18	0.44
7:Ah:361:PRO:O	7:Ah:365:LYS:HG2	2.17	0.44
7:Ar:67:GLN:HB3	7:Ar:70:LEU:HB2	2.00	0.44
1:Au:65:DG:N2	2:Av:2052:DT:H3	2.16	0.44
1:Au:219:DT:H2''	1:Au:220:DC:C5	2.53	0.44
1:Au:336:DC:H2''	1:Au:337:DT:C2	2.53	0.44
1:Au:392:DC:H42	2:Av:1723:DG:H1	1.64	0.44
1:Au:400:DT:H2'	1:Au:401:DT:H71	2.00	0.44
1:Au:669:DC:H2''	1:Au:670:DA:C8	2.53	0.44
1:Au:780:DT:H2'	1:Au:781:DT:H71	2.00	0.44
1:Au:1282:DC:H2''	1:Au:1283:DA:H8	1.83	0.44
1:Au:1360:DA:H2''	1:Au:1361:DC:O5'	2.18	0.44
1:Au:1666:DT:H2'	1:Au:1667:DA:C8	2.53	0.44
1:Au:1862:DT:H2''	1:Au:1863:DC:C6	2.53	0.44
1:Au:2024:DC:H2''	1:Au:2025:DG:N3	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Au:2067:DT:H2''	1:Au:2068:DA:C8	2.53	0.44
2:Av:77:DA:H2'	2:Av:78:DC:C5	2.53	0.44
2:Av:480:DG:H2''	2:Av:481:DA:OP1	2.17	0.44
2:Av:504:DC:H2''	2:Av:505:DC:C6	2.53	0.44
2:Av:537:DA:H2''	2:Av:538:DA:C8	2.53	0.44
2:Av:605:DG:H2''	7:As:47:ARG:HH22	1.82	0.44
2:Av:1459:DG:H2''	2:Av:1460:DG:C8	2.52	0.44
2:Av:1606:DT:H2'	2:Av:1607:DG:C8	2.53	0.44
4:S:921:GLY:O	4:S:925:ARG:HG2	2.18	0.44
4:T:2749:LYS:HB3	4:T:2762:ARG:HA	1.99	0.44
4:Ad:2874:LYS:O	4:Ad:2876:SER:N	2.49	0.44
7:Am:149:PRO:HA	7:Am:152:ALA:HB3	2.00	0.44
1:Au:49:DG:H2'	1:Au:50:DT:C6	2.53	0.44
1:Au:178:DG:N2	2:Av:1939:DG:N7	2.65	0.44
1:Au:594:DT:H5'	5:Y:176:LEU:HD12	1.99	0.44
1:Au:625:DC:H2''	1:Au:626:DC:OP1	2.18	0.44
1:Au:794:DG:N3	7:Ao:87:VAL:HG21	2.32	0.44
1:Au:917:DC:H6	1:Au:917:DC:H2'	1.70	0.44
1:Au:946:DT:OP2	5:t:1261:ARG:NH1	2.38	0.44
1:Au:949:DA:H2'	1:Au:950:DG:C2	2.53	0.44
1:Au:1156:DC:H42	2:Av:962:DA:H61	1.66	0.44
1:Au:1205:DG:H2'	1:Au:1206:DT:H71	1.99	0.44
1:Au:1341:DT:H2''	1:Au:1342:DT:C2	2.53	0.44
1:Au:1392:DT:H2''	1:Au:1393:DA:C8	2.53	0.44
1:Au:1457:DC:H2''	1:Au:1458:DT:C5	2.52	0.44
1:Au:1687:DC:H1'	1:Au:1688:DC:H5'	2.00	0.44
1:Au:1761:DT:H2''	1:Au:1762:DG:H8	1.81	0.44
1:Au:1788:DG:H2'	1:Au:1789:DG:N1	2.33	0.44
1:Au:1831:DT:H2''	1:Au:1832:DC:O4'	2.18	0.44
2:Av:557:DC:H2''	2:Av:558:DA:C8	2.53	0.44
2:Av:600:DC:H2''	2:Av:601:DG:N7	2.33	0.44
2:Av:743:DG:H2'	2:Av:744:DG:C8	2.53	0.44
5:X:111:ALA:HB2	5:X:119:ILE:HA	2.00	0.44
5:X:128:ARG:CZ	5:X:133:GLU:HB3	2.48	0.44
6:4:2317:ARG:HD3	6:4:2317:ARG:HA	1.81	0.44
7:Ao:125:ARG:HA	7:Ao:128:ARG:CG	2.47	0.44
7:Aq:139:ARG:HB3	7:As:18:ALA:HB3	1.99	0.44
1:Au:40:DG:C2	2:Av:2077:DG:N1	2.86	0.43
1:Au:546:DC:N4	2:Av:1568:DA:H61	2.16	0.43
1:Au:649:DA:N6	2:Av:1465:DA:H61	2.16	0.43
1:Au:1149:DC:H2''	1:Au:1150:DG:C8	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Au:1210:DA:H2''	1:Au:1211:DT:C5	2.53	0.43
1:Au:1603:DG:H22	1:Au:1604:DA:H62	1.66	0.43
1:Au:1691:DG:OP1	7:An:83:GLN:HB2	2.18	0.43
2:Av:69:DC:H2''	2:Av:70:DG:O5'	2.18	0.43
2:Av:179:DC:H2'	2:Av:180:DT:C6	2.53	0.43
2:Av:637:DA:H2''	2:Av:638:DG:C8	2.53	0.43
2:Av:1693:DG:H2'	2:Av:1693:DG:N3	2.33	0.43
3:I:2517:LEU:HD22	4:T:2799:VAL:HG13	1.99	0.43
5:i:3278:ARG:NH2	5:i:3283:GLU:O	2.51	0.43
5:m:377:PRO:O	6:CD:311:ASN:ND2	2.44	0.43
5:q:793:LEU:HA	5:q:796:ILE:HG12	2.00	0.43
6:z:484:THR:HB	3:an:1008:VAL:HG13	1.99	0.43
6:a2:395:GLY:O	6:a2:465:LYS:NZ	2.41	0.43
3:au:4382:ARG:NH1	4:Ag:3191:LYS:O	2.51	0.43
4:aw:131:LYS:HD2	4:aw:131:LYS:O	2.18	0.43
7:Ai:158:VAL:HG23	7:Ar:16:VAL:HB	2.00	0.43
1:Au:37:DG:H3'	3:A:17:ARG:HH21	1.83	0.43
1:Au:521:DG:H2''	1:Au:522:DT:O2	2.18	0.43
1:Au:1271:DC:N4	2:Av:846:DC:H41	2.13	0.43
1:Au:1306:DA:H4'	6:a6:3271:LYS:HD3	2.00	0.43
1:Au:1350:DC:H2''	1:Au:1351:DA:H8	1.83	0.43
1:Au:1655:DC:H6	1:Au:1656:DT:C4	2.35	0.43
1:Au:1657:DA:H4'	1:Au:1658:DG:OP2	2.18	0.43
2:Av:77:DA:H2'	2:Av:78:DC:C6	2.53	0.43
2:Av:86:DA:H5'	5:n:487:ARG:CZ	2.49	0.43
2:Av:266:DT:H2''	2:Av:267:DG:C8	2.53	0.43
2:Av:551:DA:H5'	2:Av:551:DA:C8	2.53	0.43
2:Av:1133:DC:H4'	2:Av:1134:DG:OP2	2.17	0.43
2:Av:1229:DT:H4'	2:Av:1230:DC:OP1	2.17	0.43
2:Av:1275:DG:H2''	2:Av:1276:DA:C8	2.52	0.43
2:Av:1664:DC:H2'	2:Av:1665:DG:C8	2.53	0.43
2:Av:1704:DT:C4	2:Av:1705:DG:C6	3.06	0.43
2:Av:1745:DA:H2'	2:Av:1746:DG:C2	2.53	0.43
2:Av:1763:DG:H2''	2:Av:1764:DG:H5''	2.00	0.43
2:Av:1808:DG:H2'	2:Av:1809:DA:C2	2.53	0.43
2:Av:1848:DC:H2''	2:Av:1849:DA:N7	2.33	0.43
2:Av:1867:DA:H2''	2:Av:1868:DG:H8	1.83	0.43
3:B:241:LEU:HD13	6:8:128:GLY:O	2.18	0.43
4:O:429:LYS:O	4:O:432:SER:OG	2.32	0.43
5:Z:262:LEU:HD13	6:x:238:ARG:HB3	2.00	0.43
5:c:596:ARG:HB2	5:c:599:PRO:HD2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:j:99:TYR:HB2	6:7:95:ARG:NH1	2.33	0.43
5:l:267:TYR:CZ	6:9:224:ARG:HG2	2.53	0.43
5:t:1218:ARG:NE	5:t:1218:ARG:HA	2.33	0.43
6:v:29:ILE:HD12	6:v:55:ARG:HG2	1.99	0.43
6:a6:3241:LEU:HD23	6:a6:3241:LEU:O	2.18	0.43
3:aj:102:ILE:HG23	4:av:58:ILE:HG21	2.00	0.43
4:ax:297:ILE:HB	4:ax:302:MET:HE2	2.00	0.43
1:Au:67:DA:N1	2:Av:2050:DG:N2	2.65	0.43
1:Au:349:DG:H1'	1:Au:350:DG:C2	2.52	0.43
1:Au:360:DT:H1'	1:Au:361:DC:O4'	2.18	0.43
1:Au:480:DC:H42	2:Av:1635:DA:N6	2.16	0.43
1:Au:686:DC:OP1	3:ak:251:SER:N	2.36	0.43
1:Au:844:DG:H22	2:Av:1270:DG:H22	1.66	0.43
1:Au:1987:DG:C2	1:Au:1988:DC:C2	3.06	0.43
1:Au:2020:DT:H2''	1:Au:2021:DA:N7	2.33	0.43
2:Av:446:DG:H2'	2:Av:447:DT:O4'	2.18	0.43
2:Av:822:DC:H6	2:Av:822:DC:H5''	1.83	0.43
2:Av:877:DG:H2'	2:Av:878:DG:C4	2.53	0.43
2:Av:1336:DA:H2''	2:Av:1337:DG:C8	2.53	0.43
2:Av:1453:DA:H2''	2:Av:1454:DG:OP1	2.17	0.43
4:W:2952:THR:HG21	6:6:3317:HIS:HB2	2.01	0.43
5:a:382:LYS:O	3:am:864:ARG:NH1	2.52	0.43
5:i:3263:HIS:CE1	5:u:3186:ARG:HH21	2.35	0.43
6:z:412:ASP:N	6:z:412:ASP:OD1	2.51	0.43
6:1:653:MET:HE2	6:1:653:MET:HA	2.00	0.43
6:5:1415:LEU:HD12	6:5:1415:LEU:HA	1.85	0.43
6:8:177:LYS:HB2	6:8:182:THR:HG23	2.00	0.43
6:a7:2371:LEU:HB3	6:a7:2376:ARG:O	2.18	0.43
3:at:4323:PRO:HA	3:at:4326:LEU:HD12	1.99	0.43
4:Ad:2902:MET:O	4:Ad:2906:VAL:HG23	2.18	0.43
7:Ar:123:ARG:HA	7:Ar:123:ARG:HD3	1.75	0.43
4:At:119:THR:HA	4:At:122:LYS:HZ2	1.83	0.43
1:Au:238:DT:H2'	1:Au:239:DC:O4'	2.18	0.43
1:Au:273:DC:H2'	1:Au:274:DC:C6	2.54	0.43
1:Au:739:DG:H2''	1:Au:740:DC:O2	2.19	0.43
1:Au:1820:DT:H5'	4:O:402:ARG:HB2	2.00	0.43
1:Au:2115:DT:H2''	1:Au:2116:DG:C8	2.53	0.43
2:Av:45:DG:H3'	2:Av:46:DA:H5''	2.00	0.43
2:Av:539:DC:H2''	2:Av:540:DA:H8	1.83	0.43
2:Av:539:DC:H5''	5:u:3119:ARG:NH1	2.33	0.43
2:Av:1405:DC:H5''	7:Ao:128:ARG:HH22	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Av:1640:DG:N3	2:Av:1640:DG:H5''	2.34	0.43
2:Av:1746:DG:H2'	2:Av:1746:DG:N3	2.33	0.43
2:Av:1752:DC:H2''	2:Av:1753:DC:C5	2.54	0.43
2:Av:2036:DT:H2'	2:Av:2037:DG:N2	2.34	0.43
3:H:5213:ILE:H	4:S:900:ILE:HA	1.84	0.43
3:H:5263:SER:N	7:Ao:66:LEU:HD22	2.32	0.43
3:K:5340:ARG:HD3	4:V:1028:SER:HB3	1.99	0.43
4:M:20:LYS:HD2	4:M:20:LYS:HA	1.76	0.43
4:N:216:GLY:O	4:N:220:VAL:HG23	2.19	0.43
4:V:988:LYS:HD3	4:V:1000:LYS:NZ	2.32	0.43
5:k:192:GLN:O	5:k:196:GLU:HG2	2.18	0.43
6:w:141:ALA:HB1	6:w:146:VAL:HB	2.01	0.43
4:Ag:3161:GLN:HE21	4:Ag:3177:VAL:HG13	1.84	0.43
7:Ah:464:ARG:NH1	7:Ah:466:SER:OG	2.52	0.43
7:Am:159:LYS:HD2	7:Am:170:LYS:HB2	2.01	0.43
7:An:55:LYS:HD2	7:An:55:LYS:HA	1.79	0.43
7:Aq:133:LYS:O	7:Aq:135:LYS:N	2.52	0.43
7:Ar:74:ARG:HD3	7:Ar:74:ARG:HA	1.81	0.43
1:Au:816:DC:H6	1:Au:816:DC:H2'	1.65	0.43
1:Au:964:DC:H42	2:Av:1149:DC:N4	2.14	0.43
1:Au:1188:DC:H2''	1:Au:1189:DT:C6	2.54	0.43
1:Au:1452:DG:C2	1:Au:1453:DG:C4	3.05	0.43
1:Au:1585:DG:N2	2:Av:534:DT:O2	2.42	0.43
1:Au:1964:DT:O4	2:Av:153:DG:N2	2.49	0.43
2:Av:262:DT:H2'	2:Av:263:DA:N3	2.34	0.43
2:Av:1189:DA:H2''	2:Av:1190:DG:C8	2.53	0.43
2:Av:1638:DG:H2''	2:Av:1639:DA:H8	1.84	0.43
2:Av:1723:DG:OP2	3:F:642:ARG:N	2.52	0.43
2:Av:2074:DA:H3'	2:Av:2075:DG:N2	2.34	0.43
4:J:1969:LYS:HA	4:J:1969:LYS:HD2	1.73	0.43
4:J:2023:SER:HB2	3:as:1746:TYR:HB3	2.00	0.43
3:K:5365:ILE:HD13	3:K:5365:ILE:HA	1.90	0.43
4:M:42:LEU:HD13	4:M:51:ILE:HD11	2.00	0.43
4:N:219:ALA:O	4:N:223:TYR:HB2	2.19	0.43
4:R:346:THR:O	4:R:350:SER:OG	2.28	0.43
4:V:1098:LYS:HE2	4:V:1098:LYS:O	2.18	0.43
5:k:198:TYR:HD2	6:8:181:ARG:HH11	1.66	0.43
5:l:242:ALA:HB3	5:l:243:PRO:HD2	1.99	0.43
5:s:2102:VAL:HG23	6:a7:2347:ILE:HD11	1.99	0.43
6:9:263:HIS:CE1	4:ax:336:GLU:HG3	2.53	0.43
3:aj:83:LEU:HD21	4:av:59:MET:HE1	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:Ai:82:LYS:HD3	7:Ai:101:ALA:HB1	1.99	0.43
7:Ak:493:ALA:O	7:Ak:497:PRO:HD2	2.17	0.43
7:Am:4:LEU:HD12	7:Am:4:LEU:H	1.83	0.43
7:An:27:THR:OG1	7:An:28:TYR:N	2.51	0.43
7:Aq:97:LYS:HA	7:As:37:ARG:NH1	2.27	0.43
1:Au:189:DT:H73	2:Av:1927:DA:H2	1.83	0.43
1:Au:408:DA:OP2	6:0:562:THR:OG1	2.29	0.43
1:Au:413:DG:H2''	1:Au:414:DC:C6	2.53	0.43
1:Au:743:DA:H2'	1:Au:743:DA:N3	2.34	0.43
1:Au:767:DG:H2'	1:Au:768:DC:C6	2.54	0.43
1:Au:1082:DA:H2'	1:Au:1083:DG:N7	2.34	0.43
1:Au:1244:DA:H2'	1:Au:1245:DT:N3	2.33	0.43
1:Au:1267:DG:H2''	1:Au:1268:DG:O5'	2.18	0.43
1:Au:1613:DA:H62	2:Av:506:DA:H61	1.65	0.43
1:Au:1764:DC:H42	2:Av:355:DA:N6	2.12	0.43
1:Au:1822:DG:C8	1:Au:1822:DG:H5''	2.53	0.43
1:Au:2079:DT:H2''	1:Au:2080:DC:H5''	2.00	0.43
2:Av:341:DT:H2''	2:Av:342:DG:O4'	2.19	0.43
2:Av:364:DG:H2'	2:Av:365:DG:H8	1.82	0.43
2:Av:607:DG:OP2	2:Av:607:DG:N2	2.39	0.43
2:Av:713:DG:H2''	2:Av:714:DA:N3	2.34	0.43
2:Av:1309:DG:N3	6:2:682:HIS:CE1	2.87	0.43
2:Av:1725:DC:H2''	2:Av:1726:DC:O5'	2.18	0.43
2:Av:1859:DT:H2''	2:Av:1860:DG:C8	2.53	0.43
2:Av:1982:DG:H2'	2:Av:1983:DG:H21	1.83	0.43
2:Av:2004:DT:H2''	2:Av:2005:DG:C8	2.53	0.43
3:B:183:TYR:O	3:B:187:GLU:HG2	2.19	0.43
3:C:306:LEU:HD13	4:O:445:ILE:HD13	2.01	0.43
4:J:1973:LYS:HG3	4:J:1974:ARG:H	1.82	0.43
5:c:616:ARG:N	6:0:561:LYS:O	2.50	0.43
5:e:794:ARG:HH21	6:2:691:GLN:C	2.26	0.43
5:h:1344:ARG:HD2	6:5:1425:LYS:HD3	2.00	0.43
5:l:329:ARG:HG3	5:l:330:VAL:N	2.34	0.43
5:n:462:PRO:O	5:n:466:ARG:HD3	2.18	0.43
5:q:773:SER:OG	5:q:775:PRO:HD3	2.19	0.43
6:9:271:ALA:O	6:9:275:VAL:HG23	2.18	0.43
6:a2:477:LYS:HG2	6:a2:482:THR:HG23	2.01	0.43
7:Ar:84:THR:CG2	7:Ar:94:ARG:HH22	2.32	0.43
4:At:13:LYS:HD2	4:At:24:LYS:HB3	2.00	0.43
1:Au:252:DA:H2''	1:Au:253:DA:C8	2.54	0.43
1:Au:566:DA:N6	2:Av:1548:DC:H42	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Au:777:DC:H2''	1:Au:778:DG:N7	2.33	0.43
1:Au:779:DC:H5''	5:q:808:ARG:NH1	2.34	0.43
1:Au:1162:DG:H5'	1:Au:1162:DG:C8	2.53	0.43
2:Av:4:DG:H2''	2:Av:5:DG:C8	2.53	0.43
2:Av:185:DC:H2''	2:Av:186:DA:C8	2.54	0.43
2:Av:464:DC:H2'	2:Av:465:DT:C5	2.52	0.43
2:Av:710:DC:H6	2:Av:710:DC:H2'	1.68	0.43
2:Av:1333:DT:H6	2:Av:1333:DT:H2'	1.71	0.43
2:Av:1787:DT:H6	2:Av:1787:DT:H2'	1.67	0.43
2:Av:2035:DG:H2''	2:Av:2036:DT:C2	2.54	0.43
3:D:493:LEU:HD11	5:m:419:ASN:HD21	1.83	0.43
3:L:5490:LEU:HD21	4:W:2921:PHE:HE1	1.84	0.43
4:U:1846:LYS:HE3	4:U:1849:SER:HB2	2.01	0.43
4:V:1075:LEU:HD12	4:V:1080:ALA:HA	2.01	0.43
5:f:3180:ARG:NH1	5:r:3050:ASP:OD1	2.51	0.43
5:l:249:LYS:HE3	5:l:249:LYS:HB3	1.90	0.43
5:o:631:ALA:HB3	6:a3:568:ARG:HH22	1.83	0.43
6:0:557:HIS:HE2	4:At:90:GLU:HG3	1.82	0.43
3:au:4449:VAL:HG11	3:au:4459:LEU:HD22	2.00	0.43
7:Ai:45:SER:HB2	7:Ai:49:SER:OG	2.19	0.43
7:Ai:72:ILE:HA	7:Ai:75:LEU:HG	2.00	0.43
7:Ao:84:THR:HG23	7:Ao:94:ARG:NH1	2.33	0.43
1:Au:90:DT:P	5:j:46:VAL:HB	2.59	0.43
1:Au:547:DC:H41	2:Av:1566:DC:H42	1.65	0.43
1:Au:823:DG:OP2	4:Ac:821:ARG:NH1	2.51	0.43
1:Au:913:DG:H2''	1:Au:914:DG:C8	2.54	0.43
1:Au:936:DC:H2''	1:Au:937:DG:H8	1.83	0.43
1:Au:1176:DG:H2'	1:Au:1177:DG:C8	2.54	0.43
1:Au:1220:DC:O2	2:Av:899:DG:N2	2.52	0.43
1:Au:1512:DC:H2''	1:Au:1513:DC:O2	2.19	0.43
1:Au:1844:DA:H5'	6:x:208:GLY:HA3	2.01	0.43
1:Au:1875:DA:H3'	1:Au:1876:DA:N7	2.34	0.43
2:Av:580:DA:H2''	2:Av:581:DA:C8	2.54	0.43
2:Av:692:DG:N3	2:Av:692:DG:H2'	2.33	0.43
2:Av:786:DC:H2''	2:Av:787:DA:H8	1.83	0.43
2:Av:793:DT:H2''	2:Av:794:DA:N7	2.34	0.43
2:Av:920:DG:H2'	2:Av:921:DG:C8	2.54	0.43
2:Av:1812:DA:H2''	2:Av:1813:DG:H5''	2.00	0.43
3:L:5456:LEU:HD11	4:W:2897:VAL:HG13	2.00	0.43
4:O:448:GLU:CD	6:x:294:ARG:HE	2.26	0.43
4:U:1889:ILE:HG12	4:U:1894:MET:SD	2.58	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:V:1070:ALA:HA	4:V:1073:LEU:HD12	2.00	0.43
5:q:854:LEU:O	5:q:857:ILE:HG22	2.19	0.43
5:r:3006:ILE:HD11	5:r:3037:GLN:HG3	2.01	0.43
6:1:659:LEU:HB3	6:1:664:ARG:O	2.19	0.43
6:7:29:ILE:HG13	6:7:58:LEU:HD23	2.01	0.43
7:Aq:143:LYS:C	7:Aq:144:LYS:HD2	2.44	0.43
7:Aq:188:LYS:C	7:Aq:188:LYS:HD3	2.43	0.43
4:At:6:ALA:N	4:At:7:PRO:HD2	2.33	0.43
1:Au:127:DT:H2''	1:Au:128:DA:C5	2.54	0.43
1:Au:493:DA:N6	2:Av:1622:DG:O6	2.52	0.43
1:Au:499:DC:H2''	1:Au:500:DA:H8	1.83	0.43
1:Au:1688:DC:H2'	1:Au:1689:DC:C6	2.53	0.43
1:Au:1775:DA:H61	2:Av:345:DC:N4	2.06	0.43
2:Av:554:DT:H2''	2:Av:555:DG:C8	2.54	0.43
2:Av:706:DG:H4'	2:Av:707:DG:OP1	2.19	0.43
2:Av:707:DG:H2'	2:Av:707:DG:N3	2.34	0.43
2:Av:762:DC:N3	2:Av:763:DC:N4	2.66	0.43
2:Av:1312:DG:H2''	2:Av:1313:DG:C8	2.54	0.43
2:Av:1624:DG:C2	2:Av:1625:DC:C4	3.07	0.43
4:N:221:THR:O	4:N:224:THR:OG1	2.36	0.43
5:j:116:ARG:NH1	5:j:118:THR:O	2.52	0.43
6:v:95:ARG:HD3	6:v:95:ARG:HA	1.80	0.43
3:ao:1129:LEU:HB3	3:ao:1132:VAL:HB	2.01	0.43
4:aw:141:THR:OG1	4:aw:144:LYS:O	2.33	0.43
7:Ak:584:LYS:HD3	7:Ak:584:LYS:N	2.34	0.43
7:Al:296:LYS:HA	7:Al:300:LYS:HD2	2.00	0.43
7:Aq:137:THR:OG1	7:Aq:141:ALA:HB2	2.19	0.43
1:Au:328:DT:H2''	1:Au:329:DA:C8	2.54	0.43
1:Au:810:DT:H2''	1:Au:811:DT:C4	2.54	0.43
1:Au:1392:DT:H2''	1:Au:1393:DA:H8	1.84	0.43
1:Au:1862:DT:H2''	1:Au:1863:DC:N1	2.33	0.43
1:Au:1881:DC:O5'	6:9:204:LYS:NZ	2.52	0.43
2:Av:440:DA:H2'	2:Av:441:DC:O4'	2.18	0.43
2:Av:725:DT:H2''	2:Av:726:DA:O4'	2.19	0.43
2:Av:1822:DC:H2''	2:Av:1823:DC:H5''	2.01	0.43
3:F:642:ARG:HG2	4:At:118:TYR:HE1	1.83	0.43
3:F:684:THR:HG21	4:At:38:VAL:HG22	2.01	0.43
3:H:5185:TYR:CE1	4:S:960:GLY:HA3	2.54	0.43
3:H:5219:GLN:OE1	3:H:5241:GLY:N	2.50	0.43
4:J:2045:LEU:O	6:a7:2373:ARG:NH2	2.52	0.43
4:U:1880:LEU:HD12	3:Ae:3021:LEU:HD22	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:k:200:VAL:HG21	6:8:126:ARG:HH11	1.83	0.43
5:o:652:ILE:HG13	6:a3:523:ILE:HD12	2.01	0.43
5:s:2093:ILE:HG22	6:a7:2314:ALA:HB1	2.01	0.43
5:t:1205:LYS:HG3	7:Ar:0:MET:N	2.34	0.43
5:u:3171:VAL:HG23	6:a9:3319:LEU:HD22	2.01	0.43
6:9:270:THR:OG1	6:9:271:ALA:N	2.52	0.43
3:ak:238:LEU:HD23	3:ak:238:LEU:H	1.83	0.43
4:Ab:715:LYS:HA	4:Ab:715:LYS:HD2	1.94	0.43
7:Aq:22:SER:O	7:Aq:22:SER:OG	2.34	0.43
7:Aq:150:LYS:H	7:Aq:150:LYS:HD2	1.83	0.43
7:Ar:45:SER:OG	7:Ar:46:SER:N	2.52	0.43
1:Au:227:DT:H2''	1:Au:228:DC:C6	2.53	0.42
1:Au:235:DA:H1'	1:Au:236:DG:H5'	2.01	0.42
1:Au:611:DA:N6	2:Av:1502:DA:H62	2.16	0.42
1:Au:628:DC:N4	2:Av:1484:DA:H62	2.15	0.42
1:Au:1056:DC:H6	1:Au:1056:DC:H2'	1.64	0.42
