



Full wwPDB EM Validation Report ⓘ

Mar 9, 2026 – 06:26 PM UTC

PDB ID : 6G0L / pdb_00006g0l
EMDB ID : EMD-4336
Title : Structure of two molecules of the chromatin remodelling enzyme Chd1 bound to a nucleosome
Authors : Sundaramoorthy, R.; Owen-hughes, T.; Norman, D.G.; Hughes, A.
Deposited on : 2018-03-19
Resolution : 10.00 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:

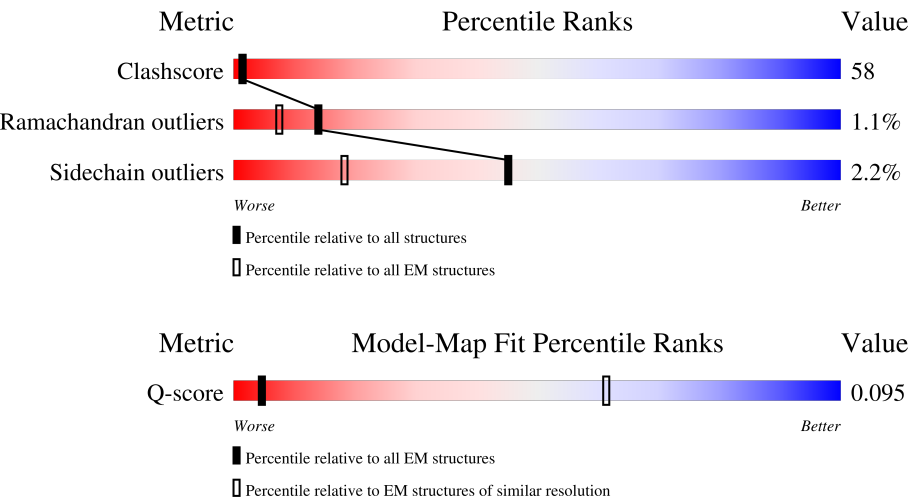
EMDB validation analysis : 0.0.1.dev132
Mogul : 2022.3.0, CSD as543be (2022)
MolProbity : 4-5-2 with Phenix2.0
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data 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 i

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

The reported resolution of this entry is 10.00 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	147 (9.50 - 10.50)

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	A	136	7% 17% 40% 12% • 29%
1	E	136	19% 35% 17% • 29%
2	B	103	15% 47% 17% • 19%
2	F	103	14% 26% 45% 16% • 11%

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Mol	Chain	Length	Quality of chain
3	C	130	
4	D	126	
4	H	126	
5	G	130	
6	I	176	
7	J	177	
8	M	1468	
8	W	1468	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
9	ADP	W	1502	-	-	X	-

2 Entry composition

There are 10 unique types of molecules in this entry. The entry contains 27526 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 protein called Histone H3.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	97	Total	C	N	O	S	0	0
			800	504	155	138	3		
1	E	97	Total	C	N	O	S	0	0
			799	502	155	139	3		

- Molecule 2 is a protein called Histone H4.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	B	83	Total	C	N	O	S	0	0
			662	418	129	114	1		
2	F	92	Total	C	N	O	S	0	0
			686	430	134	121	1		

- Molecule 3 is a protein called Histone H2A type 1.

Mol	Chain	Residues	Atoms				AltConf	Trace
3	C	103	Total	C	N	O	0	0
			795	501	155	139		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C	99	ARG	GLY	conflict	UNP P06897
C	106	ARG	GLY	conflict	UNP P06897

- Molecule 4 is a protein called Histone H4.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	D	95	Total	C	N	O	S	0	0
			745	469	134	140	2		
4	H	93	Total	C	N	O	S	0	0
			726	457	130	137	2		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
D	29	THR	SER	conflict	UNP A0A1L8G0X3
H	29	THR	SER	conflict	UNP A0A1L8G0X3

- Molecule 5 is a protein called Histone H2A type 1.

Mol	Chain	Residues	Atoms				AltConf	Trace
5	G	105	Total	C	N	O	0	0
			809	510	158	141		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
G	99	ARG	GLY	conflict	UNP P06897

- Molecule 6 is a DNA chain called DNA (176-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
6	I	176	Total	C	N	O	P	0	0
			3590	1704	657	1053	176		

- Molecule 7 is a DNA chain called DNA (177-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
7	J	177	Total	C	N	O	P	0	0
			3646	1727	676	1066	177		

- Molecule 8 is a protein called Chromo domain-containing protein 1.

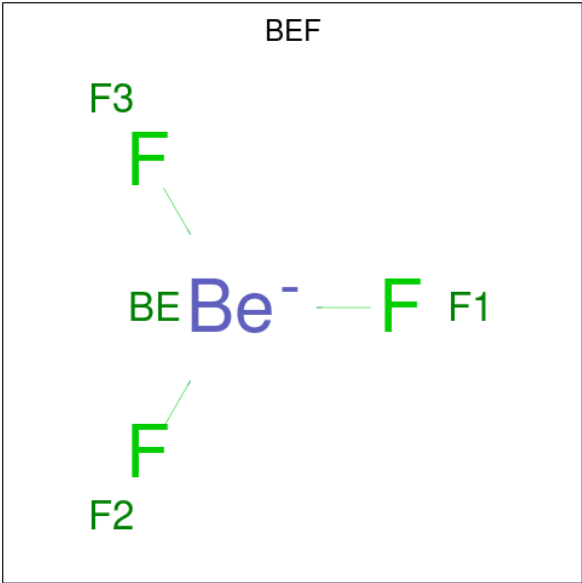
Mol	Chain	Residues	Atoms					AltConf	Trace
8	M	855	Total	C	N	O	S	0	0
			7017	4461	1221	1308	27		
8	W	878	Total	C	N	O	S	2	0
			7189	4568	1260	1334	27		

- Molecule 9 is ADENOSINE-5'-DIPHOSPHATE (CCD ID: ADP) (formula: $C_{10}H_{15}N_5O_{10}P_2$).



Mol	Chain	Residues	Atoms					AltConf
9	M	1	Total	C	N	O	P	0
			27	10	5	10	2	
9	W	1	Total	C	N	O	P	0
			27	10	5	10	2	

- Molecule 10 is BERYLLIUM TRIFLUORIDE ION (CCD ID: BEF) (formula: BeF₃).

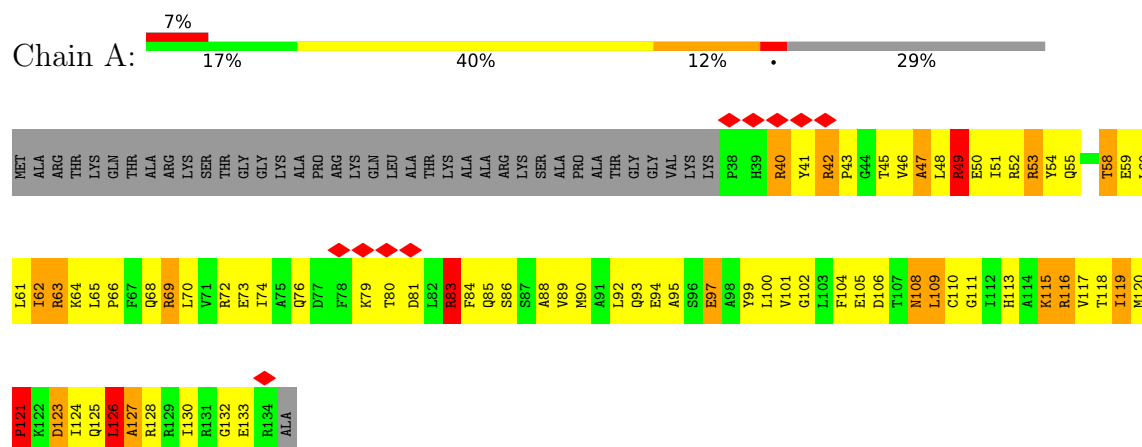


Mol	Chain	Residues	Atoms			AltConf
10	M	1	Total	Be	F	0
			4	1	3	
10	W	1	Total	Be	F	0
			4	1	3	