1:Au:1111:DG:H5'	3:as:1720:LYS:HG3	2.01	0.42
1:Au:1374:DA:H2''	1:Au:1375:DG:C8	2.53	0.42
1:Au:1603:DG:N2	1:Au:1604:DA:N7	2.67	0.42
2:Av:398:DG:N2	4:R:257:ARG:HH12	2.17	0.42
2:Av:492:DC:H2'	2:Av:493:DA:N3	2.33	0.42
2:Av:560:DG:H4'	3:L:5425:ARG:NH1	2.34	0.42
2:Av:923:DG:OP1	3:Ae:2969:ARG:HB3	2.19	0.42
2:Av:1029:DG:H2''	2:Av:1030:DA:C8	2.54	0.42
2:Av:1143:DC:H2''	2:Av:1144:DG:N7	2.34	0.42
2:Av:1517:DG:H2''	2:Av:1518:DT:H5'	2.01	0.42
2:Av:1554:DC:H2''	2:Av:1555:DA:H8	1.84	0.42
2:Av:1677:DG:H2''	2:Av:1678:DT:O5'	2.19	0.42
3:A:57:TYR:CD1	4:M:110:GLU:HG3	2.54	0.42
3:L:5447:VAL:HG22	4:W:2966:ALA:HB1	2.01	0.42
5:c:653:MET:HE3	5:c:653:MET:HB2	1.94	0.42
5:i:3258:ASN:HD21	3:au:4477:LEU:HD11	1.84	0.42
5:s:2092:LEU:HD22	6:a7:2317:ARG:HB3	2.01	0.42
5:s:2147:ARG:NH1	5:s:2151:MET:HG3	2.34	0.42
6:3:3164:LEU:H	6:3:3164:LEU:HD12	1.84	0.42
6:a2:421:ARG:HG2	6:a2:425:ARG:HE	1.84	0.42
3:aj:17:ARG:HB2	3:aj:27:VAL:HG21	2.00	0.42
3:aq:4240:SER:C	3:aq:4241:LYS:HD2	2.44	0.42
3:at:4259:THR:O	3:at:4263:ARG:HG3	2.17	0.42
3:at:4333:ASP:HB3	3:at:4336:LEU:HB2	2.00	0.42
4:ay:373:ALA:N	4:ay:374:PRO:HD2	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:Ah:407:SER:OG	7:Ah:408:HIS:N	2.51	0.42
7:Am:65:ASP:OD1	7:Am:65:ASP:N	2.52	0.42
4:At:118:TYR:HD2	4:At:119:THR:CG2	2.31	0.42
1:Au:261:DA:H2''	1:Au:262:DC:H5''	2.01	0.42
1:Au:274:DC:H2'	1:Au:275:DG:H8	1.81	0.42
1:Au:599:DC:H2''	1:Au:600:DC:OP1	2.19	0.42
1:Au:731:DA:H2'	1:Au:732:DT:H72	2.00	0.42
1:Au:966:DC:H2''	1:Au:967:DG:H8	1.83	0.42
1:Au:1327:DG:H2'	1:Au:1328:DC:C6	2.54	0.42
1:Au:1699:DA:OP2	5:p:677:ARG:HG2	2.19	0.42
1:Au:1822:DG:H2''	1:Au:1823:DT:O5'	2.19	0.42
1:Au:1893:DT:H3'	5:l:296:ARG:HH21	1.84	0.42
1:Au:1905:DA:H2''	1:Au:1906:DG:C8	2.54	0.42
1:Au:1976:DG:H2'	1:Au:1977:DT:C7	2.49	0.42
1:Au:2002:DG:H2'	1:Au:2003:DA:C5	2.53	0.42
1:Au:2005:DA:H61	2:Av:112:DG:N2	2.16	0.42
2:Av:1085:DT:OP1	3:K:5340:ARG:HB2	2.19	0.42
2:Av:1368:DC:C2	2:Av:1369:DG:C6	3.08	0.42
2:Av:1403:DT:H6	2:Av:1403:DT:H2'	1.70	0.42
2:Av:1936:DC:H2''	2:Av:1937:DT:O4'	2.19	0.42
2:Av:2048:DG:H5''	2:Av:2048:DG:C8	2.54	0.42
3:H:5161:PRO:HG3	4:S:886:TYR:CZ	2.54	0.42
3:I:2562:VAL:HG23	6:a6:3288:THR:HB	2.01	0.42
3:I:2577:LEU:HD22	6:a6:3236:LYS:HB3	2.00	0.42
3:L:5520:LYS:HB3	7:As:66:LEU:HD21	2.01	0.42
5:Y:161:GLU:OE2	6:w:142:ARG:NE	2.51	0.42
6:v:79:LYS:HE2	6:v:79:LYS:HB3	1.81	0.42
6:0:548:ILE:O	6:0:552:VAL:HG12	2.19	0.42
6:5:1484:LYS:HB3	6:5:1484:LYS:HE2	1.81	0.42
6:a5:742:THR:HG23	6:a5:744:MET:N	2.34	0.42
3:ap:4026:PRO:HG3	4:Ab:732:TYR:CE2	2.54	0.42
7:Ak:509:HIS:ND1	7:Ak:513:SER:O	2.52	0.42
7:Al:243:GLU:HA	7:Al:247:LEU:HG	2.01	0.42
7:Ao:125:ARG:NE	7:Ao:131:ALA:HA	2.34	0.42
1:Au:107:DC:H2''	1:Au:108:DC:C6	2.55	0.42
1:Au:129:DG:H5''	4:av:30:ARG:NH1	2.34	0.42
1:Au:246:DC:H2''	1:Au:247:DG:C8	2.53	0.42
1:Au:251:DA:H2''	1:Au:252:DA:C8	2.54	0.42
1:Au:445:DG:H2''	1:Au:446:DT:O2	2.19	0.42
1:Au:1841:DC:H5	4:ax:272:ARG:HH22	1.66	0.42
2:Av:339:DG:H2'	2:Av:340:DA:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Av:1046:DG:H8	7:Aq:58:TYR:CE1	2.38	0.42
2:Av:1661:DA:H2''	2:Av:1662:DC:O5'	2.18	0.42
2:Av:1835:DA:H4'	4:P:506:ARG:HH22	1.84	0.42
2:Av:1914:DG:H2'	2:Av:1914:DG:N3	2.34	0.42
3:A:96:LEU:HD13	4:M:100:PRO:HD3	2.01	0.42
5:l:274:LEU:HD21	6:9:224:ARG:HB2	2.01	0.42
5:s:2079:LEU:HA	5:s:2082:ILE:HD12	2.01	0.42
6:4:2377:ALA:HB1	6:4:2394:PHE:HB3	2.02	0.42
3:as:1791:GLN:O	3:as:1795:ARG:HG2	2.19	0.42
4:Ab:722:ARG:HD2	4:Ab:722:ARG:HA	1.93	0.42
7:Ar:113:ARG:C	7:Ar:115:SER:H	2.27	0.42
1:Au:118:DA:H2''	1:Au:119:DT:C5	2.55	0.42
1:Au:299:DC:H5'	3:am:796:LYS:HE2	2.01	0.42
1:Au:420:DC:H2'	1:Au:421:DA:C8	2.53	0.42
1:Au:1038:DT:H2''	1:Au:1039:DA:O5'	2.19	0.42
1:Au:1151:DC:OP2	5:g:2252:LYS:NZ	2.45	0.42
1:Au:1549:DC:H42	2:Av:570:DA:N6	2.15	0.42
1:Au:1667:DA:N6	2:Av:453:DC:H41	2.18	0.42
1:Au:1878:DC:H2'	1:Au:1879:DG:C2	2.54	0.42
1:Au:1934:DC:H2''	1:Au:1935:DC:O2	2.20	0.42
1:Au:1990:DC:H2''	1:Au:1991:DA:C8	2.53	0.42
1:Au:2081:DC:H42	2:Av:37:DA:N6	2.17	0.42
2:Av:95:DT:P	6:a2:403:ARG:HH22	2.42	0.42
2:Av:412:DG:O5'	6:a4:585:LYS:NZ	2.52	0.42
2:Av:513:DC:O4'	7:An:125:ARG:NH2	2.53	0.42
2:Av:722:DG:H2'	2:Av:723:DT:H71	2.00	0.42
2:Av:964:DA:H2''	2:Av:965:DG:C8	2.55	0.42
2:Av:1041:DG:H2''	2:Av:1042:DA:C5	2.55	0.42
2:Av:1139:DA:C8	7:Ar:87:VAL:HG11	2.54	0.42
2:Av:1495:DA:H2''	2:Av:1496:DG:C8	2.54	0.42
2:Av:1498:DG:O3'	7:Ai:76:LEU:HB2	2.20	0.42
2:Av:2025:DC:H2''	2:Av:2026:DA:C8	2.53	0.42
2:Av:2030:DC:H2'	2:Av:2031:DG:O4'	2.19	0.42
2:Av:2083:DG:C8	2:Av:2083:DG:H5'	2.54	0.42
3:F:741:LEU:HD11	5:o:581:LEU:HD21	2.02	0.42
4:T:2826:GLU:HA	6:3:3229:HIS:HE1	1.85	0.42
5:j:121:PRO:HA	5:j:124:ILE:HG22	2.01	0.42
5:n:543:ILE:HG12	6:a2:436:ILE:HG13	2.01	0.42
6:a4:651:THR:HG23	6:a4:654:ASP:H	1.85	0.42
3:ao:1079:ALA:HB2	4:Aa:659:THR:HA	2.01	0.42
3:aq:4199:HIS:HA	3:aq:4202:LEU:HD12	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:au:4426:GLU:O	3:au:4430:ASN:ND2	2.51	0.42
4:Ab:817:LYS:HA	4:Ab:817:LYS:HD2	1.89	0.42
1:Au:77:DC:H2''	1:Au:78:DG:C8	2.54	0.42
1:Au:143:DG:H1'	1:Au:144:DT:H72	2.02	0.42
1:Au:324:DC:H2'	1:Au:325:DA:C5	2.55	0.42
1:Au:484:DT:H2''	1:Au:485:DC:C6	2.55	0.42
1:Au:589:DA:H2''	1:Au:590:DG:C8	2.54	0.42
1:Au:614:DT:H2''	1:Au:615:DA:C8	2.53	0.42
1:Au:644:DA:H2''	1:Au:645:DG:C8	2.54	0.42
1:Au:853:DC:H5'	1:Au:853:DC:H6	1.84	0.42
1:Au:886:DG:N1	2:Av:1226:DT:H72	2.34	0.42
1:Au:980:DC:C2	1:Au:981:DC:C5	3.08	0.42
1:Au:1595:DA:H2'	1:Au:1596:DG:N3	2.34	0.42
1:Au:1922:DA:H2''	1:Au:1923:DT:O5'	2.19	0.42
2:Av:166:DC:H2''	2:Av:167:DT:C5	2.54	0.42
2:Av:286:DG:H5''	2:Av:286:DG:C8	2.53	0.42
2:Av:604:DG:H2''	3:L:5517:LYS:NZ	2.35	0.42
2:Av:810:DT:H2'	2:Av:811:DG:C8	2.54	0.42
2:Av:982:DA:H5''	5:s:2096:LEU:HD23	2.01	0.42
2:Av:1070:DC:H2''	2:Av:1071:DA:C8	2.55	0.42
2:Av:1433:DT:OP2	5:Y:139:SER:N	2.45	0.42
3:C:271:THR:HG22	3:C:273:SER:H	1.85	0.42
4:O:440:ASP:OD2	6:9:286:TYR:OH	2.25	0.42
5:b:482:GLN:HG2	6:z:428:ARG:HA	2.01	0.42
5:h:1384:LEU:HD13	5:t:1307:ARG:HG2	2.01	0.42
5:m:381:LEU:O	5:m:385:ILE:HG12	2.20	0.42
6:8:129:VAL:HG11	6:8:132:ILE:HD11	2.01	0.42
3:am:803:ARG:NH1	4:ay:491:LYS:HE2	2.34	0.42
3:ap:4027:VAL:HG13	3:ap:4048:PRO:HB2	2.01	0.42
7:Ai:7:SER:O	7:Ai:10:PRO:HD2	2.20	0.42
7:Aj:145:LYS:HB2	7:Aj:146:PRO:HD3	2.01	0.42
7:An:28:TYR:CE1	7:An:31:MET:HE1	2.54	0.42
7:An:84:THR:OG1	7:An:94:ARG:NH2	2.53	0.42
7:An:102:LYS:HZ2	7:An:102:LYS:HG3	1.64	0.42
7:Ap:54:ILE:C	7:Ap:55:LYS:HD2	2.44	0.42
7:Aq:97:LYS:CA	7:As:37:ARG:HH22	2.30	0.42
7:Ar:3:SER:O	7:Ar:7:SER:OG	2.28	0.42
1:Au:132:DT:H4'	1:Au:133:DC:OP1	2.20	0.42
1:Au:278:DT:H2'	1:Au:279:DT:C7	2.49	0.42
1:Au:476:DC:OP2	3:ao:1043:ARG:NE	2.53	0.42
1:Au:486:DT:H2'	1:Au:487:DC:C6	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Au:1166:DT:H2''	1:Au:1167:DA:O4'	2.20	0.42
1:Au:1195:DC:H4'	1:Au:1196:DC:OP1	2.18	0.42
1:Au:1481:DG:N2	2:Av:638:DG:N2	2.67	0.42
1:Au:1652:DG:H2'	1:Au:1652:DG:N3	2.35	0.42
1:Au:1815:DA:H2''	1:Au:1816:DT:C5	2.53	0.42
1:Au:1870:DG:H2'	1:Au:1871:DT:H71	2.02	0.42
1:Au:2052:DA:H5'	7:Al:314:ARG:HH21	1.85	0.42
2:Av:119:DA:H2	2:Av:120:DC:H42	1.67	0.42
2:Av:540:DA:H2''	2:Av:541:DG:C8	2.55	0.42
2:Av:591:DC:H5''	5:i:3213:ARG:NH1	2.34	0.42
2:Av:930:DG:H2''	2:Av:931:DA:H8	1.85	0.42
2:Av:1729:DG:H2''	2:Av:1730:DG:C8	2.53	0.42
2:Av:1784:DG:H2'	2:Av:1785:DT:H72	2.01	0.42
2:Av:1921:DC:H2''	2:Av:1922:DA:C8	2.55	0.42
3:I:2591:LYS:HB2	5:r:2983:HIS:CD2	2.54	0.42
4:U:1953:VAL:HG12	3:Ae:3007:VAL:HG13	2.02	0.42
5:Y:192:ASP:HA	6:w:122:ARG:HH12	1.84	0.42
5:e:844:ILE:HG12	6:2:707:VAL:HG21	2.01	0.42
5:f:3110:GLU:O	6:3:3194:ARG:NH2	2.40	0.42
5:n:451:LYS:HB3	5:n:452:SER:H	1.57	0.42
6:3:3174:LYS:NZ	6:3:3179:ASN:HA	2.31	0.42
6:9:191:ARG:HB2	6:9:200:LYS:HE2	2.01	0.42
6:CD:291:LYS:HD3	6:CD:292:GLY:N	2.35	0.42
3:aq:4180:LEU:HD13	4:Ac:837:LEU:HB2	2.01	0.42
3:ar:2708:ILE:HG22	3:ar:2710:SER:H	1.85	0.42
7:An:1:THR:OG1	7:An:2:GLU:N	2.51	0.42
7:Ar:133:LYS:HG3	7:Ar:134:PRO:N	2.34	0.42
7:As:95:LEU:HD23	7:As:95:LEU:HA	1.81	0.42
1:Au:125:DC:H4'	3:aj:12:ALA:HB2	2.02	0.42
1:Au:179:DA:H2''	1:Au:180:DG:C5	2.54	0.42
1:Au:196:DG:H2''	1:Au:197:DA:C8	2.55	0.42
1:Au:282:DA:H2''	1:Au:283:DA:C8	2.54	0.42
1:Au:646:DG:H2''	1:Au:647:DG:O5'	2.20	0.42
1:Au:708:DC:H2''	1:Au:709:DG:C8	2.55	0.42
1:Au:763:DG:H2''	1:Au:764:DA:C8	2.54	0.42
1:Au:1293:DA:H2'	1:Au:1294:DG:C8	2.55	0.42
1:Au:1311:DT:H2''	1:Au:1312:DT:C5	2.54	0.42
1:Au:1348:DG:N3	1:Au:1348:DG:H2'	2.34	0.42
1:Au:1570:DA:C8	1:Au:1570:DA:H5'	2.54	0.42
1:Au:2018:DC:C2'	1:Au:2019:DT:H71	2.49	0.42
2:Av:994:DG:H4'	4:U:1864:ARG:HD2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Av:1642:DA:H2'	2:Av:1643:DA:C8	2.55	0.42
2:Av:1827:DT:H2''	2:Av:1828:DG:C8	2.55	0.42
2:Av:1945:DG:H2''	2:Av:1946:DG:H8	1.85	0.42
2:Av:2034:DC:C2	2:Av:2035:DG:N7	2.88	0.42
4:N:206:GLY:O	4:N:207:GLU:HB3	2.19	0.42
4:U:1929:ILE:HA	4:U:1932:ALA:HB3	2.01	0.42
4:W:2946:THR:OG1	4:W:2947:SER:N	2.52	0.42
5:h:1375:LEU:HD23	6:5:1442:LEU:HD13	2.02	0.42
5:u:3109:HIS:HA	5:u:3112:ARG:HE	1.85	0.42
3:aj:63:LEU:HD22	4:av:42:LEU:HD13	2.02	0.42
3:ao:1075:VAL:HG12	4:Aa:658:ILE:HD12	2.01	0.42
3:ao:1148:LEU:HD23	3:ao:1148:LEU:HA	1.92	0.42
7:Ar:10:PRO:HA	7:Ar:13:PRO:HG3	2.00	0.42
7:As:15:ARG:HG3	7:As:16:VAL:CG2	2.41	0.42
1:Au:89:DC:H6	1:Au:89:DC:H2'	1.73	0.42
1:Au:428:DA:H2'	1:Au:429:DA:H5''	2.01	0.42
1:Au:472:DA:H2''	1:Au:473:DT:H71	2.00	0.42
1:Au:785:DC:H2''	1:Au:786:DG:C4	2.55	0.42
1:Au:912:DC:H42	2:Av:1202:DC:H41	1.67	0.42
1:Au:1646:DT:H71	2:Av:473:DA:H61	1.85	0.42
1:Au:1719:DC:H42	2:Av:400:DA:N6	2.17	0.42
2:Av:455:DG:H2''	2:Av:456:DT:C6	2.55	0.42
2:Av:1148:DA:H61	7:Ai:100:LYS:NZ	2.18	0.42
2:Av:1272:DC:H6	2:Av:1272:DC:H2'	1.72	0.42
2:Av:1302:DT:H6	2:Av:1302:DT:H2'	1.58	0.42
2:Av:1346:DG:H2''	2:Av:1347:DA:C8	2.55	0.42
2:Av:1435:DT:O2	2:Av:1435:DT:H2'	2.20	0.42
2:Av:1548:DC:H2'	2:Av:1549:DC:H6	1.85	0.42
2:Av:1854:DG:H2''	2:Av:1855:DT:C6	2.55	0.42
2:Av:1992:DG:H2''	2:Av:1993:DA:H5''	2.00	0.42
2:Av:1999:DC:H2''	2:Av:2000:DC:C6	2.55	0.42
2:Av:2014:DA:H2'	2:Av:2015:DA:C8	2.55	0.42
3:K:5326:LEU:HD13	4:V:1018:LEU:HB2	2.02	0.42
3:K:5392:LYS:HZ1	7:Ar:67:GLN:HA	1.83	0.42
4:P:575:VAL:HG13	4:P:579:LEU:HD12	2.01	0.42
5:f:3097:VAL:HA	5:f:3100:ARG:HE	1.84	0.42
5:o:580:ALA:O	5:o:584:ILE:N	2.38	0.42
6:v:27:GLN:OE1	6:v:55:ARG:NH2	2.53	0.42
6:0:546:ASN:HB3	6:0:575:GLN:HE22	1.85	0.42
6:a5:709:LEU:HD12	6:a5:709:LEU:O	2.20	0.42
3:al:695:PRO:HD3	4:ax:283:TYR:CG	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:am:911:SER:HA	7:Ak:550:LEU:HB2	2.01	0.42
3:an:918:THR:O	3:an:919:ARG:HB3	2.20	0.42
3:aq:4141:GLN:HE21	4:Ac:839:GLN:HE22	1.67	0.42
4:az:572:LEU:HD23	4:az:572:LEU:HA	1.91	0.42
7:Al:311:LEU:HG	7:Al:314:ARG:NH2	2.30	0.42
7:Ao:83:GLN:HB3	7:Ao:92:SER:OG	2.19	0.42
1:Au:317:DC:H2''	1:Au:318:DG:C8	2.55	0.42
1:Au:943:DA:H8	4:V:1002:ARG:NH2	2.18	0.42
1:Au:1028:DG:N2	2:Av:1087:DA:H61	2.18	0.42
1:Au:1129:DA:H61	2:Av:989:DC:N4	2.17	0.42
1:Au:1824:DA:H2''	1:Au:1825:DG:C8	2.54	0.42
1:Au:1829:DG:H2'	1:Au:1830:DC:C4	2.55	0.42
1:Au:1869:DC:H2''	1:Au:1870:DG:C8	2.54	0.42
2:Av:271:DT:OP2	6:x:219:ARG:NH1	2.52	0.42
2:Av:509:DG:H2'	2:Av:510:DG:C8	2.55	0.42
2:Av:595:DT:H6	2:Av:595:DT:H2'	1.65	0.42
2:Av:622:DC:C2	2:Av:623:DG:C8	3.08	0.42
2:Av:1423:DA:H2''	2:Av:1424:DC:C2	2.53	0.42
2:Av:1529:DT:H5'	4:aw:148:LYS:HG2	2.01	0.42
2:Av:1684:DC:H2''	2:Av:1685:DG:H8	1.85	0.42
4:O:433:ILE:HA	6:9:286:TYR:O	2.20	0.42
4:U:1840:LYS:HG2	4:U:1842:ALA:H	1.84	0.42
4:W:2877:THR:OG1	4:W:2880:LYS:O	2.33	0.42
5:Z:255:TYR:CZ	6:x:238:ARG:HG2	2.55	0.42
5:a:377:ILE:HG13	5:a:378:ARG:N	2.35	0.42
5:j:90:MET:HE2	5:j:90:MET:HB2	1.86	0.42
5:o:649:ARG:HH22	5:o:656:ASP:CG	2.28	0.42
6:9:266:ARG:O	6:9:267:LYS:HG2	2.20	0.42
6:a3:504:LYS:HB2	6:a3:505:PRO:HD3	2.00	0.42
3:ar:2663:ALA:O	3:ar:2667:ALA:N	2.49	0.42
4:ax:248:LYS:NZ	4:ax:251:PRO:HG3	2.35	0.42
7:Am:159:LYS:CG	7:Am:167:LYS:HA	2.49	0.42
7:Ao:47:ARG:NH2	7:Ao:69:LYS:HE2	2.35	0.42
1:Au:656:DC:O2	1:Au:656:DC:H2'	2.19	0.42
1:Au:1754:DG:H1	2:Av:366:DA:H61	1.66	0.42
2:Av:536:DG:H5'	2:Av:536:DG:C8	2.55	0.42
2:Av:964:DA:H2''	2:Av:965:DG:H8	1.84	0.42
2:Av:1494:DC:O3'	6:8:121:ARG:NH2	2.52	0.42
2:Av:1656:DT:H2''	2:Av:1657:DT:O5'	2.18	0.42
2:Av:1825:DC:H2''	2:Av:1826:DT:C6	2.55	0.42
2:Av:2081:DT:H2''	2:Av:2082:DC:C6	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:X:106:ASP:HB3	5:j:130:ILE:HD12	2.02	0.42
5:k:159:LEU:HD23	5:k:161:ILE:H	1.85	0.42
5:l:292:LYS:NZ	6:9:262:GLU:OE1	2.41	0.42
5:t:1297:ILE:HG22	6:a8:1501:ARG:O	2.20	0.42
3:am:788:LYS:HG3	3:am:788:LYS:O	2.20	0.42
7:Ai:49:SER:HA	7:Ai:52:LYS:HG2	2.01	0.42
7:Aj:186:TYR:HA	7:Aj:188:LYS:NZ	2.35	0.42
7:Ao:122:ALA:HA	7:Ao:125:ARG:HB3	2.02	0.42
7:Ap:67:GLN:HG3	7:Ap:68:ILE:N	2.35	0.42
1:Au:567:DG:H2''	1:Au:568:DG:N3	2.34	0.41
1:Au:658:DT:H6	1:Au:658:DT:H2'	1.68	0.41
1:Au:832:DC:C2	1:Au:833:DC:C5	3.08	0.41
1:Au:1078:DC:H2''	1:Au:1079:DT:O4'	2.19	0.41
1:Au:1464:DG:C6	1:Au:1465:DG:C6	3.08	0.41
1:Au:1665:DT:H2'	1:Au:1666:DT:O2	2.20	0.41
2:Av:116:DA:H2''	2:Av:117:DC:O2	2.19	0.41
2:Av:288:DT:H2''	2:Av:289:DG:O4'	2.20	0.41
2:Av:430:DG:H22	7:An:73:ARG:NH1	2.18	0.41
2:Av:573:DA:H2''	2:Av:574:DG:H8	1.85	0.41
2:Av:609:DC:H2''	2:Av:610:DA:N7	2.35	0.41
2:Av:661:DG:H2''	2:Av:662:DG:N7	2.35	0.41
2:Av:763:DC:H2''	2:Av:764:DT:C6	2.55	0.41
2:Av:1716:DA:H2''	2:Av:1717:DT:O5'	2.19	0.41
2:Av:1977:DT:H2''	2:Av:1978:DG:C8	2.55	0.41
3:K:5359:LEU:HD23	3:K:5360:LEU:N	2.35	0.41
4:M:86:ILE:HD13	4:M:90:GLU:HG2	2.02	0.41
4:T:2749:LYS:HA	4:T:2749:LYS:HD3	1.88	0.41
5:Z:271:LEU:HD13	6:x:228:ILE:HA	2.01	0.41
5:i:3254:PHE:O	5:i:3258:ASN:N	2.52	0.41
5:m:406:ALA:HA	6:CD:381:ARG:HH22	1.84	0.41
5:m:409:ALA:HA	5:m:412:VAL:HG12	2.01	0.41
5:p:736:VAL:HG21	6:a4:609:ARG:HE	1.85	0.41
5:q:782:LYS:O	5:q:785:ARG:HD2	2.19	0.41
6:9:197:GLY:HA3	6:9:200:LYS:HE3	2.02	0.41
3:aj:24:GLN:HG3	4:av:41:VAL:HG12	2.02	0.41
3:ap:4034:LEU:HA	3:ap:4039:TYR:HD2	1.85	0.41
4:av:103:LEU:HD23	4:av:103:LEU:HA	1.89	0.41
4:ax:288:LEU:HD21	4:ax:295:THR:HB	2.02	0.41
4:Af:1117:LYS:HA	4:Af:1117:LYS:HD2	1.74	0.41
7:Ak:489:VAL:O	7:Ak:489:VAL:HG12	2.20	0.41
7:Ak:593:LYS:HA	7:Ak:593:LYS:HD3	1.81	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:Al:248:SER:O	7:Al:251:PRO:HD2	2.20	0.41
7:Al:272:MET:HE2	7:Al:295:ILE:HG22	2.01	0.41
7:Al:343:LYS:HA	7:Al:343:LYS:HD2	1.76	0.41
7:Am:151:LYS:HA	7:Am:154:LYS:HG3	2.02	0.41
1:Au:69:DC:O3'	6:v:16:LYS:NZ	2.53	0.41
1:Au:90:DT:H2''	5:j:40:ARG:NH1	2.35	0.41
1:Au:404:DT:H71	2:Av:1710:DC:H41	1.85	0.41
1:Au:474:DT:H2''	1:Au:475:DA:C8	2.55	0.41
1:Au:768:DC:H2'	1:Au:769:DT:C5	2.55	0.41
1:Au:1033:DA:N6	2:Av:1080:DA:H62	2.18	0.41
1:Au:1041:DA:N6	2:Av:1073:DG:C6	2.86	0.41
1:Au:1142:DA:H2''	1:Au:1143:DC:C6	2.55	0.41
1:Au:1191:DG:H21	2:Av:928:DG:N2	2.18	0.41
1:Au:1231:DG:C8	1:Au:1231:DG:H5''	2.55	0.41
1:Au:1286:DT:H2'	1:Au:1287:DG:H8	1.85	0.41
1:Au:1363:DC:N4	2:Av:753:DG:N7	2.68	0.41
1:Au:1549:DC:N4	2:Av:570:DA:H61	2.14	0.41
1:Au:1936:DA:N6	2:Av:182:DG:O6	2.53	0.41
2:Av:3:DT:P	5:n:451:LYS:HA	2.60	0.41
2:Av:517:DA:H2'	2:Av:518:DT:C4	2.55	0.41
2:Av:1175:DT:H2''	2:Av:1176:DC:C6	2.55	0.41
2:Av:1686:DT:H4'	2:Av:1687:DT:OP1	2.20	0.41
2:Av:1911:DC:H2''	2:Av:1912:DG:C8	2.55	0.41
3:A:18:SER:O	3:A:23:LEU:N	2.42	0.41
3:C:271:THR:O	3:C:275:ARG:HB2	2.20	0.41
3:L:5517:LYS:HB2	3:L:5517:LYS:HE3	1.90	0.41
4:M:60:ASN:ND2	6:7:102:GLY:OXT	2.54	0.41
5:g:2233:SER:HB3	6:4:2352:LEU:HD11	2.01	0.41
5:i:3215:LEU:HB3	5:i:3216:PRO:HD3	2.02	0.41
5:p:697:ILE:HG22	6:a4:602:ALA:HB1	2.02	0.41
6:w:193:LEU:HB3	6:w:198:ARG:O	2.19	0.41
7:Al:341:LYS:HD3	7:Al:341:LYS:H	1.84	0.41
1:Au:55:DG:H2''	1:Au:56:DA:C8	2.55	0.41
1:Au:117:DG:N2	3:aj:42:ARG:HH22	2.19	0.41
1:Au:126:DC:H2'	1:Au:127:DT:C5	2.55	0.41
1:Au:300:DT:C2	2:Av:1817:DG:N2	2.88	0.41
1:Au:802:DC:H42	2:Av:1313:DG:H22	1.67	0.41
1:Au:811:DT:H2''	1:Au:812:DT:O5'	2.20	0.41
1:Au:947:DC:H41	2:Av:1166:DC:N4	2.19	0.41
1:Au:950:DG:H2'	1:Au:950:DG:N3	2.35	0.41
1:Au:955:DG:H1	2:Av:1159:DA:N6	2.16	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Au:964:DC:OP1	5:t:1219:TYR:HB3	2.20	0.41
1:Au:1179:DG:N2	2:Av:940:DC:O2	2.53	0.41
1:Au:1487:DC:H6	1:Au:1487:DC:H2'	1.69	0.41
2:Av:251:DG:H2''	2:Av:252:DG:H5''	2.01	0.41
2:Av:256:DA:H2'	2:Av:257:DG:C8	2.55	0.41
2:Av:541:DG:H2''	2:Av:542:DG:C8	2.55	0.41
2:Av:605:DG:H1	7:As:85:LYS:NZ	2.18	0.41
2:Av:1829:DG:H2''	2:Av:1830:DC:C6	2.56	0.41
2:Av:1951:DG:H2''	2:Av:1952:DG:O5'	2.20	0.41
2:Av:1986:DA:H2''	2:Av:1987:DC:H5''	2.02	0.41
2:Av:2007:DC:H2''	2:Av:2008:DG:C5	2.55	0.41
2:Av:2019:DG:H2''	2:Av:2020:DG:C8	2.55	0.41
5:k:141:ARG:O	5:k:145:VAL:HG13	2.20	0.41
5:p:703:GLN:HG3	5:p:724:VAL:HG21	2.02	0.41
5:q:848:LEU:O	5:q:852:THR:OG1	2.33	0.41
5:u:3096:ARG:CD	5:u:3096:ARG:N	2.79	0.41
6:v:35:ARG:O	6:v:39:ARG:HG2	2.20	0.41
6:a4:644:HIS:HB2	4:Ab:788:THR:HG21	2.01	0.41
6:a6:3224:PRO:HA	6:a6:3227:ARG:HB2	2.02	0.41
6:a9:3329:SER:HB3	6:a9:3332:ILE:HG12	2.02	0.41
3:ak:202:ILE:HG12	3:ak:205:HIS:CE1	2.55	0.41
3:al:753:GLN:NE2	3:al:775:GLY:O	2.52	0.41
7:Ak:529:SER:HB2	7:Ak:577:PHE:HB2	2.02	0.41
4:At:24:LYS:HD2	4:At:24:LYS:HA	1.76	0.41
1:Au:280:DT:H6	1:Au:280:DT:H2'	1.70	0.41
1:Au:400:DT:H3	2:Av:1715:DA:H61	1.68	0.41
1:Au:759:DC:H2''	1:Au:760:DG:C8	2.56	0.41
1:Au:1365:DC:H2'	1:Au:1366:DT:H72	2.02	0.41
1:Au:1377:DC:OP2	3:I:2494:ARG:NH1	2.53	0.41
1:Au:1463:DT:C2	1:Au:1464:DG:C8	3.09	0.41
1:Au:1496:DA:H2''	1:Au:1497:DC:H5	1.80	0.41
1:Au:1749:DA:H2'	1:Au:1750:DT:H72	2.01	0.41
1:Au:1873:DT:H4'	5:l:329:ARG:HH12	1.84	0.41
1:Au:1921:DT:O4	1:Au:1922:DA:N6	2.53	0.41
1:Au:2019:DT:H3'	6:a2:390:GLY:HA3	2.01	0.41
2:Av:310:DC:H2''	2:Av:311:DT:O5'	2.20	0.41
2:Av:352:DG:H4'	2:Av:353:DG:OP2	2.19	0.41
2:Av:457:DG:C8	2:Av:458:DC:C5	3.09	0.41
2:Av:611:DG:H2''	6:a9:3327:ARG:NH2	2.28	0.41
2:Av:793:DT:H2''	2:Av:794:DA:C5	2.54	0.41
2:Av:937:DC:H2''	2:Av:938:DC:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Av:1187:DT:C4	2:Av:1188:DG:C6	3.08	0.41
2:Av:1193:DG:H2''	2:Av:1194:DC:H5''	2.02	0.41
2:Av:1524:DA:H2''	2:Av:1525:DG:C8	2.55	0.41
2:Av:1643:DA:H2''	2:Av:1644:DT:H5'	2.02	0.41
2:Av:1757:DT:H2''	2:Av:1758:DG:H8	1.85	0.41
2:Av:1758:DG:H5'	7:Am:12:LYS:HG2	2.02	0.41
2:Av:1979:DC:H2''	2:Av:1980:DC:H5''	2.02	0.41
2:Av:2031:DG:H2'	2:Av:2032:DT:C2	2.55	0.41
2:Av:2091:DG:H2''	2:Av:2092:DA:C8	2.56	0.41
3:C:332:ARG:HD3	4:O:427:SER:HB3	2.01	0.41
3:H:5175:ALA:HB2	4:S:935:ILE:HD12	2.02	0.41
3:K:5328:LEU:HB3	3:K:5349:ALA:HB1	2.02	0.41
4:N:192:THR:HG23	4:N:194:ARG:H	1.85	0.41
5:t:1204:ARG:HG2	5:t:1205:LYS:N	2.35	0.41
6:z:485:LEU:HD11	3:an:1011:ALA:HB2	2.02	0.41
6:4:2378:MET:HE3	6:4:2378:MET:HB2	1.89	0.41
6:7:54:THR:HA	6:7:57:VAL:HG12	2.03	0.41
6:8:153:ARG:O	6:8:157:THR:OG1	2.32	0.41
6:CD:324:ALA:HB1	6:CD:329:VAL:HG11	2.03	0.41
6:a4:659:LEU:HB3	6:a4:664:ARG:O	2.21	0.41
3:al:685:THR:HG23	3:al:688:SER:H	1.85	0.41
3:al:723:VAL:HG22	4:ax:353:ALA:HB1	2.03	0.41
4:az:564:VAL:HG13	4:az:568:LEU:HD12	2.02	0.41
7:Al:315:ARG:NH1	7:Al:319:ALA:HB2	2.29	0.41
1:Au:14:DC:H6	1:Au:14:DC:H2'	1.70	0.41
1:Au:107:DC:H2''	1:Au:108:DC:C5	2.56	0.41
1:Au:114:DG:H5''	1:Au:114:DG:H8	1.84	0.41
1:Au:362:DC:H2''	1:Au:363:DG:H8	1.85	0.41
1:Au:411:DC:H2''	1:Au:412:DA:C8	2.55	0.41
1:Au:429:DA:H5'	1:Au:429:DA:H8	1.86	0.41
1:Au:611:DA:H2''	1:Au:612:DC:O5'	2.19	0.41
1:Au:684:DT:H2''	1:Au:685:DA:O4'	2.20	0.41
1:Au:1016:DC:H2'	1:Au:1017:DT:H6	1.86	0.41
1:Au:1417:DG:H2'	1:Au:1417:DG:N3	2.36	0.41
1:Au:1566:DA:C8	1:Au:1566:DA:H5''	2.55	0.41
1:Au:1600:DC:H3'	1:Au:1601:DC:H5''	2.01	0.41
1:Au:1639:DT:H2''	1:Au:1640:DT:H3	1.84	0.41
2:Av:128:DG:H2''	2:Av:129:DC:C2	2.55	0.41
2:Av:600:DC:H2''	2:Av:601:DG:C8	2.56	0.41
2:Av:941:DT:C2'	2:Av:942:DT:H71	2.50	0.41
2:Av:999:DC:H2''	2:Av:1000:DT:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Av:1351:DG:H2'	2:Av:1352:DT:C6	2.56	0.41
2:Av:1427:DG:H8	2:Av:1427:DG:OP2	2.02	0.41
2:Av:1570:DG:H2''	2:Av:1571:DG:N2	2.35	0.41
2:Av:1622:DG:H2'	2:Av:1623:DT:O4'	2.20	0.41
3:C:357:ILE:HG23	4:O:433:ILE:HG21	2.03	0.41
4:J:2055:ALA:HB1	3:as:1761:VAL:HG22	2.01	0.41
3:K:5364:THR:N	6:a8:1552:THR:O	2.41	0.41
4:W:2934:SER:HB3	4:W:2935:ARG:NH1	2.36	0.41
5:t:1214:LYS:HE2	7:Ar:74:ARG:NH2	2.35	0.41
5:t:1298:MET:HB3	5:t:1299:PRO:HD2	2.03	0.41
6:w:133:THR:OG1	6:w:134:LYS:N	2.54	0.41
6:z:472:MET:O	6:z:475:VAL:HG12	2.19	0.41
6:9:246:LEU:O	6:9:250:LEU:HG	2.20	0.41
6:a8:1472:LYS:HB2	6:a8:1473:ARG:H	1.61	0.41
6:a9:3348:ILE:HA	6:a9:3351:ALA:HB3	2.03	0.41
3:as:1828:GLU:OE1	3:as:1830:SER:N	2.33	0.41
4:Ab:716:LYS:HA	4:Ab:716:LYS:HD3	1.74	0.41
7:Am:154:LYS:HG3	7:Am:155:PRO:HD3	2.02	0.41
7:An:113:ARG:HD3	7:An:113:ARG:C	2.45	0.41
7:Ao:65:ASP:OD1	7:Ao:65:ASP:N	2.53	0.41
7:Ar:50:ILE:HA	7:Ar:53:TYR:HD2	1.86	0.41
1:Au:179:DA:H2''	1:Au:180:DG:N7	2.36	0.41
1:Au:309:DT:H2''	1:Au:310:DC:N3	2.34	0.41
1:Au:489:DA:C6	1:Au:490:DG:C6	3.09	0.41
1:Au:645:DG:H8	1:Au:645:DG:H5''	1.86	0.41
1:Au:883:DC:H2''	1:Au:884:DC:C6	2.56	0.41
1:Au:943:DA:H8	4:V:1002:ARG:HH22	1.69	0.41
1:Au:954:DC:H6	1:Au:954:DC:H2'	1.70	0.41
1:Au:1096:DG:H2''	1:Au:1097:DA:C8	2.56	0.41
1:Au:1825:DG:H5''	1:Au:1825:DG:C8	2.54	0.41
1:Au:1921:DT:C2	1:Au:1922:DA:C8	3.08	0.41
1:Au:1926:DA:N3	1:Au:1926:DA:H2'	2.33	0.41
1:Au:2071:DC:H42	2:Av:46:DA:N6	2.15	0.41
2:Av:498:DG:H2'	2:Av:499:DA:O4'	2.20	0.41
2:Av:606:DG:H2'	2:Av:607:DG:C4	2.55	0.41
2:Av:2034:DC:H2''	2:Av:2035:DG:C8	2.55	0.41
2:Av:2109:DG:H2'	2:Av:2110:DA:C2	2.55	0.41
3:G:759:LYS:HA	3:G:759:LYS:HD2	1.83	0.41
4:J:2045:LEU:HG	6:a7:2352:THR:HG21	2.01	0.41
5:a:450:ILE:O	5:a:454:ARG:HG2	2.20	0.41
5:n:544:MET:C	6:a2:436:ILE:HD11	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:z:454:ILE:HD13	6:z:454:ILE:HA	1.89	0.41
6:a2:452:ILE:O	6:a2:456:VAL:HG23	2.21	0.41
3:aj:73:ASN:HD22	3:aj:82:HIS:CD2	2.38	0.41
3:ar:2621:GLN:N	3:ar:2653:GLU:OE2	2.49	0.41
3:ar:2708:ILE:HG21	3:ar:2713:LEU:HG	2.02	0.41
4:ax:323:LEU:O	4:ax:327:ASN:ND2	2.42	0.41
7:Ai:134:PRO:HB3	7:Ai:139:ARG:HB3	2.02	0.41
1:Au:401:DT:H2''	1:Au:402:DG:C5	2.55	0.41
1:Au:1007:DC:H2''	1:Au:1008:DT:O5'	2.19	0.41
1:Au:1031:DA:H2''	1:Au:1032:DC:O5'	2.20	0.41
1:Au:1202:DC:H2'	1:Au:1203:DG:C8	2.56	0.41
1:Au:1316:DC:H6	1:Au:1316:DC:H2'	1.69	0.41
1:Au:1391:DA:H2''	1:Au:1392:DT:H5''	2.03	0.41
1:Au:1430:DC:H2''	1:Au:1431:DC:OP1	2.19	0.41
1:Au:1494:DG:N1	2:Av:626:DT:C2	2.89	0.41
1:Au:1507:DG:N2	2:Av:613:DG:C2	2.88	0.41
1:Au:1942:DG:H2''	1:Au:1943:DG:O4'	2.21	0.41
1:Au:2095:DA:H2''	1:Au:2096:DT:C2	2.56	0.41
2:Av:147:DT:OP2	7:Al:303:HIS:HB3	2.20	0.41
2:Av:249:DG:H2''	2:Av:250:DG:C8	2.56	0.41
2:Av:291:DC:OP2	3:C:269:ALA:N	2.43	0.41
2:Av:329:DA:H2''	2:Av:330:DG:C8	2.55	0.41
2:Av:413:DG:H2''	2:Av:414:DC:O5'	2.20	0.41
2:Av:469:DT:H5''	3:G:767:LYS:HA	2.02	0.41
2:Av:1044:DC:O2	7:Aq:15:ARG:NH2	2.53	0.41
2:Av:1679:DA:OP2	7:Am:47:ARG:NH1	2.54	0.41
2:Av:1745:DA:H2''	2:Av:1746:DG:O5'	2.20	0.41
2:Av:1824:DC:H2''	2:Av:1825:DC:C6	2.55	0.41
2:Av:2048:DG:H5''	2:Av:2048:DG:H8	1.84	0.41
4:O:406:LYS:NZ	4:O:408:SER:OG	2.40	0.41
5:a:391:LEU:N	5:a:392:PRO:HD2	2.36	0.41
5:e:776:ILE:HD12	6:2:706:GLY:HA2	2.03	0.41
5:e:856:ARG:HB3	5:e:858:GLU:HG3	2.02	0.41
5:p:674:HIS:O	5:p:674:HIS:CG	2.74	0.41
5:u:3134:LYS:H	5:u:3134:LYS:HG2	1.68	0.41
6:w:169:ILE:HD12	6:w:169:ILE:HA	1.95	0.41
6:z:488:PHE:O	4:az:530:SER:OG	2.37	0.41
6:a3:571:TYR:HB3	4:At:58:ILE:HG23	2.02	0.41
3:aj:78:ILE:HB	4:av:51:ILE:HD12	2.01	0.41
3:al:714:ALA:O	3:al:718:VAL:HG22	2.20	0.41
7:Ao:123:ARG:HB3	7:Ao:124:PRO:HD3	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:Aq:9:ALA:O	7:Aq:11:ALA:N	2.54	0.41
7:Aq:89:ALA:HB1	7:Aq:92:SER:HB3	2.02	0.41
1:Au:243:DC:H2''	1:Au:244:DA:H8	1.86	0.41
1:Au:530:DC:H2''	1:Au:531:DC:H6	1.84	0.41
1:Au:759:DC:P	4:Ac:878:ARG:HE	2.43	0.41
1:Au:1553:DG:N2	1:Au:1554:DC:C2	2.89	0.41
1:Au:1609:DC:H2'	1:Au:1610:DT:C7	2.51	0.41
1:Au:1649:DA:H2''	1:Au:1650:DC:C6	2.55	0.41
1:Au:1750:DT:H3	2:Av:370:DA:H61	1.69	0.41
1:Au:1979:DC:H2''	1:Au:1980:DC:O4'	2.20	0.41
1:Au:2009:DC:N4	2:Av:108:DA:H62	2.19	0.41
1:Au:2089:DT:OP1	3:E:535:GLY:HA3	2.21	0.41
2:Av:46:DA:H2'	2:Av:47:DG:N3	2.36	0.41
2:Av:108:DA:H2''	2:Av:109:DG:H8	1.86	0.41
2:Av:605:DG:H1	7:As:85:LYS:HZ3	1.68	0.41
2:Av:623:DG:H2'	2:Av:624:DT:C6	2.56	0.41
2:Av:1009:DT:H2''	2:Av:1010:DT:H71	2.03	0.41
2:Av:1143:DC:H2''	2:Av:1144:DG:C8	2.55	0.41
2:Av:1311:DG:H2''	2:Av:1312:DG:N1	2.36	0.41
2:Av:1615:DG:H2''	2:Av:1616:DT:C5	2.56	0.41
2:Av:1626:DC:H2''	2:Av:1627:DT:H71	2.02	0.41
2:Av:1695:DT:H2''	2:Av:1696:DG:H8	1.86	0.41
2:Av:1705:DG:C4	2:Av:1706:DT:H72	2.55	0.41
2:Av:2021:DG:H2''	2:Av:2022:DG:C8	2.56	0.41
3:D:478:VAL:HG13	6:CD:382:THR:HG23	2.02	0.41
3:L:5483:ASP:HB3	3:L:5486:LEU:HB2	2.03	0.41
4:N:222:LYS:O	4:N:223:TYR:C	2.62	0.41
4:P:570:GLU:HG3	6:y:379:HIS:HE1	1.85	0.41
4:Q:665:PHE:HA	6:a2:484:TYR:HE2	1.85	0.41
6:x:233:LYS:HB3	6:x:234:PRO:HD3	2.03	0.41
6:2:760:THR:HG23	3:aq:4217:VAL:HG22	2.02	0.41
6:7:10:LEU:HD23	6:7:10:LEU:H	1.84	0.41
6:a5:722:LEU:O	6:a5:726:ILE:HG12	2.21	0.41
3:am:862:ILE:HG12	3:am:865:HIS:CE1	2.56	0.41
4:aw:195:GLY:O	4:aw:199:ARG:HG2	2.20	0.41
4:Aa:671:LEU:O	4:Aa:676:ALA:HB2	2.21	0.41
7:Ak:530:SER:HA	7:Ak:575:GLY:HA3	2.02	0.41
7:Ak:531:ARG:NH2	7:Ak:574:SER:HB3	2.34	0.41
7:As:45:SER:HB3	7:As:50:ILE:HG13	2.01	0.41
1:Au:201:DT:C6	1:Au:201:DT:H5''	2.55	0.41
1:Au:206:DG:H2'	1:Au:207:DT:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Au:779:DC:H2''	1:Au:780:DT:H71	2.02	0.41
1:Au:805:DC:H2''	1:Au:806:DG:O4'	2.21	0.41
1:Au:901:DC:H42	2:Av:1212:DC:H41	1.68	0.41
1:Au:1010:DC:H42	2:Av:1104:DA:N6	2.19	0.41
1:Au:1019:DC:H2''	1:Au:1020:DA:C8	2.56	0.41
1:Au:1131:DC:H2''	1:Au:1132:DG:C8	2.56	0.41
1:Au:1313:DA:N6	2:Av:804:DA:N7	2.69	0.41
1:Au:1345:DA:H61	2:Av:773:DA:H62	1.69	0.41
1:Au:1350:DC:H2''	1:Au:1351:DA:O5'	2.21	0.41
1:Au:1472:DA:H3'	3:au:4382:ARG:HH22	1.85	0.41
1:Au:1491:DA:C4	1:Au:1492:DA:N1	2.89	0.41
1:Au:1550:DC:H2''	1:Au:1551:DA:C8	2.55	0.41
1:Au:1563:DC:O2	4:W:2886:ARG:NH2	2.53	0.41
1:Au:1611:DG:N2	7:An:120:LYS:HD2	2.36	0.41
1:Au:1804:DG:O6	2:Av:314:DG:C2	2.73	0.41
1:Au:1899:DG:H2''	1:Au:1900:DT:O4'	2.21	0.41
1:Au:2035:DG:H2''	1:Au:2036:DC:O4'	2.21	0.41
2:Av:8:DC:H2''	2:Av:9:DA:O5'	2.20	0.41
2:Av:274:DA:H2'	2:Av:275:DG:H8	1.86	0.41
2:Av:305:DG:H2''	2:Av:306:DC:O5'	2.20	0.41
2:Av:441:DC:N4	2:Av:442:DG:O6	2.54	0.41
2:Av:488:DT:H2''	2:Av:489:DC:C6	2.56	0.41
2:Av:518:DT:H6	2:Av:518:DT:H2'	1.72	0.41
2:Av:536:DG:H5'	2:Av:536:DG:H8	1.86	0.41
2:Av:566:DG:H5'	2:Av:566:DG:C8	2.56	0.41
2:Av:761:DC:H6	2:Av:761:DC:H2'	1.66	0.41
2:Av:933:DT:C2	2:Av:934:DA:N7	2.88	0.41
2:Av:1073:DG:N7	2:Av:1074:DA:N6	2.69	0.41
2:Av:1501:DT:P	7:Ai:69:LYS:HZ3	2.42	0.41
2:Av:1509:DT:H2''	2:Av:1510:DT:N1	2.35	0.41
2:Av:1644:DT:H2''	2:Av:1645:DC:C6	2.56	0.41
2:Av:1672:DA:H5''	5:o:576:PRO:HA	2.02	0.41
2:Av:1956:DA:H2''	2:Av:1957:DG:H8	1.86	0.41
2:Av:1980:DC:H2''	2:Av:1981:DT:C6	2.55	0.41
2:Av:1986:DA:H2''	2:Av:1987:DC:C6	2.56	0.41
2:Av:2009:DG:H2'	2:Av:2010:DT:C5	2.56	0.41
3:B:152:PRO:HD3	4:N:142:TYR:CG	2.55	0.41
3:B:155:ARG:HG2	3:B:158:ARG:NH2	2.36	0.41
3:C:355:VAL:HG22	6:9:284:THR:HB	2.01	0.41
3:D:410:ARG:NH2	4:P:512:GLU:OE2	2.54	0.41
4:M:42:LEU:HD22	4:M:51:ILE:HD11	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:O:433:ILE:H	4:O:433:ILE:HD12	1.85	0.41
4:P:570:GLU:HA	6:y:379:HIS:HE1	1.86	0.41
4:Q:668:ASP:OD1	4:Q:672:ARG:NH1	2.54	0.41
4:S:926:LEU:HD12	6:2:739:HIS:CG	2.56	0.41
4:U:1935:LEU:HD23	6:4:2362:ASP:CG	2.46	0.41
4:W:2865:ALA:HB3	4:W:2866:PRO:HD3	2.02	0.41
5:Z:295:GLU:HB2	6:x:299:LEU:HD11	2.03	0.41
5:Z:329:ARG:HH21	5:Z:334:GLU:HB3	1.86	0.41
5:a:401:ALA:HA	5:a:404:PHE:HD1	1.86	0.41
5:b:541:ALA:HB1	5:b:543:ARG:HE	1.85	0.41
5:d:734:LEU:HD13	5:d:762:ARG:HH21	1.86	0.41
5:h:1375:LEU:HD22	6:5:1463:LEU:HD21	2.02	0.41
5:h:1384:LEU:HA	5:h:1387:ILE:HG22	2.02	0.41
5:m:410:TYR:HB2	6:CD:381:ARG:NH1	2.36	0.41
5:r:3068:ILE:HD11	6:a6:3249:VAL:HG21	2.02	0.41
6:w:194:LYS:NZ	4:aw:188:ASP:OD1	2.39	0.41
6:2:695:LYS:HB3	6:2:696:PRO:HD2	2.01	0.41
6:4:2328:ILE:HD13	6:4:2345:TYR:HA	2.02	0.41
6:CD:320:ILE:H	6:CD:320:ILE:HD12	1.86	0.41
6:a2:476:LEU:HB3	6:a2:481:ARG:O	2.21	0.41
6:a3:565:ARG:NE	4:Aa:669:LEU:HD21	2.35	0.41
6:a4:591:LEU:O	6:a4:592:ARG:NE	2.53	0.41
6:a5:750:LEU:HB3	6:a5:755:ARG:O	2.21	0.41
3:ak:206:LEU:HD12	3:ak:206:LEU:HA	1.94	0.41
3:ao:1052:ARG:HH22	4:Aa:694:LYS:HE3	1.86	0.41
3:ao:1061:ARG:HD2	4:Aa:604:GLU:OE1	2.21	0.41
3:at:4287:GLY:N	4:Af:1160:ILE:O	2.48	0.41
4:Ab:808:LYS:O	4:Ab:812:LYS:HG3	2.21	0.41
7:Ai:121:ALA:O	7:Ai:124:PRO:HD2	2.21	0.41
7:Ai:150:LYS:HG3	7:Ai:153:LYS:HZ1	1.86	0.41
7:Ak:500:VAL:HG12	7:Ak:501:LYS:CD	2.47	0.41
7:Al:300:LYS:NZ	7:Al:301:VAL:O	2.50	0.41
7:Am:150:LYS:HE2	7:Am:164:LYS:HD3	2.03	0.41