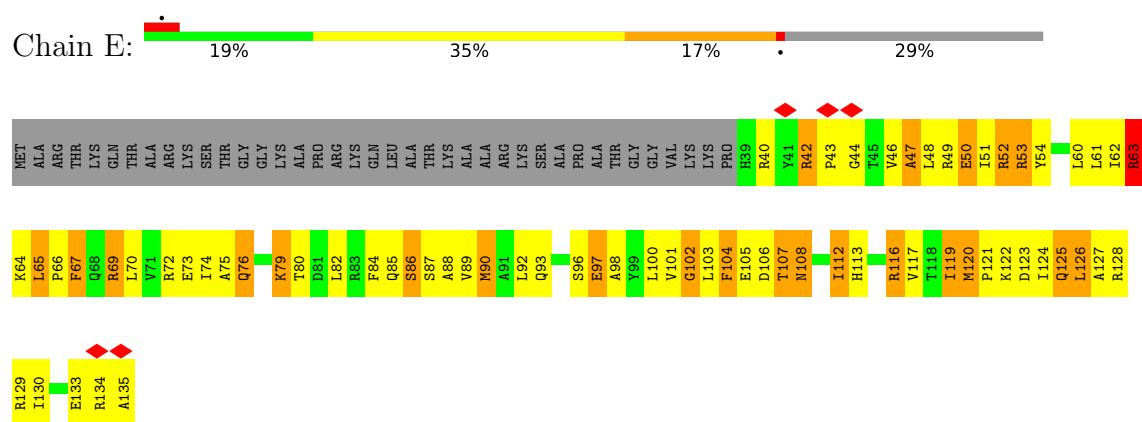
3 Residue-property plots

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.

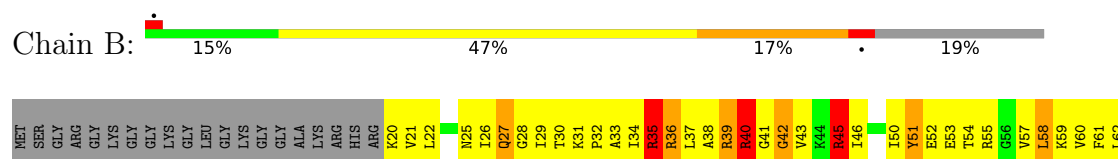
• Molecule 1: Histone H3

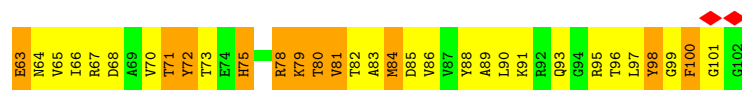


• Molecule 1: Histone H3

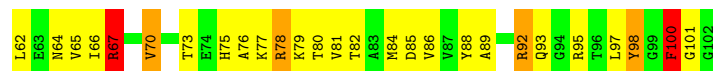


• Molecule 2: Histone H4

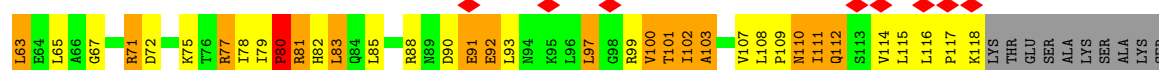
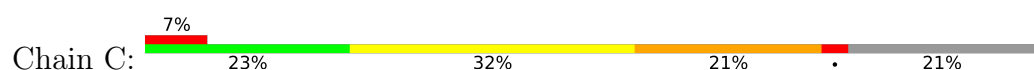




• Molecule 2: Histone H4

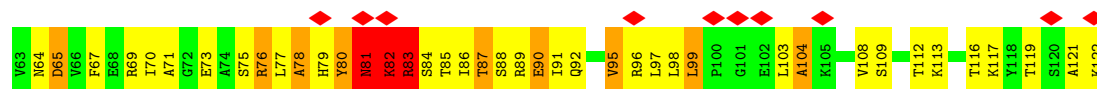
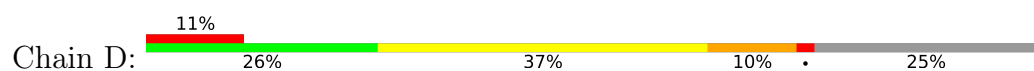