7:Aq:115:SER:O	7:Aq:118:PRO:HD2	2.21	0.41
7:Aq:154:LYS:HA	7:Aq:154:LYS:HD3	1.91	0.41
7:Ar:185:SER:HB2	7:Ar:186:PRO:HD3	2.02	0.41
4:At:33:SER:HA	4:At:60:ASN:ND2	2.36	0.41
4:At:113:LYS:O	4:At:117:LYS:HG3	2.20	0.41
1:Au:698:DG:OP2	7:Ai:121:ALA:HB2	2.21	0.41
1:Au:772:DA:H2	2:Av:1342:DG:H1	1.57	0.41
1:Au:981:DC:H2"	1:Au:982:DC:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Au:1198:DG:N2	2:Av:921:DG:C2	2.89	0.41
1:Au:1234:DG:H22	2:Av:886:DA:H2	1.69	0.41
1:Au:1277:DC:H2''	1:Au:1278:DC:H6	1.86	0.41
1:Au:1734:DG:H5'	3:ap:4012:ALA:HB3	2.03	0.41
1:Au:1780:DG:H3'	7:As:128:ARG:NH1	2.36	0.41
1:Au:1920:DA:C2'	1:Au:1921:DT:H71	2.51	0.41
1:Au:1962:DC:H5''	1:Au:1963:DC:N4	2.36	0.41
1:Au:1989:DT:H2''	1:Au:1990:DC:O5'	2.20	0.41
2:Av:339:DG:H2''	2:Av:340:DA:O5'	2.19	0.41
2:Av:517:DA:H2''	2:Av:518:DT:O5'	2.21	0.41
2:Av:1070:DC:H2''	2:Av:1071:DA:N7	2.35	0.41
2:Av:1821:DT:OP1	3:am:792:LYS:HA	2.20	0.41
2:Av:2025:DC:N3	2:Av:2026:DA:N6	2.68	0.41
3:C:371:LEU:HD11	3:C:376:GLU:O	2.21	0.41
3:E:541:LEU:HD13	3:E:550:VAL:HG11	2.03	0.41
3:H:5261:ALA:CB	7:Ao:66:LEU:HD21	2.51	0.41
5:Y:214:LEU:HD23	5:Y:214:LEU:HA	1.81	0.41
5:a:399:GLU:OE1	6:y:329:ASN:ND2	2.54	0.41
5:c:598:LEU:HB3	5:c:599:PRO:HD3	2.03	0.41
5:u:3170:LEU:HD22	6:a9:3336:THR:HG23	2.03	0.41
6:7:75:HIS:NE2	4:av:90:GLU:HG3	2.36	0.41
6:CD:316:THR:O	6:CD:320:ILE:HD12	2.21	0.41
6:a2:464:ARG:NH2	6:a2:471:ASP:OD2	2.53	0.41
3:aj:84:GLN:O	3:aj:88:ARG:HG2	2.21	0.41
3:aj:85:LEU:HA	3:aj:108:LEU:HD11	2.03	0.41
4:Ab:782:THR:H	4:Ab:785:GLU:HG2	1.86	0.41
7:Ai:121:ALA:O	7:Ai:125:ARG:HB2	2.21	0.41
7:Aj:228:LEU:HD12	7:Aj:228:LEU:HA	1.85	0.41
7:Am:47:ARG:CZ	7:Am:47:ARG:HB2	2.51	0.41
7:Am:140:LYS:HG3	7:Am:155:PRO:HG2	2.03	0.41
7:Aq:152:ALA:C	7:Aq:155:PRO:HD2	2.45	0.41
7:Aq:164:LYS:HB3	7:Aq:167:LYS:HB3	2.04	0.41
1:Au:126:DC:H2'	1:Au:127:DT:C7	2.49	0.40
1:Au:134:DC:H2''	1:Au:135:DA:C8	2.56	0.40
1:Au:371:DT:H73	2:Av:1743:DC:H41	1.86	0.40
1:Au:773:DG:N2	2:Av:1341:DT:H3	2.18	0.40
1:Au:1002:DG:O6	2:Av:1112:DA:N6	2.38	0.40
1:Au:1012:DT:H71	2:Av:1101:DA:H62	1.86	0.40
1:Au:1022:DG:H2''	1:Au:1023:DC:C6	2.57	0.40
1:Au:1535:DT:H2'	1:Au:1536:DT:H71	2.03	0.40
2:Av:66:DA:H4'	6:z:433:ARG:NH2	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Av:325:DC:H6	2:Av:325:DC:H2'	1.64	0.40
2:Av:344:DT:H72	2:Av:345:DC:C2	2.56	0.40
2:Av:365:DG:H2''	2:Av:366:DA:C8	2.56	0.40
2:Av:620:DT:H2''	2:Av:621:DG:H8	1.86	0.40
2:Av:685:DG:H1'	2:Av:686:DG:N7	2.36	0.40
2:Av:693:DG:H2''	2:Av:694:DA:N9	2.36	0.40
2:Av:732:DG:H2''	2:Av:733:DA:N3	2.36	0.40
2:Av:786:DC:H2''	2:Av:787:DA:H5''	2.03	0.40
2:Av:1646:DC:H5''	2:Av:1646:DC:C6	2.56	0.40
4:M:93:THR:HG21	6:v:75:HIS:HB2	2.02	0.40
4:U:1862:LYS:HD3	4:U:1862:LYS:HA	1.97	0.40
4:W:2881:ASP:OD1	4:W:2882:GLY:N	2.53	0.40
5:Z:249:LEU:HA	5:Z:252:ILE:CG1	2.49	0.40
5:n:506:LEU:HA	5:n:506:LEU:HD12	1.88	0.40
6:w:148:ARG:HA	6:w:148:ARG:HD2	1.90	0.40
4:ax:258:LYS:HD3	4:ax:258:LYS:HA	1.96	0.40
3:Ae:3028:ALA:HB2	3:Ae:3036:ILE:HD13	2.03	0.40
7:Ai:110:LYS:HD3	7:Ai:110:LYS:HA	1.88	0.40
7:Al:290:SER:HB2	7:Al:294:TYR:CE1	2.56	0.40
7:Ao:47:ARG:HH21	7:Ao:69:LYS:HE2	1.86	0.40
1:Au:218:DC:H2'	1:Au:219:DT:C6	2.57	0.40
1:Au:875:DG:H2''	1:Au:876:DT:O4'	2.21	0.40
1:Au:1087:DC:H2'	1:Au:1088:DC:C6	2.57	0.40
1:Au:1157:DC:H2''	1:Au:1158:DC:C5	2.56	0.40
1:Au:1259:DA:H62	2:Av:858:DC:N4	2.20	0.40
1:Au:2068:DA:N6	2:Av:48:DT:O4	2.55	0.40
2:Av:60:DC:H2'	2:Av:61:DG:O4'	2.22	0.40
2:Av:493:DA:H2'	2:Av:494:DC:C4	2.57	0.40
2:Av:731:DT:C2	2:Av:732:DG:C6	3.09	0.40
2:Av:1092:DT:H2''	2:Av:1093:DG:C8	2.56	0.40
2:Av:1159:DA:H2''	2:Av:1160:DG:C8	2.56	0.40
2:Av:1394:DG:C4	2:Av:1395:DG:C6	3.09	0.40
2:Av:1502:DA:H2''	2:Av:1503:DC:O5'	2.21	0.40
2:Av:2035:DG:N2	7:Ah:436:LYS:HE2	2.36	0.40
3:F:750:SER:OG	3:F:751:ALA:N	2.54	0.40
3:G:818:GLU:HB2	4:R:275:VAL:HG11	2.03	0.40
4:M:87:THR:OG1	4:M:88:SER:N	2.55	0.40
4:N:148:LYS:NZ	4:N:154:THR:O	2.48	0.40
4:V:991:VAL:HG23	4:V:993:LYS:HE2	2.03	0.40
5:c:591:THR:HG21	3:ao:1113:ARG:HB2	2.03	0.40
5:i:3266:ARG:NH1	5:i:3273:ASP:OD2	2.39	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:2:742:ARG:NH1	6:2:744:THR:O	2.44	0.40
6:5:1471:ILE:HD12	6:5:1471:ILE:HA	1.97	0.40
6:a3:563:LEU:HB3	6:a3:568:ARG:O	2.21	0.40
6:a8:1519:GLU:O	6:a8:1523:ARG:HG3	2.21	0.40
3:at:4259:THR:HB	3:at:4262:SER:HB2	2.03	0.40
7:Ap:36:ILE:HD12	7:Ap:36:ILE:H	1.87	0.40
1:Au:217:DG:H2'	1:Au:218:DC:C6	2.56	0.40
1:Au:427:DT:H2'	1:Au:428:DA:O4'	2.21	0.40
1:Au:566:DA:H62	2:Av:1548:DC:H42	1.68	0.40
1:Au:1052:DG:H2''	1:Au:1053:DT:C6	2.57	0.40
1:Au:1293:DA:H2'	1:Au:1294:DG:H8	1.87	0.40
1:Au:1346:DC:H2''	1:Au:1347:DC:O4'	2.21	0.40
1:Au:1472:DA:OP1	3:au:4379:ARG:HG3	2.19	0.40
1:Au:1702:DG:H2''	1:Au:1703:DC:O4'	2.22	0.40
1:Au:1866:DC:H2''	1:Au:1867:DC:H5'	2.02	0.40
1:Au:1901:DC:H42	2:Av:217:DC:H41	1.68	0.40
2:Av:91:DC:H2''	2:Av:92:DG:C2	2.57	0.40
2:Av:654:DA:H2'	2:Av:655:DT:H71	2.03	0.40
2:Av:707:DG:N3	2:Av:707:DG:H5''	2.37	0.40
2:Av:1140:DC:H2'	2:Av:1141:DA:N7	2.36	0.40
2:Av:1437:DT:H2''	2:Av:1438:DG:H8	1.86	0.40
2:Av:1476:DC:H2''	2:Av:1477:DG:C8	2.57	0.40
2:Av:1767:DC:H2'	2:Av:1768:DG:H21	1.87	0.40
2:Av:2002:DC:OP1	4:av:83:ARG:HD3	2.21	0.40
3:E:586:ILE:HG12	3:E:589:HIS:CE1	2.56	0.40
3:E:604:LEU:HB3	3:E:607:VAL:HG21	2.03	0.40
4:O:409:TYR:HA	4:O:412:TYR:HD2	1.86	0.40
4:T:2803:PHE:HA	4:T:2806:ILE:HG22	2.04	0.40
5:X:112:ILE:HD13	5:X:112:ILE:HA	1.87	0.40
5:Z:329:ARG:NE	5:Z:334:GLU:OE1	2.54	0.40
5:a:435:LEU:O	5:a:438:ILE:HG22	2.21	0.40
5:f:3116:LEU:HB3	5:f:3117:PRO:HD3	2.02	0.40
5:t:1278:LEU:HD23	5:t:1278:LEU:HA	1.89	0.40
5:t:1299:PRO:O	5:t:1302:ILE:HG22	2.21	0.40
6:a5:676:LYS:HD3	6:a5:676:LYS:HA	1.81	0.40
3:ap:4077:ARG:HD3	4:Ab:747:SER:HB3	2.03	0.40
4:Ab:754:MET:HE2	4:Ab:754:MET:HB2	1.96	0.40
7:Ah:435:THR:HG22	7:Ah:443:SER:HB2	2.03	0.40
7:Ai:48:GLN:HE22	7:Ai:90:SER:HB3	1.87	0.40
7:Aj:153:ARG:HD3	7:Aj:153:ARG:HA	1.96	0.40
7:An:83:GLN:HG2	7:An:92:SER:O	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:At:105:LYS:O	4:At:106:HIS:C	2.62	0.40
1:Au:209:DC:H2''	1:Au:210:DC:O2	2.21	0.40
1:Au:288:DC:O2	2:Av:1829:DG:N2	2.55	0.40
1:Au:369:DC:H2''	1:Au:370:DC:O5'	2.21	0.40
1:Au:471:DG:H2''	1:Au:472:DA:O5'	2.21	0.40
1:Au:774:DC:H2''	1:Au:775:DA:C8	2.56	0.40
1:Au:867:DC:H2'	1:Au:868:DT:H71	2.02	0.40
1:Au:990:DA:H62	2:Av:1122:DC:N4	2.19	0.40
1:Au:1333:DC:H5''	7:Ap:83:GLN:HB3	2.02	0.40
1:Au:1669:DA:C8	1:Au:1670:DC:N4	2.89	0.40
1:Au:1739:DA:C5'	4:Ab:704:LYS:HZ2	2.34	0.40
1:Au:1928:DC:O2	1:Au:1928:DC:H5''	2.21	0.40
1:Au:2046:DC:H2''	5:n:539:LYS:HE2	2.03	0.40
1:Au:2063:DG:N3	1:Au:2064:DG:C8	2.89	0.40
2:Av:144:DG:H3'	2:Av:145:DA:C8	2.57	0.40
2:Av:337:DC:H2'	2:Av:338:DG:C8	2.56	0.40
2:Av:831:DA:OP2	4:Ad:2871:LYS:NZ	2.38	0.40
2:Av:880:DT:H2''	2:Av:881:DC:H5''	2.02	0.40
2:Av:1097:DG:C2	2:Av:1098:DG:C5	3.09	0.40
2:Av:1717:DT:H1'	2:Av:1718:DT:H5'	2.03	0.40
2:Av:2067:DC:H2''	2:Av:2068:DC:O4'	2.21	0.40
2:Av:2090:DG:H1'	2:Av:2091:DG:H5'	2.03	0.40
3:B:176:TYR:CZ	4:N:197:GLN:HG2	2.56	0.40
3:D:471:LEU:HD23	4:P:583:LEU:HD11	2.03	0.40
3:K:5320:TYR:HE2	4:V:1079:LEU:HD12	1.87	0.40
5:Z:319:THR:HG22	6:x:247:ARG:CB	2.50	0.40
5:a:365:HIS:O	5:a:368:ARG:HG3	2.21	0.40
5:l:294:ASP:N	5:l:294:ASP:OD1	2.54	0.40
5:m:365:TYR:HB3	6:CD:326:ARG:HG2	2.03	0.40
5:q:829:PHE:HA	6:a5:741:VAL:HG12	2.02	0.40
5:u:3121:ILE:O	5:u:3125:GLN:HB2	2.21	0.40
6:1:596:GLN:HB2	6:1:624:ARG:HD3	2.02	0.40
6:1:667:TYR:HB3	4:Ab:753:ILE:HG23	2.03	0.40
6:CD:311:ASN:C	6:CD:313:GLN:N	2.79	0.40
3:aq:4176:THR:HG21	4:Ac:833:VAL:HG22	2.02	0.40
4:Ab:730:ALA:HA	4:Ab:751:MET:HE3	2.02	0.40
7:Am:10:PRO:C	7:Am:13:PRO:HD2	2.46	0.40
7:As:33:ALA:HB1	7:As:37:ARG:NH2	2.37	0.40
1:Au:115:DG:H2''	1:Au:116:DG:N7	2.37	0.40
1:Au:318:DG:H1	2:Av:1798:DC:H41	1.69	0.40
1:Au:547:DC:H2'	1:Au:548:DT:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Au:958:DT:H4'	3:ak:241:LYS:HG2	2.04	0.40
1:Au:1043:DC:H42	2:Av:1071:DA:H61	1.68	0.40
1:Au:1114:DG:C2	2:Av:1004:DA:H2	2.35	0.40
1:Au:1152:DT:C4	1:Au:1153:DG:C6	3.10	0.40
1:Au:1282:DC:H41	2:Av:835:DA:N6	2.20	0.40
1:Au:1774:DC:H42	2:Av:346:DG:N2	2.20	0.40
1:Au:1788:DG:N1	2:Av:331:DG:O6	2.49	0.40
2:Av:259:DG:H2'	2:Av:260:DC:O4'	2.21	0.40
2:Av:555:DG:H21	4:W:2883:LYS:NZ	2.20	0.40
2:Av:693:DG:H2''	2:Av:694:DA:C8	2.56	0.40
2:Av:1251:DA:H2'	2:Av:1252:DT:H71	2.03	0.40
2:Av:1252:DT:C4	2:Av:1253:DG:O6	2.74	0.40
2:Av:1334:DT:H6	2:Av:1334:DT:H2'	1.73	0.40
2:Av:1773:DT:H2''	2:Av:1774:DG:H5''	2.03	0.40
3:E:588:ARG:HB2	5:n:482:THR:HG21	2.02	0.40
4:O:400:LYS:HG2	4:O:400:LYS:O	2.21	0.40
6:a4:589:LYS:HA	6:a4:589:LYS:HD2	1.78	0.40
6:a7:2291:LEU:HD13	6:a7:2300:ARG:HH21	1.87	0.40
6:a9:3331:LEU:HD12	6:a9:3331:LEU:O	2.22	0.40
3:ak:246:SER:HB2	3:ak:252:LYS:O	2.20	0.40
3:ao:1127:LYS:HD2	4:Aa:672:PRO:HG3	2.04	0.40
4:ay:375:ALA:N	4:ay:376:PRO:HD2	2.36	0.40
4:Ag:3159:GLU:OE1	4:Ag:3159:GLU:N	2.54	0.40
7:Ao:139:ARG:HA	7:Ao:142:ARG:HD3	2.03	0.40
7:Aq:55:LYS:HB3	7:Aq:55:LYS:HE2	1.78	0.40
7:Ar:107:LYS:HB2	7:Ar:108:LYS:H	1.67	0.40
7:As:103:ARG:C	7:As:103:ARG:HD3	2.47	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	A	120/130 (92%)	110 (92%)	10 (8%)	0	100	100
3	Ae	120/130 (92%)	113 (94%)	7 (6%)	0	100	100
3	B	124/130 (95%)	115 (93%)	9 (7%)	0	100	100
3	C	127/130 (98%)	115 (91%)	12 (9%)	0	100	100
3	D	121/130 (93%)	115 (95%)	6 (5%)	0	100	100
3	E	126/130 (97%)	121 (96%)	5 (4%)	0	100	100
3	F	117/130 (90%)	110 (94%)	7 (6%)	0	100	100
3	G	127/130 (98%)	122 (96%)	5 (4%)	0	100	100
3	H	123/130 (95%)	119 (97%)	4 (3%)	0	100	100
3	I	127/130 (98%)	121 (95%)	6 (5%)	0	100	100
3	K	126/130 (97%)	119 (94%)	7 (6%)	0	100	100
3	L	128/130 (98%)	124 (97%)	4 (3%)	0	100	100
3	aj	121/130 (93%)	111 (92%)	10 (8%)	0	100	100
3	ak	121/130 (93%)	114 (94%)	7 (6%)	0	100	100
3	al	109/130 (84%)	106 (97%)	3 (3%)	0	100	100
3	am	125/130 (96%)	115 (92%)	9 (7%)	1 (1%)	16	49
3	an	123/130 (95%)	112 (91%)	11 (9%)	0	100	100
3	ao	122/130 (94%)	115 (94%)	7 (6%)	0	100	100
3	ap	125/130 (96%)	119 (95%)	6 (5%)	0	100	100
3	aq	115/130 (88%)	111 (96%)	4 (4%)	0	100	100
3	ar	127/130 (98%)	119 (94%)	8 (6%)	0	100	100
3	as	117/130 (90%)	113 (97%)	4 (3%)	0	100	100
3	at	124/130 (95%)	114 (92%)	10 (8%)	0	100	100
3	au	109/130 (84%)	104 (95%)	5 (5%)	0	100	100
4	Aa	101/123 (82%)	97 (96%)	4 (4%)	0	100	100
4	Ab	121/123 (98%)	114 (94%)	7 (6%)	0	100	100
4	Ac	98/123 (80%)	98 (100%)	0	0	100	100
4	Ad	100/123 (81%)	97 (97%)	3 (3%)	0	100	100
4	Af	95/123 (77%)	92 (97%)	3 (3%)	0	100	100
4	Ag	102/123 (83%)	99 (97%)	3 (3%)	0	100	100
4	At	121/123 (98%)	112 (93%)	7 (6%)	2 (2%)	7	35
4	J	101/123 (82%)	95 (94%)	6 (6%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
4	M	121/123 (98%)	113 (93%)	8 (7%)	0	100	100
4	N	103/123 (84%)	97 (94%)	5 (5%)	1 (1%)	12	45
4	O	101/123 (82%)	94 (93%)	7 (7%)	0	100	100
4	P	103/123 (84%)	101 (98%)	2 (2%)	0	100	100
4	Q	121/123 (98%)	109 (90%)	12 (10%)	0	100	100
4	R	98/123 (80%)	94 (96%)	4 (4%)	0	100	100
4	S	121/123 (98%)	110 (91%)	11 (9%)	0	100	100
4	T	121/123 (98%)	114 (94%)	7 (6%)	0	100	100
4	U	121/123 (98%)	110 (91%)	11 (9%)	0	100	100
4	V	121/123 (98%)	110 (91%)	11 (9%)	0	100	100
4	W	121/123 (98%)	114 (94%)	7 (6%)	0	100	100
4	av	101/123 (82%)	96 (95%)	5 (5%)	0	100	100
4	aw	121/123 (98%)	108 (89%)	13 (11%)	0	100	100
4	ax	121/123 (98%)	114 (94%)	6 (5%)	1 (1%)	16	49
4	ay	121/123 (98%)	115 (95%)	6 (5%)	0	100	100
4	az	98/123 (80%)	96 (98%)	2 (2%)	0	100	100
5	X	110/136 (81%)	105 (96%)	5 (4%)	0	100	100
5	Y	109/136 (80%)	105 (96%)	4 (4%)	0	100	100
5	Z	88/136 (65%)	87 (99%)	1 (1%)	0	100	100
5	a	123/136 (90%)	116 (94%)	7 (6%)	0	100	100
5	b	99/136 (73%)	97 (98%)	2 (2%)	0	100	100
5	c	104/136 (76%)	101 (97%)	3 (3%)	0	100	100
5	d	96/136 (71%)	92 (96%)	4 (4%)	0	100	100
5	e	92/136 (68%)	89 (97%)	3 (3%)	0	100	100
5	f	96/136 (71%)	96 (100%)	0	0	100	100
5	g	100/136 (74%)	98 (98%)	2 (2%)	0	100	100
5	h	95/136 (70%)	95 (100%)	0	0	100	100
5	i	97/136 (71%)	95 (98%)	2 (2%)	0	100	100
5	j	103/136 (76%)	100 (97%)	3 (3%)	0	100	100
5	k	97/136 (71%)	96 (99%)	1 (1%)	0	100	100
5	l	112/136 (82%)	108 (96%)	4 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
5	m	96/136 (71%)	90 (94%)	6 (6%)	0	100	100
5	n	111/136 (82%)	104 (94%)	7 (6%)	0	100	100
5	o	107/136 (79%)	100 (94%)	7 (6%)	0	100	100
5	p	100/136 (74%)	98 (98%)	2 (2%)	0	100	100
5	q	108/136 (79%)	101 (94%)	7 (6%)	0	100	100
5	r	104/136 (76%)	100 (96%)	4 (4%)	0	100	100
5	s	93/136 (68%)	91 (98%)	2 (2%)	0	100	100
5	t	108/136 (79%)	101 (94%)	7 (6%)	0	100	100
5	u	124/136 (91%)	120 (97%)	4 (3%)	0	100	100
6	0	92/103 (89%)	90 (98%)	1 (1%)	1 (1%)	11	43
6	1	85/103 (82%)	84 (99%)	1 (1%)	0	100	100
6	2	93/103 (90%)	85 (91%)	8 (9%)	0	100	100
6	3	91/103 (88%)	88 (97%)	3 (3%)	0	100	100
6	4	85/103 (82%)	81 (95%)	4 (5%)	0	100	100
6	5	93/103 (90%)	89 (96%)	4 (4%)	0	100	100
6	6	83/103 (81%)	81 (98%)	2 (2%)	0	100	100
6	7	99/103 (96%)	95 (96%)	4 (4%)	0	100	100
6	8	84/103 (82%)	82 (98%)	2 (2%)	0	100	100
6	9	100/103 (97%)	95 (95%)	5 (5%)	0	100	100
6	CD	95/103 (92%)	85 (90%)	9 (10%)	1 (1%)	11	43
6	a2	98/103 (95%)	94 (96%)	4 (4%)	0	100	100
6	a3	85/103 (82%)	83 (98%)	2 (2%)	0	100	100
6	a4	94/103 (91%)	90 (96%)	4 (4%)	0	100	100
6	a5	89/103 (86%)	88 (99%)	1 (1%)	0	100	100
6	a6	99/103 (96%)	96 (97%)	3 (3%)	0	100	100
6	a7	100/103 (97%)	91 (91%)	9 (9%)	0	100	100
6	a8	85/103 (82%)	83 (98%)	2 (2%)	0	100	100
6	a9	88/103 (85%)	86 (98%)	2 (2%)	0	100	100
6	v	96/103 (93%)	95 (99%)	1 (1%)	0	100	100
6	w	101/103 (98%)	97 (96%)	4 (4%)	0	100	100
6	x	97/103 (94%)	96 (99%)	1 (1%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
6	y	100/103 (97%)	95 (95%)	5 (5%)	0	100	100
6	z	82/103 (80%)	79 (96%)	3 (4%)	0	100	100
7	Ah	128/196 (65%)	119 (93%)	9 (7%)	0	100	100
7	Ai	168/196 (86%)	147 (88%)	21 (12%)	0	100	100
7	Aj	101/196 (52%)	92 (91%)	9 (9%)	0	100	100
7	Ak	127/196 (65%)	114 (90%)	13 (10%)	0	100	100
7	Al	105/196 (54%)	94 (90%)	11 (10%)	0	100	100
7	Am	173/196 (88%)	150 (87%)	23 (13%)	0	100	100
7	An	126/196 (64%)	110 (87%)	16 (13%)	0	100	100
7	Ao	157/196 (80%)	138 (88%)	18 (12%)	1 (1%)	21	54
7	Ap	71/196 (36%)	67 (94%)	4 (6%)	0	100	100
7	Aq	188/196 (96%)	172 (92%)	16 (8%)	0	100	100
7	Ar	176/196 (90%)	144 (82%)	32 (18%)	0	100	100
7	As	129/196 (66%)	111 (86%)	17 (13%)	1 (1%)	16	49
All	All	11912/14160 (84%)	11227 (94%)	676 (6%)	9 (0%)	49	79

All (9) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	N	205	PRO
6	0	499	ARG
3	am	797	ALA
4	At	20	LYS
6	CD	312	ILE
7	Ao	57	HIS
4	At	101	GLY
4	ax	267	LYS
7	As	27	THR

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 PDB entries followed by that with respect to all EM entries.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	A	97/102 (95%)	97 (100%)	0	100	100
3	Ae	97/102 (95%)	97 (100%)	0	100	100
3	B	99/102 (97%)	99 (100%)	0	100	100
3	C	101/102 (99%)	100 (99%)	1 (1%)	68	75
3	D	97/102 (95%)	97 (100%)	0	100	100
3	E	100/102 (98%)	100 (100%)	0	100	100
3	F	95/102 (93%)	95 (100%)	0	100	100
3	G	101/102 (99%)	101 (100%)	0	100	100
3	H	99/102 (97%)	99 (100%)	0	100	100
3	I	101/102 (99%)	101 (100%)	0	100	100
3	K	100/102 (98%)	100 (100%)	0	100	100
3	L	102/102 (100%)	102 (100%)	0	100	100
3	aj	97/102 (95%)	97 (100%)	0	100	100
3	ak	97/102 (95%)	96 (99%)	1 (1%)	68	75
3	al	86/102 (84%)	86 (100%)	0	100	100
3	am	100/102 (98%)	98 (98%)	2 (2%)	48	66
3	an	99/102 (97%)	99 (100%)	0	100	100
3	ao	98/102 (96%)	98 (100%)	0	100	100
3	ap	100/102 (98%)	100 (100%)	0	100	100
3	aq	94/102 (92%)	94 (100%)	0	100	100
3	ar	101/102 (99%)	100 (99%)	1 (1%)	68	75
3	as	95/102 (93%)	95 (100%)	0	100	100
3	at	99/102 (97%)	99 (100%)	0	100	100
3	au	88/102 (86%)	88 (100%)	0	100	100
4	Aa	88/103 (85%)	88 (100%)	0	100	100
4	Ab	103/103 (100%)	103 (100%)	0	100	100
4	Ac	85/103 (82%)	85 (100%)	0	100	100
4	Ad	87/103 (84%)	87 (100%)	0	100	100
4	Af	83/103 (81%)	83 (100%)	0	100	100
4	Ag	89/103 (86%)	88 (99%)	1 (1%)	65	74
4	At	103/103 (100%)	102 (99%)	1 (1%)	68	75
4	J	88/103 (85%)	88 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	M	103/103 (100%)	103 (100%)	0	100	100
4	N	90/103 (87%)	90 (100%)	0	100	100
4	O	88/103 (85%)	87 (99%)	1 (1%)	65	74
4	P	90/103 (87%)	90 (100%)	0	100	100
4	Q	103/103 (100%)	102 (99%)	1 (1%)	68	75
4	R	85/103 (82%)	85 (100%)	0	100	100
4	S	103/103 (100%)	102 (99%)	1 (1%)	68	75
4	T	103/103 (100%)	103 (100%)	0	100	100
4	U	103/103 (100%)	103 (100%)	0	100	100
4	V	103/103 (100%)	101 (98%)	2 (2%)	50	67
4	W	103/103 (100%)	103 (100%)	0	100	100
4	av	88/103 (85%)	88 (100%)	0	100	100
4	aw	103/103 (100%)	103 (100%)	0	100	100
4	ax	103/103 (100%)	103 (100%)	0	100	100
4	ay	103/103 (100%)	103 (100%)	0	100	100
4	az	85/103 (82%)	85 (100%)	0	100	100
5	X	93/111 (84%)	93 (100%)	0	100	100
5	Y	93/111 (84%)	93 (100%)	0	100	100
5	Z	78/111 (70%)	78 (100%)	0	100	100
5	a	102/111 (92%)	102 (100%)	0	100	100
5	b	88/111 (79%)	88 (100%)	0	100	100
5	c	90/111 (81%)	90 (100%)	0	100	100
5	d	85/111 (77%)	84 (99%)	1 (1%)	63	73
5	e	81/111 (73%)	81 (100%)	0	100	100
5	f	85/111 (77%)	85 (100%)	0	100	100
5	g	88/111 (79%)	88 (100%)	0	100	100
5	h	84/111 (76%)	84 (100%)	0	100	100
5	i	86/111 (78%)	86 (100%)	0	100	100
5	j	89/111 (80%)	89 (100%)	0	100	100
5	k	86/111 (78%)	85 (99%)	1 (1%)	63	73
5	l	95/111 (86%)	95 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
5	m	85/111 (77%)	85 (100%)	0	100	100
5	n	94/111 (85%)	94 (100%)	0	100	100
5	o	92/111 (83%)	92 (100%)	0	100	100
5	p	88/111 (79%)	88 (100%)	0	100	100
5	q	93/111 (84%)	93 (100%)	0	100	100
5	r	90/111 (81%)	90 (100%)	0	100	100
5	s	82/111 (74%)	82 (100%)	0	100	100
5	t	93/111 (84%)	93 (100%)	0	100	100
5	u	103/111 (93%)	103 (100%)	0	100	100
6	0	74/79 (94%)	74 (100%)	0	100	100
6	1	72/79 (91%)	72 (100%)	0	100	100
6	2	75/79 (95%)	75 (100%)	0	100	100
6	3	74/79 (94%)	73 (99%)	1 (1%)	59	71
6	4	72/79 (91%)	72 (100%)	0	100	100
6	5	75/79 (95%)	75 (100%)	0	100	100
6	6	71/79 (90%)	70 (99%)	1 (1%)	59	71
6	7	77/79 (98%)	76 (99%)	1 (1%)	61	72
6	8	71/79 (90%)	71 (100%)	0	100	100
6	9	78/79 (99%)	78 (100%)	0	100	100
6	CD	76/79 (96%)	76 (100%)	0	100	100
6	a2	77/79 (98%)	77 (100%)	0	100	100
6	a3	72/79 (91%)	72 (100%)	0	100	100
6	a4	75/79 (95%)	75 (100%)	0	100	100
6	a5	73/79 (92%)	73 (100%)	0	100	100
6	a6	77/79 (98%)	77 (100%)	0	100	100
6	a7	78/79 (99%)	78 (100%)	0	100	100
6	a8	72/79 (91%)	72 (100%)	0	100	100
6	a9	72/79 (91%)	72 (100%)	0	100	100
6	v	76/79 (96%)	76 (100%)	0	100	100
6	w	79/79 (100%)	79 (100%)	0	100	100
6	x	76/79 (96%)	76 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
6	y	78/79 (99%)	78 (100%)	0	100	100
6	z	69/79 (87%)	69 (100%)	0	100	100
7	Ah	104/158 (66%)	103 (99%)	1 (1%)	68	75
7	Ai	135/158 (85%)	134 (99%)	1 (1%)	76	78
7	Aj	82/158 (52%)	82 (100%)	0	100	100
7	Ak	103/158 (65%)	103 (100%)	0	100	100
7	Al	85/158 (54%)	84 (99%)	1 (1%)	63	73
7	Am	140/158 (89%)	139 (99%)	1 (1%)	76	78
7	An	102/158 (65%)	101 (99%)	1 (1%)	68	75
7	Ao	127/158 (80%)	127 (100%)	0	100	100
7	Ap	57/158 (36%)	56 (98%)	1 (2%)	51	68
7	Aq	152/158 (96%)	151 (99%)	1 (1%)	76	78
7	Ar	144/158 (91%)	144 (100%)	0	100	100
7	As	105/158 (66%)	105 (100%)	0	100	100
All	All	9893/11376 (87%)	9869 (100%)	24 (0%)	85	85