• Molecule 3: Histone H2A type 1

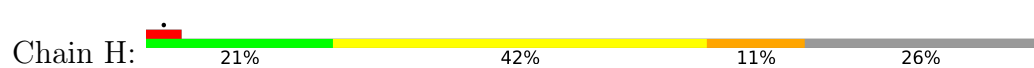


LYS

• Molecule 4: Histone H4

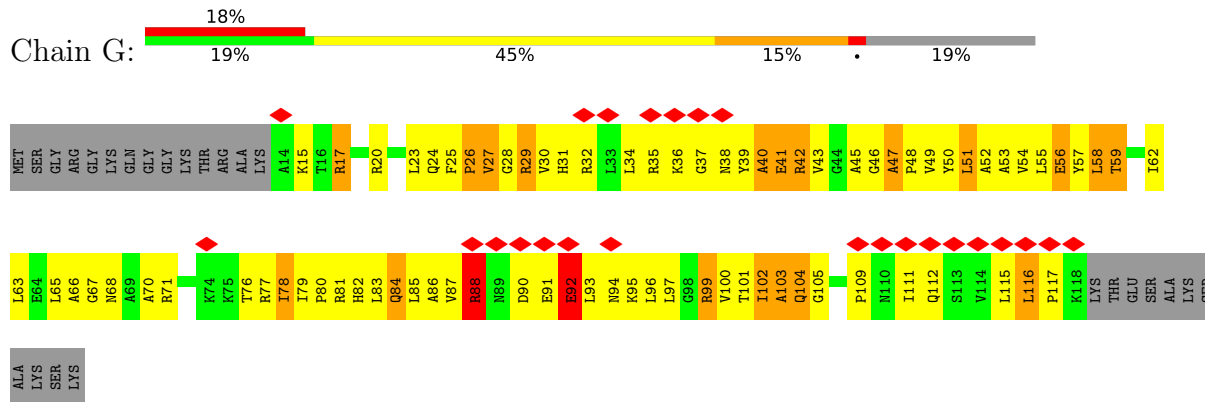


• Molecule 4: Histone H4

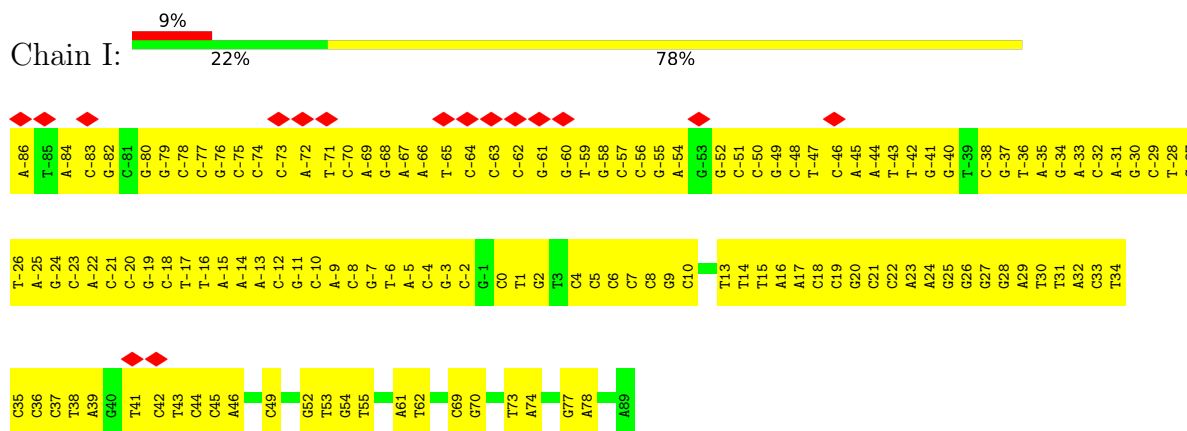


LYS

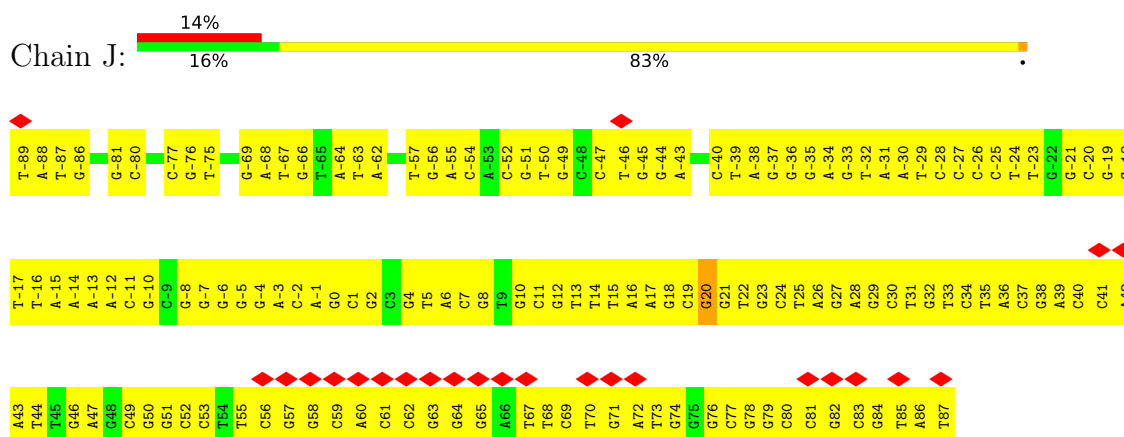
- Molecule 5: Histone H2A type 1



- Molecule 6: DNA (176-MER)



- Molecule 7: DNA (177-MER)

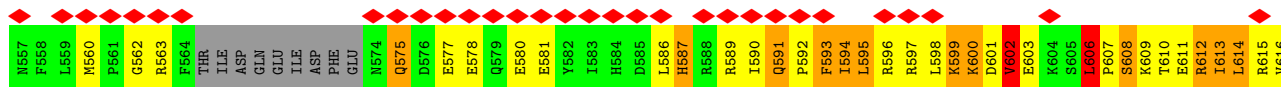
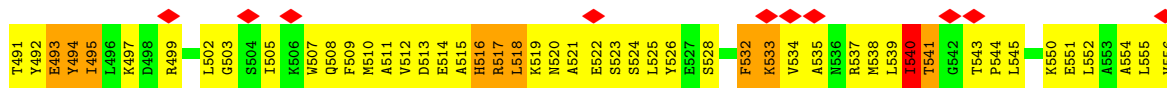
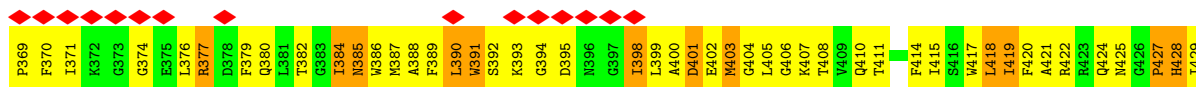
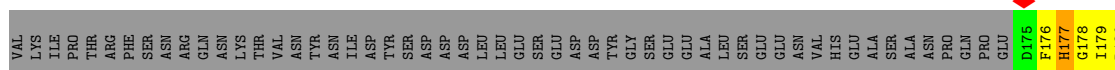
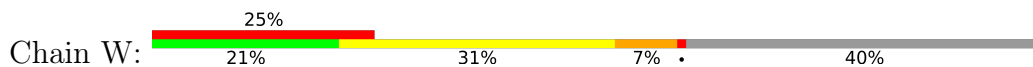


- Molecule 8: Chromo domain-containing protein 1





- Molecule 8: Chromo domain-containing protein 1





4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	68000	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 ($e^-/\text{\AA}^2$)	1.56	Depositor
Minimum defocus (nm)	1500	Depositor
Maximum defocus (nm)	4000	Depositor
Magnification	98591	Depositor
Image detector	FEI FALCON III (4k x 4k)	Depositor
Maximum map value	0.162	Depositor
Minimum map value	-0.047	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.008	Depositor
Recommended contour level	0.044	Depositor
Map size (Å)	369.19998, 369.19998, 369.19998	wwPDB
Map dimensions	260, 260, 260	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.42, 1.42, 1.42	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

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	A	1.62	14/812 (1.7%)	1.76	11/1088 (1.0%)
1	E	1.45	8/810 (1.0%)	1.83	19/1084 (1.8%)
2	B	1.58	9/669 (1.3%)	2.01	17/894 (1.9%)
2	F	1.67	13/693 (1.9%)	1.96	21/929 (2.3%)
3	C	1.83	21/805 (2.6%)	2.00	31/1088 (2.8%)
4	D	1.62	18/756 (2.4%)	1.79	10/1015 (1.0%)
4	H	1.51	9/737 (1.2%)	1.84	20/993 (2.0%)
5	G	1.73	18/819 (2.2%)	1.90	21/1106 (1.9%)
6	I	0.26	0/4023	0.46	0/6199
7	J	0.26	0/4091	0.47	1/6315 (0.0%)
8	M	0.09	0/7152	0.23	0/9632
8	W	1.43	94/7334 (1.3%)	1.54	64/9875 (0.6%)
All	All	1.05	204/28701 (0.7%)	1.18	215/40218 (0.5%)

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
1	A	0	7
1	E	0	6
2	B	0	5
2	F	0	7
3	C	0	7
4	D	0	3
4	H	0	4
5	G	0	4
8	W	0	19
All	All	0	62