All (24) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	C	371	LEU
4	O	452	LEU
4	Q	603	MET
4	S	864	VAL
4	V	991	VAL
4	V	1098	LYS
5	d	750	ILE
5	k	211	ILE
6	3	3180	ILE
6	6	3263	VAL
6	7	49	LEU
3	ak	236	SER
3	am	786	ARG
3	am	799	THR
3	ar	2607	THR
4	Ag	3091	ASP
7	Ah	413	HIS
7	Ai	157	THR

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Mol	Chain	Res	Type
7	Al	323	LYS
7	Am	6	LEU
7	An	50	ILE
7	Ap	48	GLN
7	Aq	36	ILE
4	At	16	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (128) such sidechains are listed below:

Mol	Chain	Res	Type
3	A	112	GLN
3	B	157	HIS
3	B	236	ASN
3	C	279	GLN
3	C	344	ASN
3	C	367	GLN
3	E	513	GLN
3	E	545	ASN
3	F	656	HIS
3	F	663	ASN
3	F	719	ASN
3	G	778	GLN
3	G	792	ASN
3	H	5208	ASN
3	I	2500	ASN
3	I	2544	HIS
4	J	2012	ASN
3	L	5487	ASN
4	M	60	ASN
4	N	165	ASN
4	N	184	HIS
4	N	197	GLN
4	P	499	GLN
4	Q	682	HIS
4	R	274	GLN
4	T	2828	GLN
4	U	1884	HIS
4	V	1036	ASN
4	W	2940	ASN
5	Y	219	ASN
5	Z	256	GLN
5	Z	314	HIS

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Mol	Chain	Res	Type
5	b	552	GLN
5	c	572	HIS
5	c	609	GLN
5	d	670	HIS
5	e	793	GLN
5	e	850	GLN
5	f	3119	GLN
5	f	3159	ASN
5	g	2245	ASN
5	i	3258	ASN
5	j	39	HIS
5	j	113	HIS
5	k	184	GLN
5	k	207	ASN
5	l	281	GLN
5	l	306	GLN
5	l	321	ASN
5	m	404	GLN
5	m	419	ASN
5	n	463	HIS
5	n	479	GLN
5	n	517	GLN
5	n	532	ASN
5	o	658	GLN
5	p	711	GLN
5	p	728	GLN
5	q	830	GLN
5	q	853	ASN
5	q	870	GLN
5	r	3020	GLN
5	r	3029	GLN
5	r	3052	ASN
5	s	2139	ASN
5	t	1217	HIS
5	u	3089	GLN
5	u	3138	GLN
6	w	167	ASN
6	x	266	ASN
6	y	329	ASN
6	0	507	ASN
6	0	575	GLN
6	2	689	ASN

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Mol	Chain	Res	Type
6	2	739	HIS
6	3	3247	GLN
6	4	2319	ASN
6	4	2369	HIS
6	6	3317	HIS
6	8	111	ASN
6	9	263	HIS
6	a4	633	ASN
6	a4	662	GLN
6	a5	687	GLN
6	a5	735	HIS
6	a6	3219	GLN
6	a7	2356	HIS
6	a8	1481	ASN
3	aj	38	ASN
3	aj	68	ASN
3	aj	73	ASN
3	ak	147	GLN
3	am	814	HIS
3	am	821	ASN
3	am	893	ASN
3	an	932	GLN
3	ao	1126	ASN
3	ap	4038	ASN
3	ap	4082	HIS
3	ap	4089	ASN
3	aq	4141	GLN
3	aq	4148	HIS
3	aq	4155	ASN
3	aq	4190	ASN
3	aq	4201	GLN
3	ar	2707	ASN
3	ar	2709	GLN
3	as	1789	HIS
3	at	4249	GLN
3	at	4332	ASN
3	au	4386	GLN
3	au	4400	ASN
3	au	4430	ASN
4	aw	169	HIS
4	ay	429	ASN
4	az	513	GLN

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Mol	Chain	Res	Type
4	az	533	ASN
4	az	561	GLN
4	Aa	616	GLN
4	Ab	787	GLN
4	Af	1153	HIS
4	Ag	3133	ASN
4	Ag	3161	GLN
7	Ak	509	HIS
7	Al	303	HIS
7	An	83	GLN
7	Ap	67	GLN
4	At	64	ASN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

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.

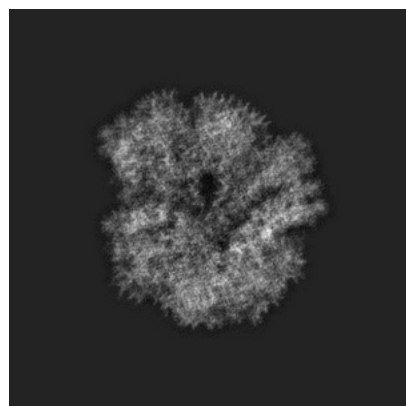
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-38407. These allow visual inspection of the internal detail of the map and identification of artifacts.

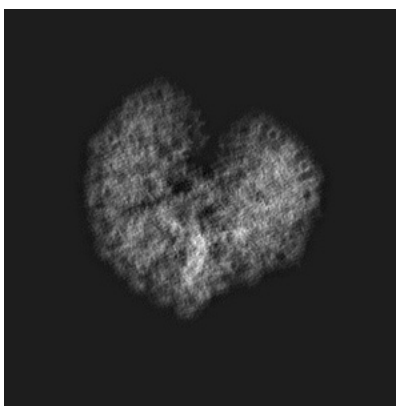
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

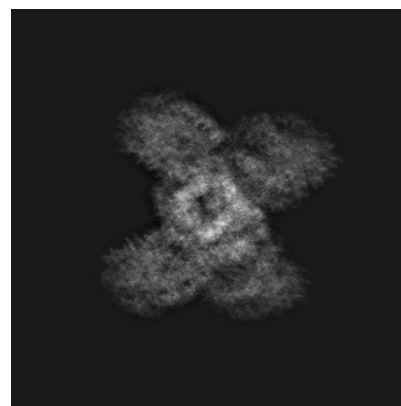
6.1.1 Primary map



X

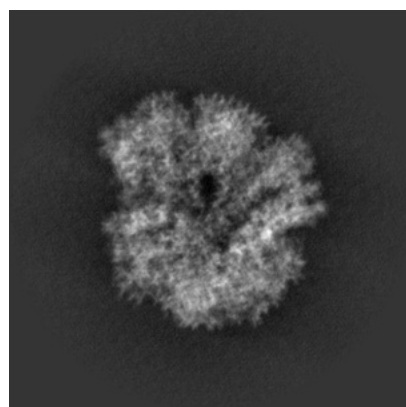


Y

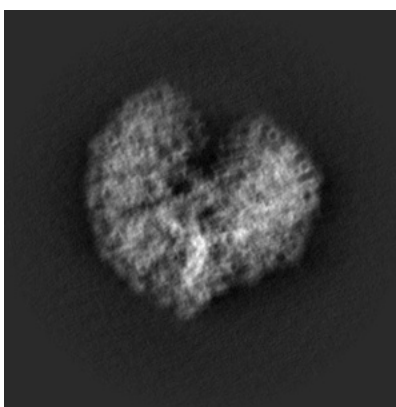


Z

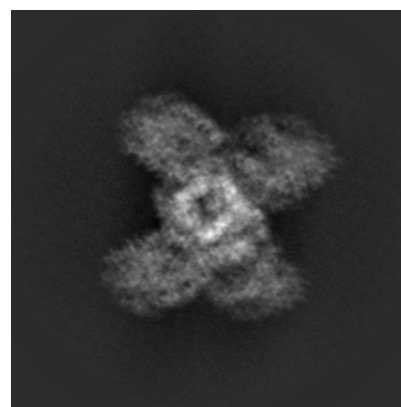
6.1.2 Raw map



X



Y



Z

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

6.2 Central slices [i](#)

6.2.1 Primary map



X Index: 144

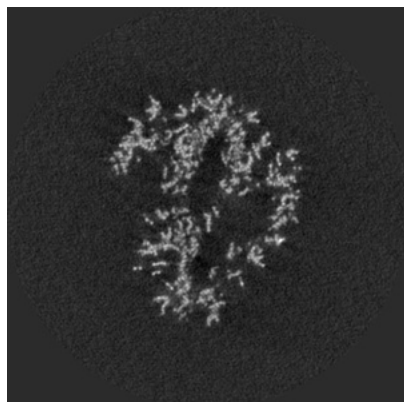


Y Index: 144

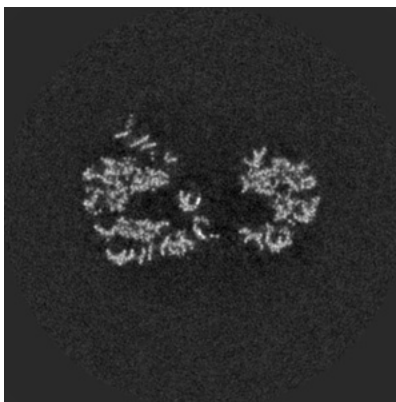


Z Index: 144

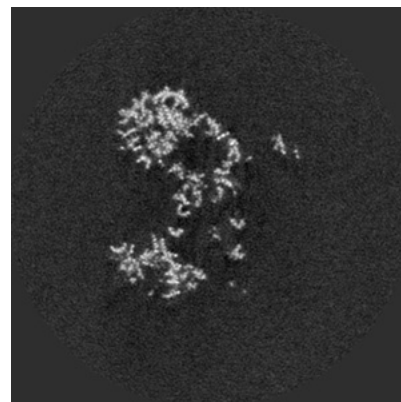
6.2.2 Raw map



X Index: 144



Y Index: 144

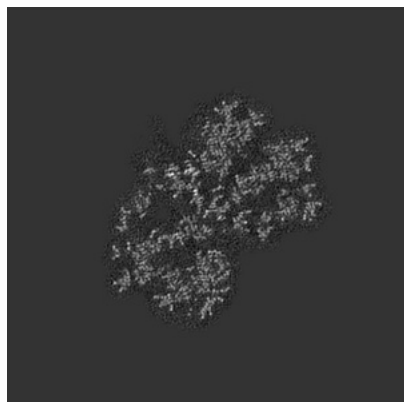


Z Index: 144

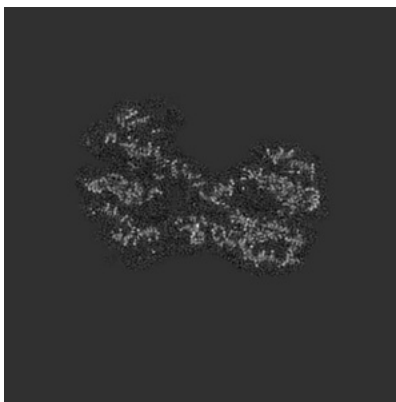
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

6.3.1 Primary map



X Index: 125

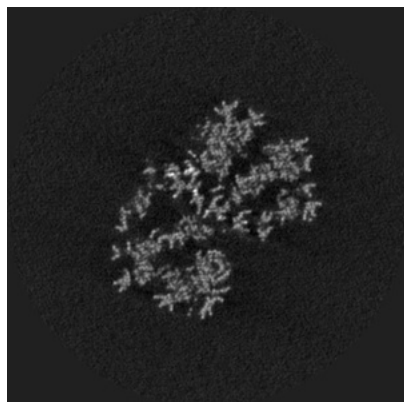


Y Index: 153

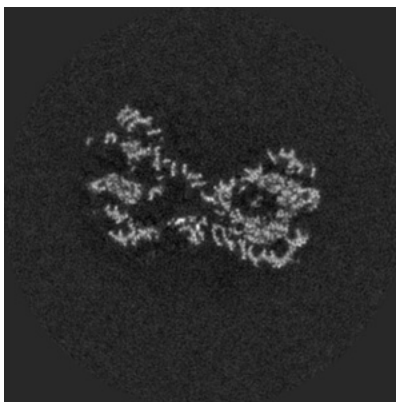


Z Index: 139

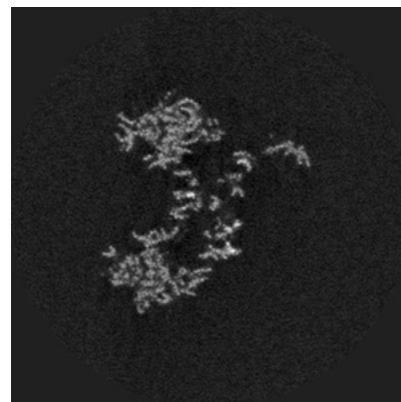
6.3.2 Raw map



X Index: 125



Y Index: 154

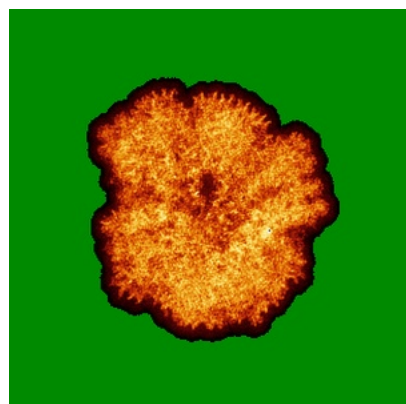


Z Index: 138

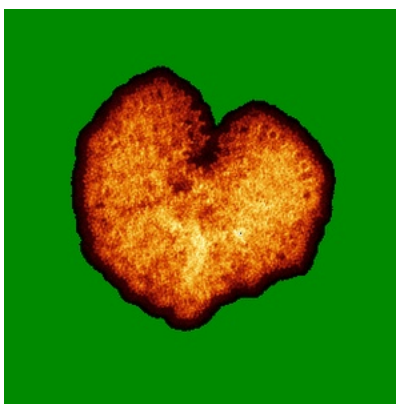
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

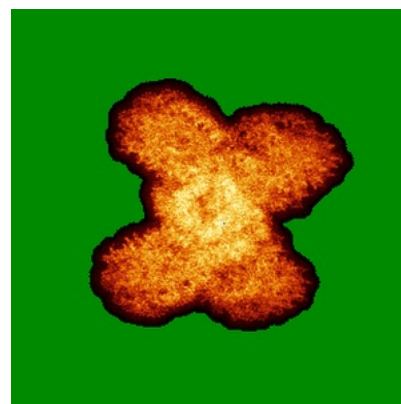
6.4.1 Primary map



X

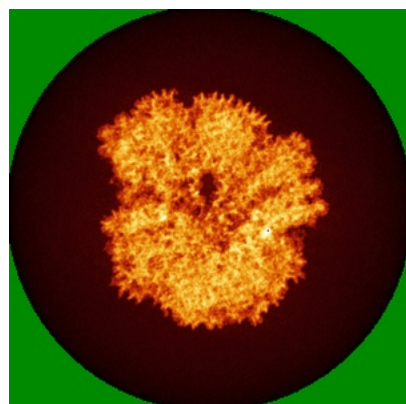


Y

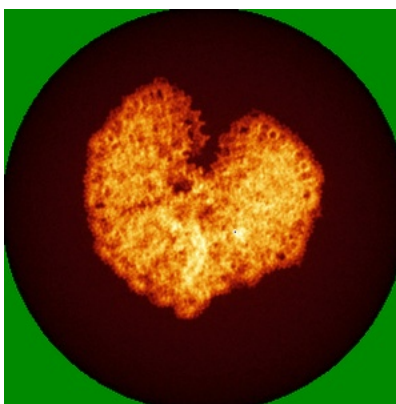


Z

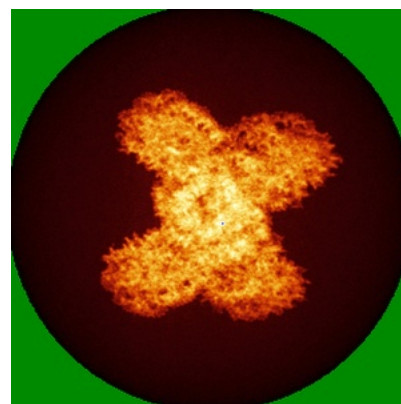
6.4.2 Raw map



X



Y

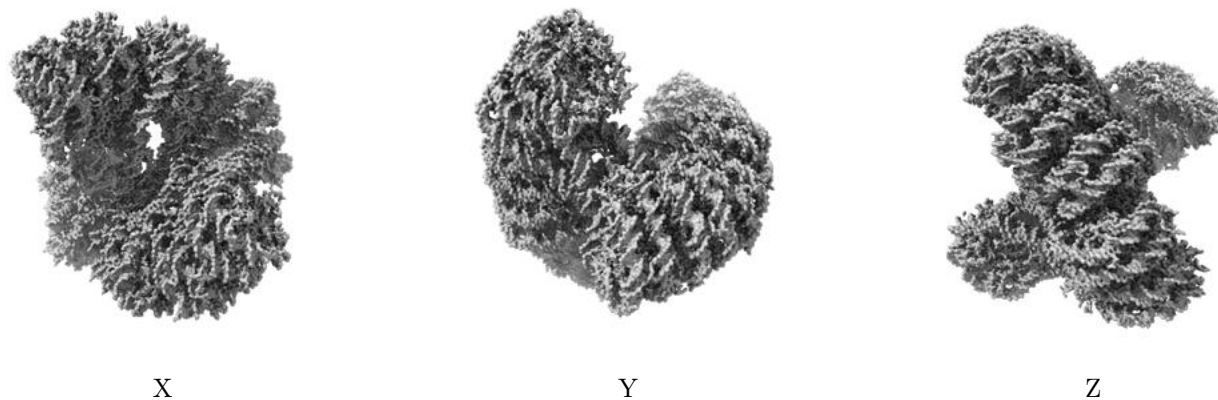


Z

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

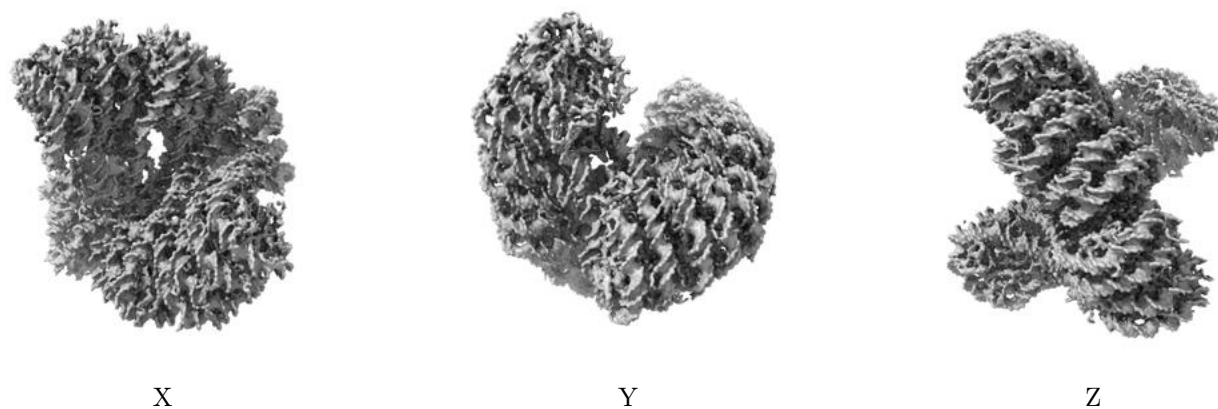
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.0293. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

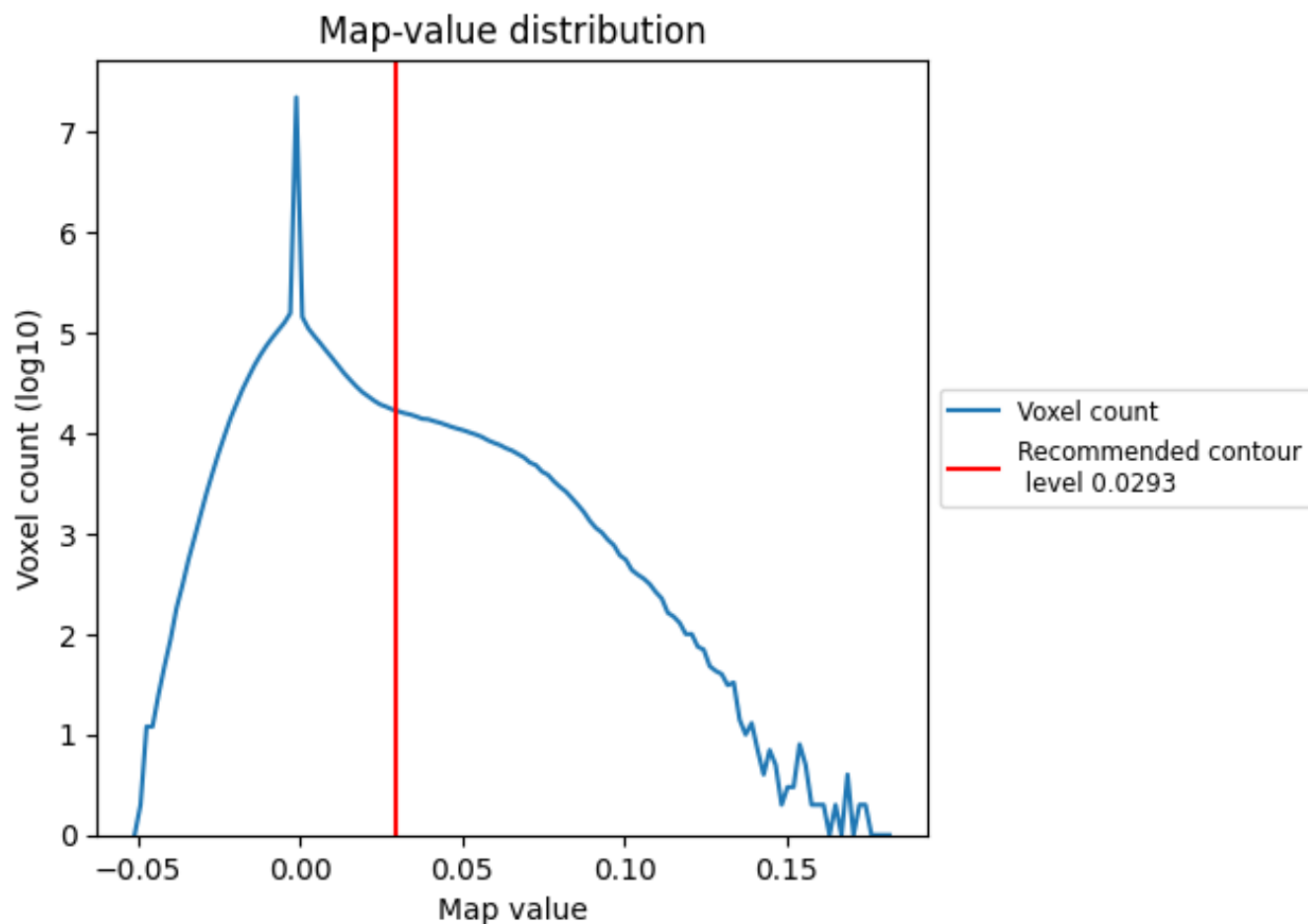
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

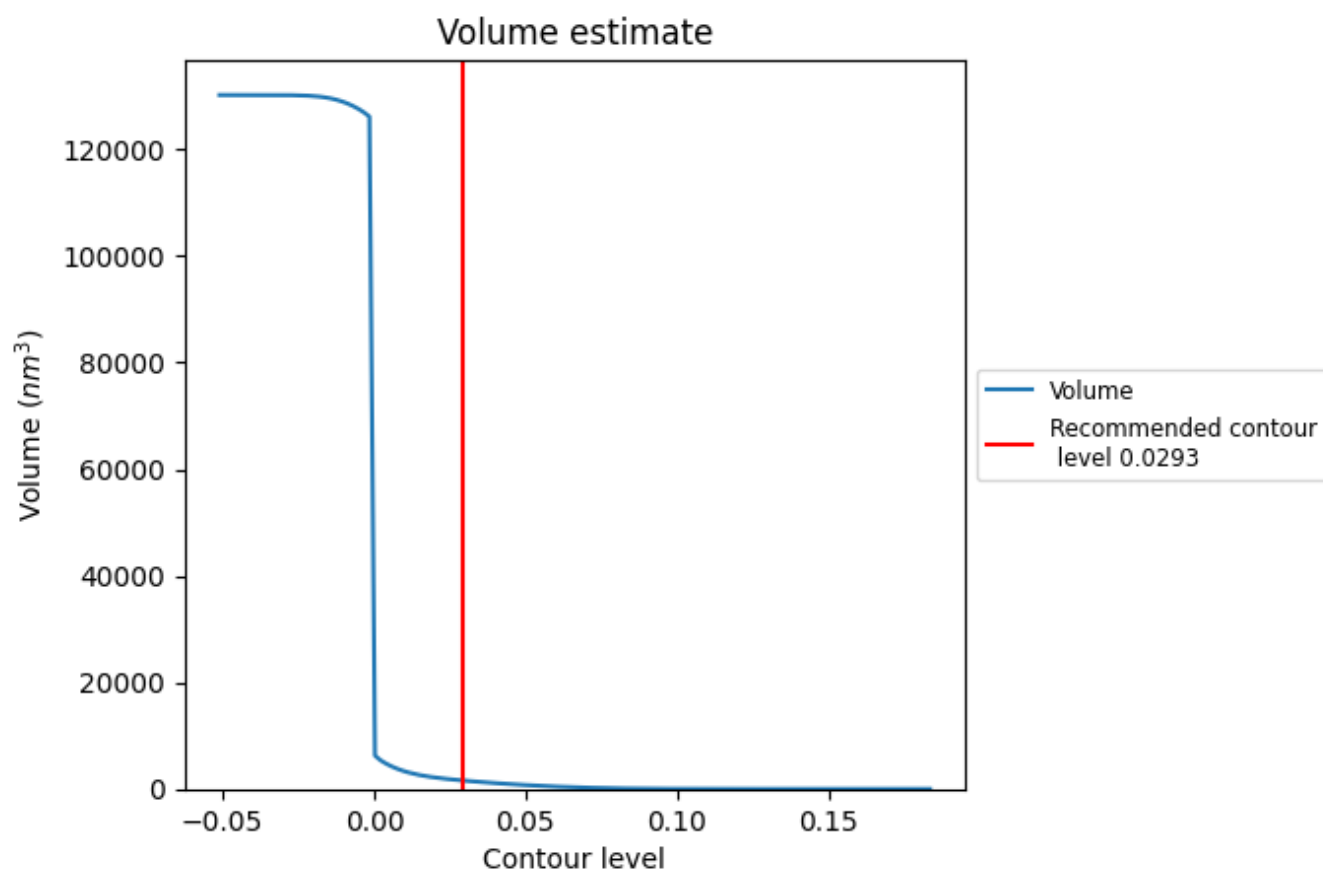
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

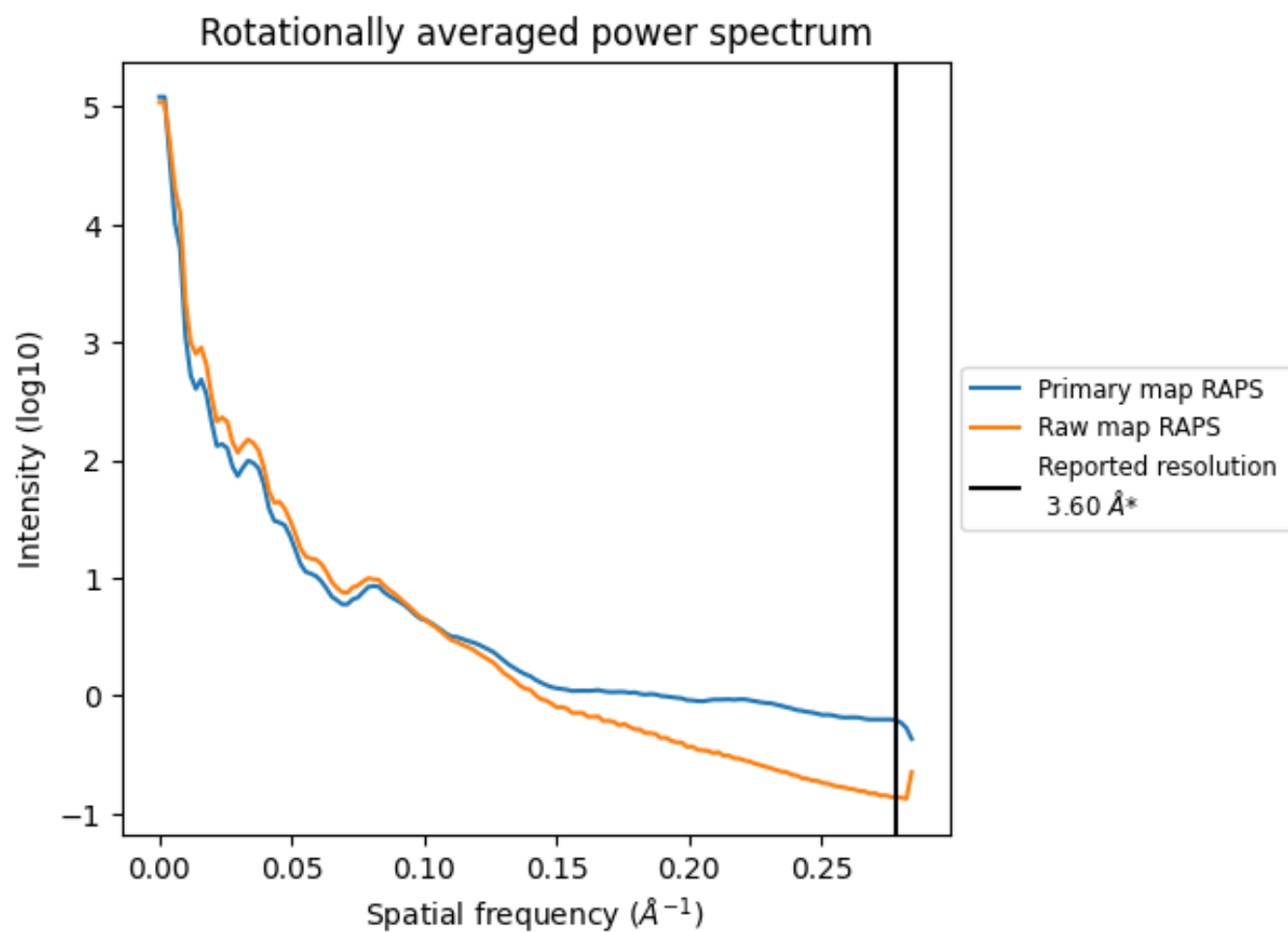
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1585 nm^3 ; this corresponds to an approximate mass of 1431 kDa.