All (204) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	C	102	ILE	C-O	12.01	1.36	1.24
4	D	87	THR	C-O	-11.77	1.10	1.23
3	C	92	GLU	C-O	11.53	1.35	1.23
1	A	121	PRO	C-O	-10.44	1.10	1.24
5	G	51	LEU	C-O	-9.94	1.12	1.24
5	G	112	GLN	C-O	-9.81	1.11	1.23
3	C	111	ILE	C-O	-9.47	1.13	1.24
3	C	109	PRO	C-O	-9.44	1.13	1.23
3	C	55	LEU	C-O	-9.38	1.13	1.24
8	W	216	LYS	C-O	9.34	1.35	1.24
8	W	784	ASP	N-CA	9.26	1.57	1.46
8	W	767	PHE	C-O	-9.23	1.13	1.23
4	D	57	SER	C-O	9.17	1.35	1.24
2	F	85	ASP	N-CA	-9.07	1.35	1.46
1	A	111	GLY	C-O	-8.93	1.13	1.23
1	E	98	ALA	N-CA	-8.86	1.35	1.46
8	W	430	ILE	C-O	-8.82	1.14	1.24
1	A	127	ALA	C-O	-8.81	1.13	1.24
8	W	729	ASP	CG-OD2	8.80	1.42	1.25
8	W	550	LYS	N-CA	8.78	1.56	1.46
8	W	797	ALA	N-CA	8.74	1.57	1.46
2	F	13	GLY	N-CA	8.74	1.57	1.45
2	B	35	ARG	C-O	8.63	1.34	1.24
8	W	730	TYR	N-CA	8.53	1.56	1.46
2	F	37	LEU	C-O	-8.24	1.13	1.24
5	G	40	ALA	C-O	-8.17	1.15	1.23
1	A	106	ASP	C-O	8.16	1.33	1.24
8	W	431	VAL	C-O	-8.13	1.15	1.24
5	G	84	GLN	C-O	8.09	1.33	1.24
1	A	118	THR	C-O	8.03	1.33	1.24
5	G	42	ARG	N-CA	7.93	1.55	1.46
4	D	95	VAL	C-O	7.82	1.33	1.24
4	D	64	ASN	C-O	-7.74	1.14	1.24
2	B	36	ARG	C-O	7.74	1.33	1.24
2	B	101	GLY	C-O	-7.70	1.14	1.23
1	A	127	ALA	N-CA	-7.70	1.36	1.46
8	W	338	PHE	N-CA	7.62	1.55	1.46
8	W	625	TYR	N-CA	-7.61	1.37	1.46
4	D	83	ARG	C-O	-7.54	1.14	1.23
4	D	65	ASP	CG-OD2	-7.50	1.11	1.25
8	W	533	LYS	C-O	-7.49	1.14	1.24
4	H	53	SER	C-O	-7.47	1.15	1.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	45	ARG	N-CA	7.46	1.56	1.46
8	W	342	GLU	C-O	-7.46	1.15	1.24
8	W	820	VAL	C-O	-7.43	1.16	1.23
8	W	494	TYR	N-CA	-7.43	1.37	1.46
8	W	436	THR	N-CA	7.42	1.55	1.46
2	F	41	GLY	C-O	-7.34	1.15	1.24
8	W	499	ARG	C-O	-7.34	1.15	1.24
2	B	78	ARG	C-O	7.28	1.32	1.23
8	W	401	ASP	N-CA	7.25	1.55	1.45
3	C	110	ASN	N-CA	-7.25	1.36	1.46
8	W	770	SER	N-CA	7.23	1.54	1.45
8	W	716	ILE	C-O	-7.21	1.16	1.24
3	C	36	LYS	C-O	-7.21	1.14	1.24
4	D	76	ARG	C-O	-7.20	1.15	1.24
2	F	43	VAL	C-O	-7.17	1.15	1.24
8	W	599	LYS	C-O	-7.16	1.15	1.24
3	C	29	ARG	CD-NE	7.09	1.56	1.46
8	W	488	LEU	C-O	-7.06	1.15	1.23
4	D	95	VAL	N-CA	-7.01	1.38	1.46
3	C	23	LEU	C-O	-6.99	1.14	1.23
1	E	102	GLY	N-CA	-6.96	1.37	1.45
3	C	35	ARG	C-O	-6.95	1.15	1.24
5	G	66	ALA	N-CA	-6.94	1.37	1.46
8	W	792	ASP	N-CA	6.94	1.55	1.46
3	C	53	ALA	C-O	6.91	1.32	1.24
8	W	489	LEU	C-O	-6.91	1.16	1.24
5	G	41	GLU	C-O	-6.88	1.16	1.24
8	W	361	PHE	N-CA	6.83	1.53	1.45
2	B	40	ARG	C-O	-6.78	1.16	1.24
2	F	40	ARG	NE-CZ	6.76	1.40	1.33
1	A	47	ALA	C-O	-6.74	1.15	1.24
8	W	652	MET	N-CA	6.69	1.54	1.45
8	W	632	LYS	N-CA	6.65	1.54	1.46
5	G	88	ARG	N-CA	6.65	1.54	1.46
8	W	767	PHE	N-CA	-6.62	1.37	1.46
8	W	357	GLN	C-O	6.62	1.31	1.23
8	W	753	SER	C-O	6.61	1.32	1.24
4	D	45	VAL	C-O	-6.60	1.16	1.24
4	D	78	ALA	C-O	-6.59	1.16	1.24
8	W	327	ILE	C-O	-6.50	1.16	1.24
1	A	108	ASN	C-O	6.44	1.31	1.24
5	G	105	GLY	C-O	6.44	1.31	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	D	73	GLU	CD-OE2	6.42	1.37	1.25
3	C	58	LEU	C-O	6.42	1.31	1.24
8	W	452	ASN	N-CA	6.41	1.54	1.45
5	G	116	LEU	N-CA	-6.41	1.36	1.45
8	W	651	ILE	N-CA	6.36	1.54	1.46
8	W	1254[A]	ARG	C-O	6.33	1.31	1.24
8	W	1254[B]	ARG	C-O	6.33	1.31	1.24
5	G	23	LEU	C-O	-6.33	1.16	1.23
8	W	669	GLU	N-CA	6.29	1.54	1.46
5	G	49	VAL	C-O	-6.29	1.17	1.24
5	G	86	ALA	C-O	-6.27	1.16	1.24
4	H	114	ALA	N-CA	-6.26	1.38	1.46
8	W	490	THR	N-CA	-6.26	1.38	1.46
8	W	433	PRO	C-O	6.23	1.30	1.23
2	B	57	VAL	N-CA	-6.23	1.39	1.46
8	W	725	ASP	N-CA	6.22	1.53	1.46
8	W	424	GLN	C-O	-6.18	1.16	1.24
1	A	94	GLU	C-O	6.17	1.31	1.24
5	G	27	VAL	N-CA	-6.16	1.39	1.46
8	W	724	LEU	N-CA	-6.13	1.38	1.46
8	W	669	GLU	CD-OE2	-6.12	1.13	1.25
8	W	494	TYR	C-O	-6.12	1.16	1.24
3	C	83	LEU	C-O	-6.12	1.17	1.24
5	G	37	GLY	C-O	-6.10	1.20	1.24
8	W	790	ASP	C-O	-6.06	1.16	1.23
8	W	756	HIS	C-O	-6.05	1.16	1.24
1	E	97	GLU	C-O	-6.04	1.17	1.24
4	H	67	PHE	C-O	-6.02	1.17	1.24
4	D	46	HIS	CE1-NE2	6.01	1.38	1.32
1	A	126	LEU	C-O	-5.99	1.17	1.24
1	E	112	ILE	C-O	5.96	1.30	1.24
8	W	817	TYR	N-CA	-5.94	1.38	1.46
8	W	594	ILE	N-CA	-5.92	1.39	1.46
8	W	731	LEU	C-O	5.90	1.31	1.24
8	W	826	GLU	CD-OE2	-5.86	1.14	1.25
4	H	70	ILE	C-O	-5.85	1.17	1.24
4	H	56	MET	CG-SD	-5.81	1.66	1.80
1	E	97	GLU	N-CA	-5.81	1.39	1.46
2	F	29	ILE	C-O	5.80	1.30	1.24
4	H	40	LYS	C-O	5.80	1.30	1.24
5	G	56	GLU	N-CA	-5.80	1.39	1.46
3	C	49	VAL	C-O	5.79	1.30	1.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	W	596	ARG	N-CA	5.78	1.53	1.46
4	D	82	LYS	N-CA	5.77	1.53	1.46
8	W	493	GLU	CD-OE2	5.76	1.36	1.25
8	W	591	GLN	N-CA	5.74	1.53	1.46
8	W	394	GLY	N-CA	5.73	1.53	1.45
2	F	25	ASN	N-CA	-5.73	1.38	1.46
1	A	49	ARG	NE-CZ	5.71	1.39	1.33
4	D	117	LYS	C-O	5.71	1.30	1.24
8	W	532	PHE	N-CA	5.69	1.53	1.46
8	W	464	ASP	C-O	5.68	1.30	1.24
8	W	257	ARG	N-CA	5.67	1.53	1.46
8	W	801	ALA	C-O	-5.67	1.17	1.24
8	W	729	ASP	C-O	-5.66	1.17	1.24
2	B	51	TYR	C-O	-5.66	1.17	1.24
1	A	123	ASP	N-CA	-5.63	1.39	1.46
8	W	720	MET	N-CA	-5.62	1.39	1.46
3	C	46	GLY	C-O	5.59	1.31	1.23
8	W	610	THR	N-CA	5.58	1.53	1.46
2	F	70	VAL	N-CA	-5.56	1.39	1.46
8	W	743	GLY	C-O	-5.53	1.16	1.23
8	W	730	TYR	C-O	-5.52	1.17	1.24
3	C	45	ALA	C-O	5.51	1.31	1.24
4	D	65	ASP	C-O	-5.51	1.17	1.24
8	W	1249	ALA	C-O	-5.50	1.17	1.24
8	W	398	ILE	C-O	-5.48	1.18	1.24
8	W	562	GLY	N-CA	5.47	1.53	1.45
3	C	31	HIS	CE1-NE2	5.45	1.38	1.32
8	W	516	HIS	N-CA	-5.44	1.38	1.46
8	W	339	GLN	C-O	5.43	1.30	1.24
3	C	72	ASP	C-O	5.42	1.30	1.24
8	W	411	THR	N-CA	5.40	1.53	1.46
4	H	116	THR	C-O	5.39	1.30	1.24
8	W	428	HIS	CE1-NE2	5.38	1.38	1.32
5	G	103	ALA	C-O	-5.37	1.17	1.24
1	E	86	SER	C-O	5.37	1.30	1.24
1	A	97	GLU	N-CA	-5.37	1.40	1.46
8	W	652	MET	C-O	-5.35	1.17	1.24
3	C	100	VAL	C-O	-5.32	1.18	1.24
2	B	79	LYS	CA-C	-5.31	1.47	1.52
8	W	719	GLN	C-O	-5.29	1.17	1.24
8	W	418	LEU	N-CA	-5.29	1.39	1.46
1	E	67	PHE	C-O	-5.29	1.17	1.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	E	104	PHE	N-CA	-5.27	1.40	1.46
8	W	384	ILE	N-CA	-5.27	1.40	1.46
2	F	98	TYR	N-CA	-5.27	1.39	1.45
8	W	554	ALA	N-CA	5.25	1.52	1.46
8	W	419	ILE	N-CA	5.25	1.51	1.45
2	F	78	ARG	C-O	5.23	1.30	1.24
8	W	729	ASP	N-CA	-5.22	1.40	1.46
8	W	787	VAL	C-O	-5.22	1.18	1.24
8	W	403	MET	N-CA	5.22	1.53	1.46
3	C	112	GLN	C-O	-5.20	1.17	1.23
3	C	107	VAL	C-O	-5.20	1.16	1.23
4	D	104	ALA	C-O	-5.20	1.18	1.24
8	W	1053	ASP	C-O	5.19	1.30	1.24
8	W	438	PRO	C-O	5.18	1.30	1.24
4	H	39	TYR	C-O	5.18	1.30	1.24
2	F	35	ARG	C-O	5.17	1.30	1.24
8	W	499	ARG	N-CA	5.16	1.52	1.46
8	W	337	HIS	N-CA	-5.16	1.40	1.46
4	H	105	LYS	C-O	-5.16	1.18	1.24
8	W	726	ILE	N-CA	-5.16	1.40	1.46
8	W	312	ARG	N-CA	5.15	1.52	1.46
8	W	463	ARG	N-CA	-5.15	1.39	1.46
8	W	777	GLY	C-O	-5.13	1.16	1.23
8	W	382	THR	C-O	5.12	1.30	1.24
4	D	33	SER	C-O	-5.12	1.17	1.23
8	W	614	LEU	C-O	-5.11	1.18	1.23
2	F	27	GLN	N-CA	5.11	1.52	1.46
1	A	53	ARG	C-O	5.09	1.30	1.24
5	G	27	VAL	C-O	-5.09	1.18	1.24
8	W	314	LEU	N-CA	-5.09	1.39	1.46
8	W	1248	GLY	C-O	-5.07	1.19	1.23
8	W	1265	GLY	N-CA	5.06	1.52	1.45
4	D	90	GLU	CD-OE2	-5.05	1.15	1.25
8	W	593	PHE	C-O	-5.04	1.16	1.23
8	W	1266	GLY	N-CA	5.03	1.52	1.45
8	W	221	SER	N-CA	5.00	1.52	1.46

All (215) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	C	39	TYR	N-CA-C	10.11	121.98	110.97
2	B	40	ARG	NE-CZ-NH1	-9.12	112.38	121.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	G	17	ARG	CA-C-O	-8.79	111.59	120.82
5	G	104	GLN	CA-C-O	-8.68	111.88	122.03
1	E	119	ILE	N-CA-CB	8.61	122.05	110.26
2	B	75	HIS	CA-CB-CG	-8.52	105.28	113.80
5	G	109	PRO	N-CA-C	-8.36	98.18	110.80
4	D	81	ASN	CB-CA-C	8.19	124.94	110.37
1	E	127	ALA	O-C-N	8.14	130.79	122.08
2	B	27	GLN	CB-CG-CD	-8.09	98.84	112.60
8	W	495	ILE	N-CA-CB	7.87	118.89	110.62
3	C	42	ARG	CB-CA-C	-7.87	100.70	113.37
8	W	442	ASP	CA-CB-CG	7.66	120.26	112.60
2	B	63	GLU	CB-CG-CD	7.55	125.44	112.60
5	G	37	GLY	CA-C-O	7.53	125.89	119.04
5	G	47	ALA	CA-C-O	7.52	126.22	119.08
5	G	92	GLU	CB-CG-CD	7.48	125.31	112.60
3	C	62	ILE	N-CA-C	7.39	117.98	110.82
2	B	98	TYR	CA-C-O	-7.35	112.23	120.32
1	A	49	ARG	CB-CG-CD	7.32	128.14	111.30
1	E	90	MET	N-CA-C	-7.24	102.57	111.33
5	G	17	ARG	O-C-N	7.23	129.51	122.07
4	D	80	TYR	CA-C-N	-7.08	110.38	122.56
4	D	80	TYR	C-N-CA	-7.08	110.38	122.56
1	A	53	ARG	CA-C-O	7.05	128.24	120.63
5	G	29	ARG	CA-C-O	6.93	127.77	120.42
4	H	39	TYR	CA-CB-CG	-6.92	101.45	113.90
4	D	46	HIS	CA-CB-CG	6.89	120.69	113.80
2	B	100	PHE	CA-C-N	-6.86	114.94	121.46
2	B	100	PHE	C-N-CA	-6.86	114.94	121.46
5	G	45	ALA	CA-C-N	-6.85	111.89	122.30
5	G	45	ALA	C-N-CA	-6.85	111.89	122.30
2	F	40	ARG	CB-CG-CD	-6.82	95.62	111.30
2	B	53	GLU	CB-CG-CD	6.81	124.17	112.60
8	W	432	VAL	N-CA-CB	-6.81	105.88	111.67
1	E	107	THR	N-CA-C	-6.75	103.00	111.11
2	B	42	GLY	CA-C-O	6.74	126.54	118.86
8	W	516	HIS	N-CA-C	-6.72	104.30	113.30
1	E	52	ARG	NE-CZ-NH1	-6.64	114.86	121.50
8	W	608	SER	N-CA-C	6.61	119.09	110.43
1	A	115	LYS	CB-CA-C	-6.59	100.26	111.26
2	F	100	PHE	CA-C-O	-6.55	113.29	120.36
2	F	100	PHE	O-C-N	6.50	131.03	123.30
2	F	36	ARG	N-CA-C	-6.50	103.47	111.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	C	18	SER	N-CA-C	-6.48	104.13	111.07
8	W	729	ASP	N-CA-CB	-6.43	100.64	110.16
2	F	36	ARG	CA-C-O	6.42	127.56	120.63
4	H	45	VAL	N-CA-C	6.41	117.09	111.90
8	W	756	HIS	CA-CB-CG	6.36	120.16	113.80
8	W	432	VAL	CA-C-N	6.35	126.30	119.76
8	W	432	VAL	C-N-CA	6.35	126.30	119.76
3	C	91	GLU	N-CA-C	6.34	118.19	111.28
8	W	385	ASN	CA-CB-CG	6.32	118.92	112.60
8	W	177	HIS	CA-C-N	6.32	127.01	121.58
8	W	177	HIS	C-N-CA	6.32	127.01	121.58
2	F	52	GLU	CA-C-O	-6.30	114.16	120.90
8	W	271	ASP	CA-CB-CG	6.26	118.86	112.60
4	H	40	LYS	N-CA-C	6.25	118.64	111.02
8	W	575	GLN	CA-C-N	6.24	128.97	120.54
8	W	575	GLN	C-N-CA	6.24	128.97	120.54
1	E	102	GLY	N-CA-C	-6.23	105.10	112.64
3	C	48	PRO	CA-C-O	6.22	129.56	119.86
3	C	42	ARG	N-CA-C	-6.22	99.23	109.80
8	W	695	GLY	CA-C-O	6.22	127.25	120.66
1	E	120	MET	CA-C-O	6.20	127.04	120.66
4	H	65	ASP	CA-C-O	6.19	127.32	120.63
8	W	730	TYR	CB-CA-C	-6.19	100.39	110.79
8	W	279	ASP	CA-CB-CG	6.18	118.78	112.60
3	C	97	LEU	CA-C-N	6.17	126.66	119.94
3	C	97	LEU	C-N-CA	6.17	126.66	119.94
5	G	109	PRO	CB-CA-C	6.12	118.87	111.46
8	W	420	PHE	N-CA-C	-6.12	104.45	112.41
5	G	26	PRO	CB-CA-C	-6.12	106.73	111.87
2	B	36	ARG	CA-C-O	-6.11	114.08	120.55
8	W	292	ASP	CA-CB-CG	6.09	118.69	112.60
2	F	52	GLU	CB-CG-CD	6.05	122.89	112.60
8	W	1202	PHE	CA-CB-CG	6.05	119.85	113.80
2	F	40	ARG	NE-CZ-NH2	6.04	124.63	119.20
4	D	90	GLU	CB-CA-C	6.03	120.35	110.88
3	C	63	LEU	CA-C-O	6.01	127.33	120.90
8	W	390	LEU	N-CA-C	-5.96	105.66	113.17
8	W	612	ARG	CG-CD-NE	5.94	125.07	112.00
1	E	133	GLU	N-CA-C	-5.94	103.58	111.24
2	F	55	ARG	N-CA-C	-5.90	104.93	111.36
8	W	599	LYS	CA-C-O	-5.89	114.81	121.00
2	F	38	ALA	CA-C-O	5.89	126.66	120.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	W	433	PRO	N-CA-C	5.87	120.30	111.14
2	F	70	VAL	N-CA-C	-5.87	104.63	110.62
1	E	125	GLN	CA-C-O	-5.85	114.67	120.82
8	W	464	ASP	N-CA-C	5.84	117.73	111.36
2	B	85	ASP	CA-C-O	-5.84	114.36	120.55
8	W	806	HIS	CB-CA-C	-5.83	101.88	111.68
7	J	20	DG	C2'-C3'-O3'	-5.80	102.80	111.50
3	C	42	ARG	CA-C-O	-5.80	114.62	120.77
2	B	58	LEU	N-CA-C	-5.79	104.32	111.33
8	W	418	LEU	N-CA-C	-5.78	106.00	113.16
8	W	1188	LYS	N-CA-C	5.76	118.77	111.69
4	H	99	LEU	CA-C-N	5.75	125.77	119.90
4	H	99	LEU	C-N-CA	5.75	125.77	119.90
2	F	31	LYS	CB-CA-C	-5.75	102.06	112.76
3	C	39	TYR	CB-CA-C	-5.75	102.11	110.96
5	G	46	GLY	O-C-N	-5.74	116.52	121.97
8	W	770	SER	O-C-N	-5.74	116.18	122.84
4	H	76	ARG	NE-CZ-NH1	-5.74	115.76	121.50
3	C	50	TYR	CB-CG-CD1	-5.70	112.25	120.80
4	H	105	LYS	CB-CA-C	5.69	120.52	110.85
3	C	102	ILE	CA-C-O	5.67	126.60	120.43
4	H	81	ASN	N-CA-CB	5.66	119.17	110.79
2	F	49	LEU	CA-C-O	5.66	126.76	120.82
8	W	1265	GLY	CA-C-N	5.65	126.22	120.00
8	W	1265	GLY	C-N-CA	5.65	126.22	120.00
8	W	628	ASN	CA-CB-CG	-5.65	106.95	112.60
1	E	119	ILE	N-CA-C	-5.65	101.53	109.21
1	E	119	ILE	CA-CB-CG1	5.64	119.99	110.40
2	F	55	ARG	CB-CG-CD	5.62	124.23	111.30
8	W	1099	PRO	N-CA-C	5.62	120.15	111.21
8	W	792	ASP	CA-C-N	5.61	130.92	122.68
8	W	792	ASP	C-N-CA	5.61	130.92	122.68
3	C	59	THR	CA-C-O	5.59	126.47	120.55
2	B	40	ARG	NH1-CZ-NH2	5.59	126.56	119.30
8	W	606	LEU	CA-C-N	5.58	125.53	119.78
8	W	606	LEU	C-N-CA	5.58	125.53	119.78
2	B	71	THR	OG1-CB-CG2	-5.58	98.14	109.30
5	G	26	PRO	N-CA-CB	5.57	106.04	102.92
8	W	1137	GLU	N-CA-C	5.56	117.42	111.36
3	C	102	ILE	N-CA-C	5.56	116.29	108.17
8	W	771	THR	CA-CB-OG1	-5.55	101.27	109.60
3	C	103	ALA	CA-C-O	-5.55	115.67	120.88