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

7.3 Rotationally averaged power spectrum ⓘ

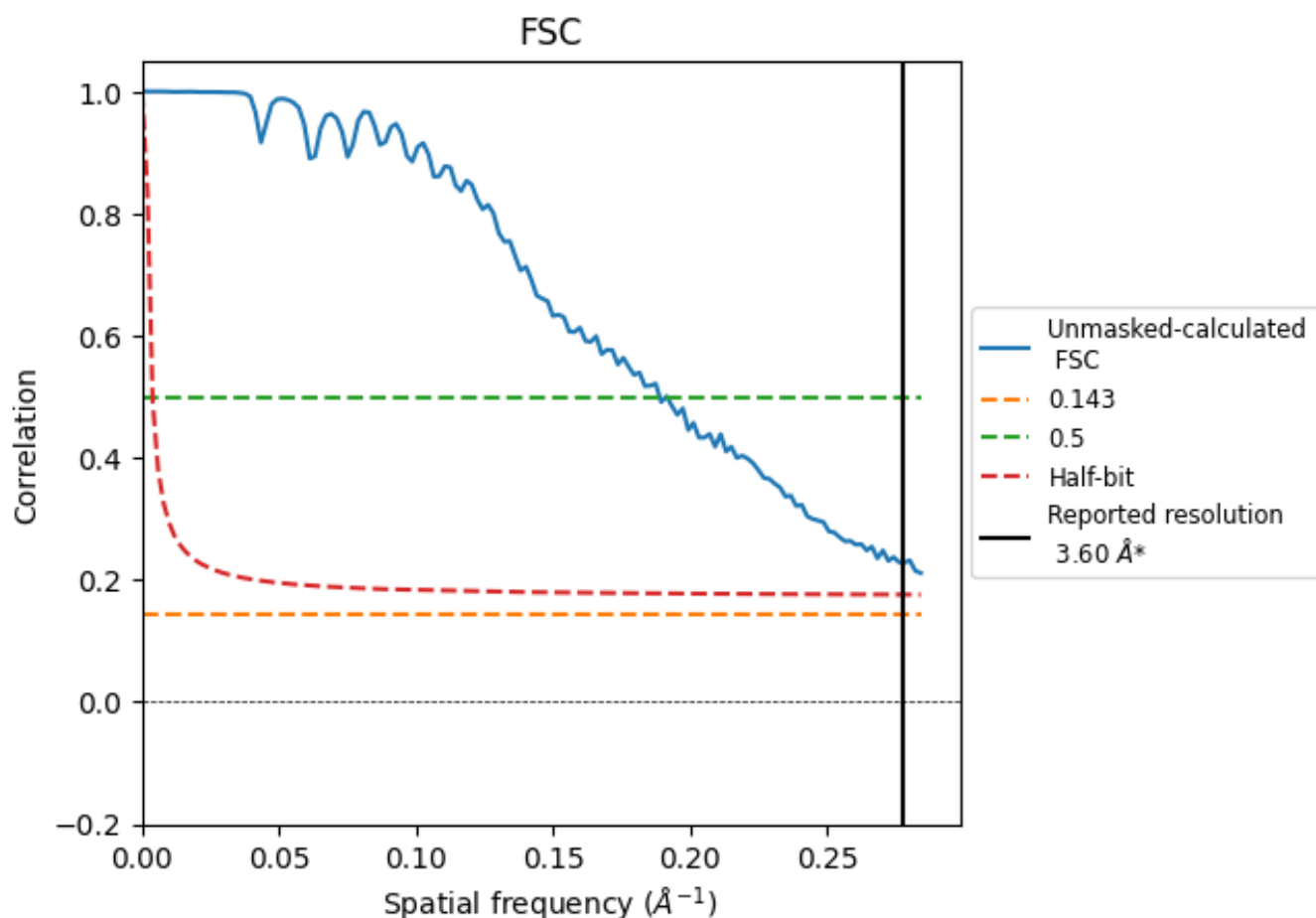


*Reported resolution corresponds to spatial frequency of 0.278 Å⁻¹

8 Fourier-Shell correlation [i](#)

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of $0.278 \text{ \AA}^{-1}$

8.2 Resolution estimates [i](#)

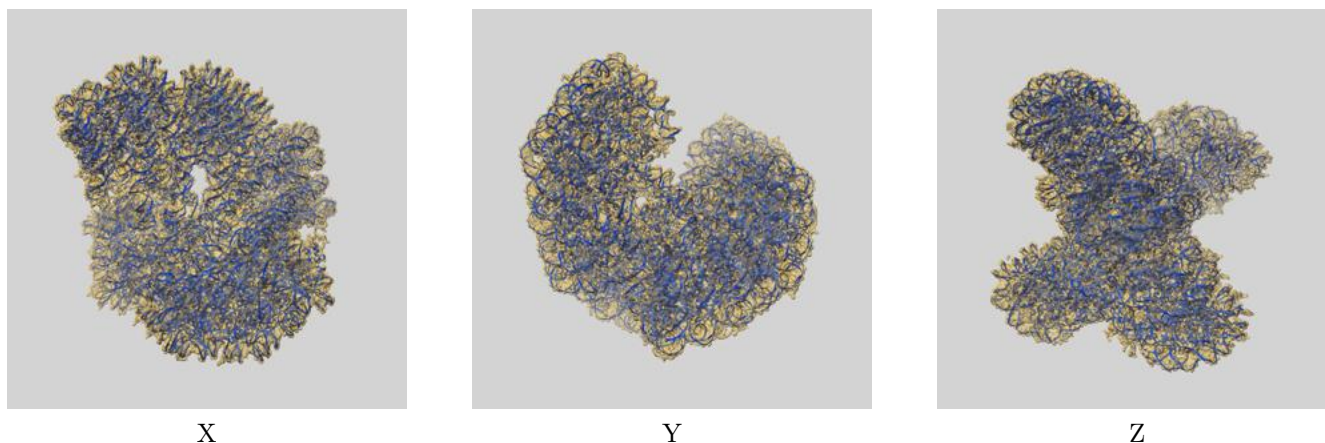
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.60	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	-	5.30	-

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps.

9 Map-model fit [i](#)

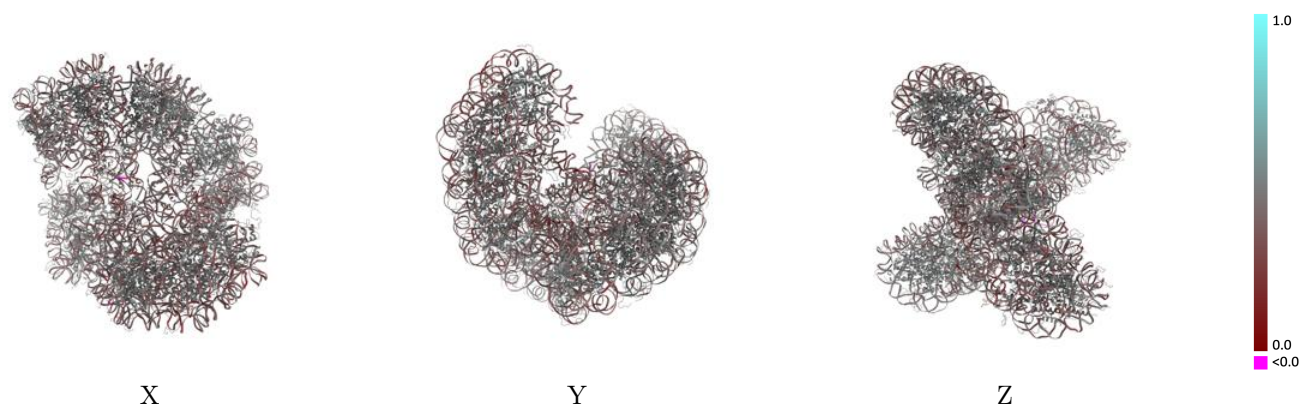
This section contains information regarding the fit between EMDB map EMD-38407 and PDB model 8XJV. Per-residue inclusion information can be found in [section 3](#) on [page 17](#).

9.1 Map-model overlay [i](#)



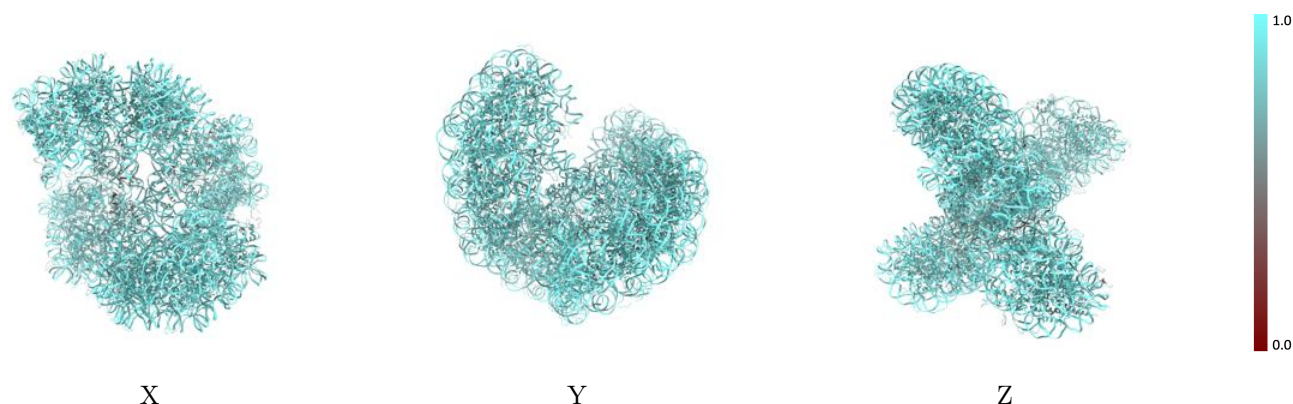
The images above show the 3D surface view of the map at the recommended contour level 0.0293 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model [i](#)



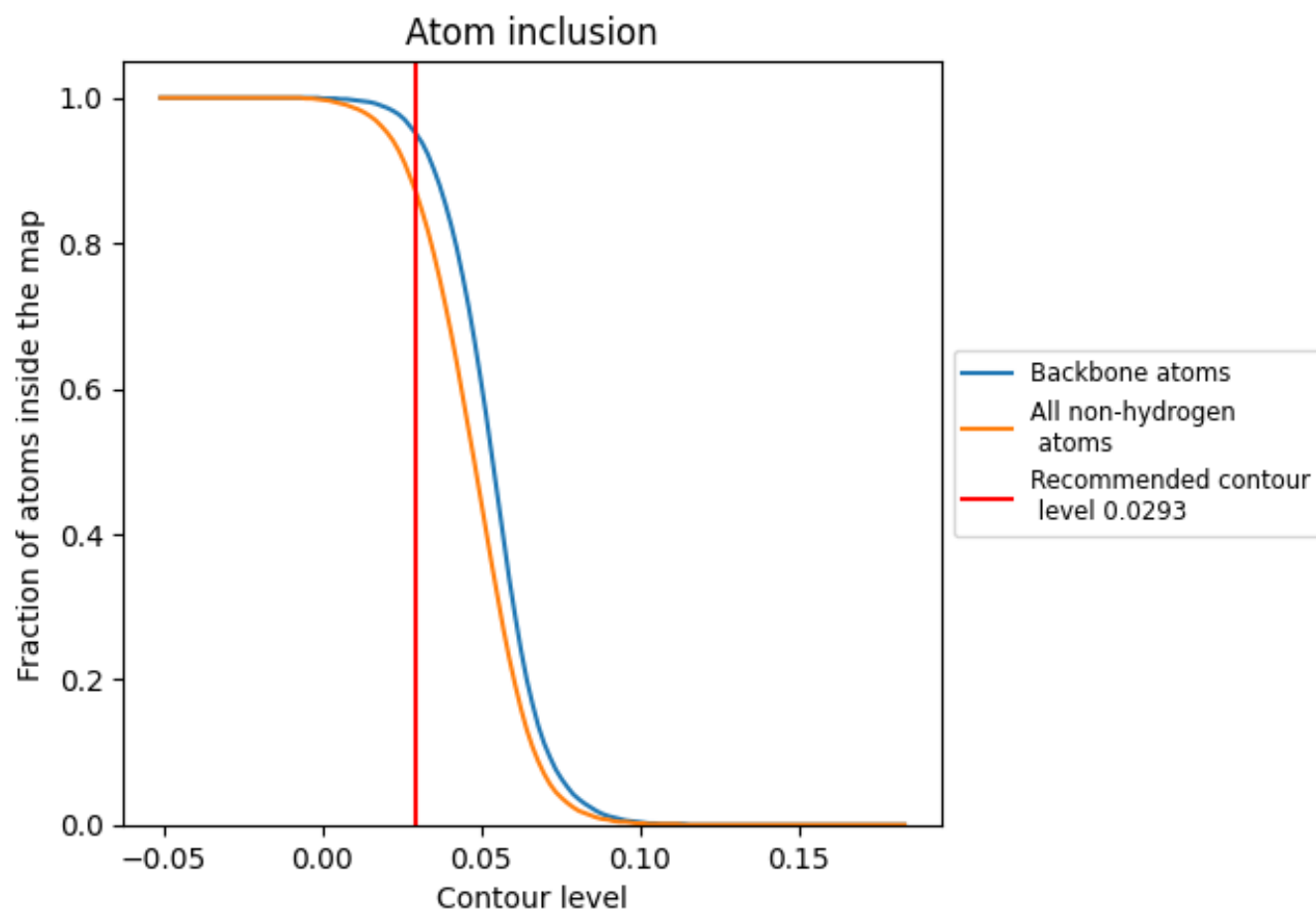
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.0293).

9.4 Atom inclusion [i](#)



At the recommended contour level, 95% of all backbone atoms, 87% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (0.0293) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8730	 0.4240
0	 0.9070	 0.4750
1	 0.8100	 0.4720
2	 0.8650	 0.4430
3	 0.8950	 0.4770
4	 0.9020	 0.4890
5	 0.8970	 0.4900
6	 0.9040	 0.4700
7	 0.8970	 0.4640
8	 0.8890	 0.4680
9	 0.8960	 0.4720
A	 0.8140	 0.4670
Aa	 0.8920	 0.4720
Ab	 0.8650	 0.4650
Ac	 0.8970	 0.4690
Ad	 0.9080	 0.4860
Ae	 0.8740	 0.4860
Af	 0.9020	 0.4770
Ag	 0.8810	 0.4810
Ah	 0.7590	 0.4280
Ai	 0.7400	 0.4050
Aj	 0.8010	 0.4340
Ak	 0.7830	 0.4280
Al	 0.7160	 0.4070
Am	 0.7550	 0.4180
An	 0.7800	 0.4260
Ao	 0.7500	 0.4200
Ap	 0.7740	 0.4140
Aq	 0.7420	 0.4000
Ar	 0.7520	 0.4060
As	 0.7480	 0.3970
At	 0.8820	 0.4810
Au	 0.8820	 0.3730
Av	 0.8800	 0.3760
B	 0.8900	 0.5000



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Chain	Atom inclusion	Q-score
C	 0.9000	 0.5050
CD	 0.8740	 0.4630
D	 0.8850	 0.4740
E	 0.8020	 0.4670
F	 0.8990	 0.4880
G	 0.8870	 0.4880
H	 0.8840	 0.4740
I	 0.8830	 0.4770
J	 0.9290	 0.4860
K	 0.8780	 0.4930
L	 0.8440	 0.4840
M	 0.7980	 0.4500
N	 0.9120	 0.5040
O	 0.8850	 0.4940
P	 0.9160	 0.4930
Q	 0.8040	 0.4750
R	 0.9020	 0.4670
S	 0.8780	 0.4620
T	 0.8770	 0.4580
U	 0.8710	 0.4660
V	 0.8770	 0.4790
W	 0.8770	 0.4810
X	 0.8570	 0.4680
Y	 0.9040	 0.4800
Z	 0.9370	 0.4810
a	 0.8900	 0.4630
a2	 0.8690	 0.4540
a3	 0.8830	 0.4850
a4	 0.9160	 0.4870
a5	 0.8650	 0.4720
a6	 0.9070	 0.4910
a7	 0.8820	 0.4840
a8	 0.8380	 0.4770
a9	 0.8460	 0.4730
aj	 0.8780	 0.4850
ak	 0.8660	 0.4950
al	 0.8980	 0.5070
am	 0.8860	 0.5050
an	 0.8570	 0.4590
ao	 0.8730	 0.4820
ap	 0.8900	 0.4800
aq	 0.8590	 0.4680

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Chain	Atom inclusion	Q-score
ar	 0.8970	 0.4910
as	 0.8770	 0.4920
at	 0.8620	 0.4880
au	 0.8650	 0.4760
av	 0.9150	 0.4830
aw	 0.8880	 0.4820
ax	 0.8950	 0.4850
ay	 0.8730	 0.4890
az	 0.9200	 0.4860
b	 0.8070	 0.4510
c	 0.9090	 0.4850
d	 0.9020	 0.4740
e	 0.9110	 0.4890
f	 0.9200	 0.4770
g	 0.9120	 0.4910
h	 0.9260	 0.4800
i	 0.9330	 0.4960
j	 0.9050	 0.4690
k	 0.9060	 0.4890
l	 0.8790	 0.4600
m	 0.9320	 0.4970
n	 0.8690	 0.4740
o	 0.9080	 0.4860
p	 0.9190	 0.4920
q	 0.8860	 0.4760
r	 0.8900	 0.4740
s	 0.9110	 0.4810
t	 0.9090	 0.4670
u	 0.8680	 0.4580
v	 0.8140	 0.4370
w	 0.8920	 0.4860
x	 0.9100	 0.4910
y	 0.9130	 0.4900
z	 0.8190	 0.4590