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	F	67	ARG	O-C-N	5.54	127.86	122.09
8	W	287	PRO	CB-CA-C	5.54	118.56	110.63
5	G	41	GLU	CA-C-O	-5.53	114.69	120.55
1	A	109	LEU	CA-C-O	5.51	126.60	120.82
8	W	337	HIS	CA-C-N	5.51	127.92	120.38
8	W	337	HIS	C-N-CA	5.51	127.92	120.38
8	W	666	ASP	N-CA-CB	-5.50	101.67	110.19
1	E	97	GLU	N-CA-C	-5.48	105.21	111.07
2	B	95	ARG	CB-CG-CD	5.47	123.89	111.30
1	E	126	LEU	O-C-N	5.47	127.78	122.09
1	A	62	ILE	CB-CA-C	-5.46	104.09	111.63
5	G	45	ALA	CA-C-O	5.45	126.38	119.78
4	H	39	TYR	N-CA-C	5.45	116.90	111.07
8	W	432	VAL	CA-CB-CG1	5.44	119.65	110.40
2	F	36	ARG	CG-CD-NE	-5.44	100.04	112.00
3	C	32	ARG	CB-CA-C	-5.43	101.62	110.85
8	W	595	LEU	CA-C-O	-5.43	113.58	120.20
4	D	99	LEU	CD1-CG-CD2	5.41	122.71	110.80
8	W	1031	LEU	CA-C-O	-5.40	115.12	120.90
8	W	1059	ALA	N-CA-C	5.39	116.84	111.07
4	H	76	ARG	NE-CZ-NH2	5.39	124.05	119.20
2	F	35	ARG	N-CA-C	-5.38	105.42	111.28
1	A	83	ARG	NE-CZ-NH1	-5.37	116.13	121.50
4	H	115	VAL	N-CA-C	-5.37	105.15	110.62
4	H	38	VAL	CA-C-O	5.36	126.52	120.95
4	H	65	ASP	CA-CB-CG	5.36	117.95	112.60
8	W	771	THR	CA-C-O	-5.34	115.19	120.80
4	H	119	THR	CA-CB-OG1	-5.34	101.60	109.60
8	W	587	HIS	CA-CB-CG	5.33	119.13	113.80
3	C	102	ILE	CA-C-N	5.32	131.18	121.97
3	C	102	ILE	C-N-CA	5.32	131.18	121.97
3	C	46	GLY	CA-C-N	5.32	126.37	119.78
3	C	46	GLY	C-N-CA	5.32	126.37	119.78
8	W	493	GLU	CB-CG-CD	-5.32	103.56	112.60
3	C	101	THR	CA-C-N	-5.31	115.05	122.75
3	C	101	THR	C-N-CA	-5.31	115.05	122.75
1	E	50	GLU	N-CA-C	-5.30	105.50	111.28
4	H	40	LYS	CB-CA-C	-5.30	102.49	110.92
4	H	74	ALA	CA-C-O	5.29	126.38	120.82
1	E	53	ARG	CA-C-O	5.29	126.02	120.42
2	F	55	ARG	CG-CD-NE	-5.28	100.38	112.00
4	H	109	SER	CA-C-O	-5.27	115.29	120.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	G	23	LEU	CA-C-O	5.27	127.02	121.33
1	E	79	LYS	CA-C-O	5.26	126.86	121.23
8	W	492	TYR	CA-C-O	-5.26	114.85	120.42
3	C	50	TYR	CB-CG-CD2	5.26	128.69	120.80
8	W	1206	THR	N-CA-C	5.25	117.01	111.28
8	W	189	THR	N-CA-C	5.25	117.46	108.90
2	B	101	GLY	CA-C-O	-5.24	116.76	121.47
1	A	102	GLY	CA-C-O	5.21	125.91	120.80
8	W	1255	ARG	N-CA-C	5.20	116.64	111.07
5	G	58	LEU	CA-C-O	5.20	126.06	120.55
8	W	273	GLU	O-C-N	5.19	127.62	122.12
8	W	596	ARG	N-CA-CB	5.19	118.75	110.65
2	B	93	GLN	OE1-CD-NE2	5.18	127.78	122.60
4	D	50	GLY	CA-C-O	5.18	127.73	121.77
8	W	367	GLN	CA-C-O	5.18	123.45	119.46
8	W	482	THR	CA-CB-OG1	-5.17	101.84	109.60
1	E	108	ASN	CB-CA-C	-5.17	102.53	110.81
8	W	724	LEU	CA-C-O	-5.17	114.94	120.42
3	C	62	ILE	CA-C-N	5.16	127.51	120.54
3	C	62	ILE	C-N-CA	5.16	127.51	120.54
5	G	102	ILE	N-CA-C	5.16	115.33	108.11
5	G	105	GLY	CA-C-O	5.14	126.34	121.05
1	E	126	LEU	CB-CA-C	-5.13	102.61	110.81
8	W	1040	LEU	N-CA-C	5.12	118.44	109.48
1	A	53	ARG	N-CA-C	-5.12	105.14	111.33
2	F	35	ARG	NE-CZ-NH1	-5.12	116.38	121.50
1	A	58	THR	CA-C-N	5.11	128.11	120.90
1	A	58	THR	C-N-CA	5.11	128.11	120.90
3	C	43	VAL	N-CA-CB	-5.11	103.08	111.45
3	C	72	ASP	CA-CB-CG	5.10	117.70	112.60
2	F	93	GLN	CA-C-O	5.09	125.30	119.35
4	H	48	ASP	CA-C-O	-5.09	116.38	122.13
4	D	64	ASN	N-CA-C	-5.08	105.82	111.36
2	F	58	LEU	CD1-CG-CD2	-5.07	99.64	110.80
4	H	42	LEU	CB-CA-C	-5.07	102.87	110.92
1	A	49	ARG	NE-CZ-NH2	5.05	123.75	119.20
4	D	50	GLY	O-C-N	-5.04	118.90	123.29
4	D	113	LYS	N-CA-C	-5.04	105.70	111.14
8	W	790	ASP	CA-C-O	-5.03	115.22	121.06
8	W	432	VAL	O-C-N	-5.03	117.10	121.57
8	W	829	VAL	N-CA-C	-5.02	105.50	110.62
1	E	105	GLU	CB-CG-CD	5.01	121.12	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	G	59	THR	CA-C-O	5.01	126.26	120.90
3	C	80	PRO	CA-C-N	5.00	126.98	120.28
3	C	80	PRO	C-N-CA	5.00	126.98	120.28

There are no chirality outliers.

All (62) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	116	ARG	Sidechain
1	A	40	ARG	Sidechain
1	A	42	ARG	Sidechain
1	A	49	ARG	Sidechain
1	A	63	ARG	Sidechain
1	A	69	ARG	Sidechain
1	A	83	ARG	Sidechain
2	B	35	ARG	Sidechain
2	B	39	ARG	Sidechain
2	B	40	ARG	Sidechain
2	B	45	ARG	Sidechain
2	B	72	TYR	Sidechain
3	C	101	THR	Peptide
3	C	29	ARG	Sidechain
3	C	35	ARG	Sidechain
3	C	42	ARG	Sidechain
3	C	71	ARG	Sidechain
3	C	77	ARG	Sidechain
3	C	81	ARG	Sidechain
4	D	30	ARG	Sidechain
4	D	81	ASN	Mainchain
4	D	83	ARG	Peptide
1	E	116	ARG	Sidechain
1	E	40	ARG	Sidechain
1	E	63	ARG	Sidechain
1	E	69	ARG	Sidechain
1	E	72	ARG	Sidechain
1	E	97	GLU	Mainchain
2	F	100	PHE	Peptide
2	F	39	ARG	Sidechain
2	F	40	ARG	Sidechain
2	F	45	ARG	Sidechain
2	F	67	ARG	Sidechain
2	F	92	ARG	Sidechain

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Mol	Chain	Res	Type	Group
2	F	95	ARG	Sidechain
5	G	71	ARG	Sidechain
5	G	77	ARG	Sidechain
5	G	88	ARG	Sidechain
5	G	99	ARG	Sidechain
4	H	34	TYR	Sidechain
4	H	76	ARG	Sidechain
4	H	89	ARG	Sidechain
4	H	96	ARG	Sidechain
8	W	1085	ARG	Sidechain
8	W	1112	ARG	Sidechain
8	W	1254[A]	ARG	Sidechain
8	W	1254[B]	ARG	Sidechain
8	W	1264	ARG	Sidechain
8	W	189	THR	Peptide
8	W	237	ARG	Sidechain
8	W	241	ARG	Sidechain
8	W	274	ARG	Sidechain
8	W	276	ARG	Sidechain
8	W	312	ARG	Sidechain
8	W	313	ARG	Sidechain
8	W	377	ARG	Sidechain
8	W	517	ARG	Sidechain
8	W	563	ARG	Sidechain
8	W	706	ARG	Sidechain
8	W	720	MET	Mainchain
8	W	722	ARG	Sidechain
8	W	797	ALA	Mainchain

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	800	0	837	197	0
1	E	799	0	834	163	0
2	B	662	0	709	169	0
2	F	686	0	693	190	0
3	C	795	0	844	179	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	D	745	0	773	131	0
4	H	726	0	746	114	0
5	G	809	0	864	180	0
6	I	3590	0	1969	644	0
7	J	3646	0	1989	702	0
8	M	7017	0	7011	173	0
8	W	7189	0	7206	956	0
9	M	27	0	12	1	0
9	W	27	0	12	12	0
10	M	4	0	0	1	0
10	W	4	0	0	0	0
All	All	27526	0	24499	2995	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 58.

All (2995) 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)
7:J:26:DA:H2''	7:J:27:DG:C8	1.33	1.59
6:I:30:DT:C6	6:I:31:DT:H72	1.40	1.52
1:A:63:ARG:CZ	7:J:17:DA:H5'	1.40	1.50
6:I:22:DC:P	8:W:520:ASN:HB3	1.52	1.50
6:I:-84:DA:H2	7:J:86:DA:C2	1.30	1.48
7:J:-17:DT:H5'	8:W:493:GLU:CB	1.43	1.47
6:I:23:DA:OP1	8:W:519:LYS:CE	1.66	1.43
8:W:345:LYS:HB3	8:W:1036:ALA:CB	1.48	1.42
1:E:61:LEU:CD1	2:F:37:LEU:HA	1.50	1.41
6:I:-84:DA:C2	7:J:86:DA:C2	2.08	1.41
6:I:-80:DG:H1	7:J:82:DG:N2	1.17	1.40
1:A:117:VAL:HB	6:I:-3:DG:P	1.62	1.40
6:I:-80:DG:N1	7:J:82:DG:N2	1.68	1.37
1:E:61:LEU:HD13	2:F:37:LEU:CA	1.54	1.37
1:A:63:ARG:CZ	7:J:17:DA:C5'	2.04	1.36
5:G:15:LYS:NZ	6:I:46:DA:H4'	1.07	1.36
6:I:-84:DA:C2	7:J:86:DA:H2	1.43	1.36
3:C:77:ARG:HB2	6:I:-55:DG:OP1	1.21	1.35
1:A:85:GLN:CG	6:I:-24:DG:OP1	1.72	1.35
8:W:481:LYS:HG3	8:W:483:MET:CE	1.55	1.34
6:I:-86:DA:N1	7:J:87:DT:N3	1.73	1.34
2:B:78:ARG:CB	7:J:28:DA:OP1	1.76	1.33

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:34:LEU:HD22	3:C:39:TYR:CE2	1.63	1.33
1:E:61:LEU:HD12	2:F:37:LEU:CD1	1.57	1.33
3:C:40:ALA:HB2	4:D:86:ILE:CD1	1.56	1.32
6:I:-3:DG:C5	6:I:-2:DC:N3	1.91	1.32
7:J:26:DA:C2'	7:J:27:DG:C8	2.13	1.32
5:G:91:GLU:O	5:G:95:LYS:HG3	1.29	1.32
5:G:43:VAL:N	6:I:39:DA:OP1	1.62	1.31
8:W:518:LEU:HD12	8:W:518:LEU:O	1.30	1.31
4:H:66:VAL:O	4:H:70:ILE:HD13	1.13	1.30
7:J:-11:DC:N4	7:J:-10:DG:O6	1.61	1.30
3:C:17:ARG:HD2	6:I:-43:DT:OP1	1.15	1.30
6:I:34:DT:H2''	6:I:35:DC:C6	1.65	1.29
4:H:36:ILE:HD11	6:I:49:DC:OP2	1.25	1.29
1:A:117:VAL:HB	6:I:-3:DG:OP1	1.31	1.29
7:J:19:DC:H2''	7:J:20:DG:C8	1.67	1.28
1:E:63:ARG:NE	7:J:-13:DA:H5'	1.48	1.27
3:C:34:LEU:CD2	3:C:39:TYR:HE2	1.46	1.27
6:I:-76:DG:N1	7:J:76:DG:N2	1.82	1.27
8:W:607:PRO:HB2	8:W:813:HIS:N	1.48	1.27
6:I:-6:DT:H2''	6:I:-5:DA:C8	1.70	1.26
1:A:83:ARG:O	1:A:84:PHE:HD1	1.15	1.26
6:I:-19:DG:O5'	8:M:743:GLY:HA3	1.17	1.26
7:J:26:DA:N7	7:J:27:DG:O6	1.68	1.26
8:W:390:LEU:CD1	8:W:393:LYS:HD2	1.65	1.25
1:A:85:GLN:HA	6:I:-24:DG:O5'	1.31	1.25
6:I:-23:DC:H2''	6:I:-22:DA:C5'	1.66	1.25
8:W:481:LYS:CG	8:W:483:MET:HE3	1.63	1.25
2:F:17:ARG:CB	8:W:722:ARG:NH2	2.01	1.24
6:I:-28:DT:H2''	6:I:-27:DC:C5	1.73	1.24
7:J:-37:DG:H2''	7:J:-36:DG:N7	1.52	1.24
8:W:345:LYS:CB	8:W:1036:ALA:CB	2.17	1.23
1:E:61:LEU:CD1	2:F:37:LEU:HD12	1.66	1.23
1:A:85:GLN:HA	6:I:-24:DG:P	1.78	1.23
6:I:22:DC:P	8:W:520:ASN:CB	2.27	1.23
5:G:15:LYS:NZ	6:I:46:DA:C4'	2.00	1.22
2:F:45:ARG:HA	6:I:8:DC:OP1	1.39	1.22
2:F:46:ILE:H	6:I:8:DC:P	1.61	1.22
6:I:22:DC:OP2	8:W:520:ASN:CB	1.88	1.22
7:J:13:DT:OP1	8:M:241:ARG:HG2	1.06	1.22
6:I:-18:DC:C5'	8:M:434:LEU:HD21	1.68	1.22
8:W:414:PHE:CE2	8:W:538:MET:HE1	1.74	1.22

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:J:-17:DT:C5'	8:W:493:GLU:HB3	1.71	1.21
6:I:-77:DC:O2	7:J:78:DG:N2	1.73	1.21
7:J:21:DG:C4'	8:M:517:ARG:HH21	1.51	1.21
7:J:-11:DC:C4	7:J:-10:DG:C6	2.29	1.21
7:J:32:DG:C2'	7:J:33:DT:H71	1.69	1.20
1:A:63:ARG:NH2	7:J:17:DA:H5'	1.56	1.20
8:W:607:PRO:HG3	8:W:811:LYS:C	1.64	1.20
1:A:84:PHE:CE1	2:B:81:VAL:HB	1.77	1.19
5:G:43:VAL:H	6:I:39:DA:P	1.64	1.19
8:W:607:PRO:CB	8:W:813:HIS:H	1.52	1.19
7:J:21:DG:H4'	8:M:517:ARG:NH2	1.57	1.19
7:J:26:DA:C5	7:J:27:DG:C6	2.29	1.19
6:I:-77:DC:C2	7:J:78:DG:N2	2.11	1.19
5:G:91:GLU:O	5:G:95:LYS:CG	1.90	1.19
1:E:63:ARG:HE	7:J:-13:DA:C5'	1.54	1.18
6:I:-3:DG:C4	6:I:-2:DC:N3	2.09	1.18
8:W:345:LYS:CB	8:W:1036:ALA:HB3	1.72	1.18
8:W:414:PHE:CD2	8:W:538:MET:HE1	1.76	1.18
1:E:116:ARG:NH2	7:J:-2:DC:OP2	1.74	1.18
7:J:-38:DA:C5	7:J:-37:DG:C6	2.31	1.18
3:C:17:ARG:CD	6:I:43:DT:OP1	1.90	1.18
6:I:20:DG:H3'	8:W:524:SER:OG	1.40	1.18
8:W:777:GLY:O	8:W:778:ILE:HG22	1.36	1.18
4:H:66:VAL:O	4:H:70:ILE:CD1	1.92	1.17
6:I:-19:DG:H3'	8:M:743:GLY:CA	1.72	1.17
7:J:-35:DG:H2''	7:J:-34:DA:C8	1.78	1.17
7:J:-46:DT:H1'	7:J:-45:DG:C5	1.79	1.17
6:I:23:DA:OP1	8:W:519:LYS:HE2	1.20	1.16
8:W:650:ASN:HA	8:W:654:GLU:HB3	1.27	1.16
6:I:-86:DA:N1	7:J:87:DT:C4	2.14	1.15
7:J:24:DC:OP1	8:M:793:TRP:CD1	1.98	1.15
3:C:97:LEU:HD11	4:D:62:PHE:CE2	1.80	1.15
6:I:-38:DC:C4	6:I:-37:DG:O6	2.00	1.15
6:I:21:DC:OP2	8:W:524:SER:OG	1.63	1.15
8:W:398:ILE:HG23	8:W:539:LEU:HD11	1.26	1.15
6:I:-35:DA:C8	6:I:-34:DG:N7	2.13	1.15
7:J:13:DT:OP1	8:M:241:ARG:CG	1.94	1.14
4:H:36:ILE:HD11	6:I:49:DC:P	1.86	1.14
7:J:-46:DT:C1'	7:J:-45:DG:C5	2.26	1.14
8:W:1150:TYR:HD1	8:W:1156:LYS:HE2	1.04	1.14
1:A:83:ARG:O	1:A:84:PHE:CD1	2.01	1.14

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:I:-35:DA:N7	6:I:-34:DG:C6	2.15	1.14
6:I:-38:DC:C4	6:I:-37:DG:C6	2.35	1.14
6:I:5:DC:H2''	6:I:6:DC:C5	1.81	1.14
7:J:-17:DT:H5'	8:W:493:GLU:CG	1.73	1.13
6:I:-18:DC:O3'	8:M:493:GLU:OE2	1.65	1.13
2:B:26:ILE:HD13	2:B:59:LYS:HD3	1.30	1.13
6:I:22:DC:OP2	8:W:520:ASN:HB3	0.95	1.13
8:W:518:LEU:CD1	8:W:555:LEU:HD12	1.78	1.13
7:J:-17:DT:C7	7:J:-16:DT:O4	1.96	1.13
6:I:42:DC:H2''	6:I:43:DT:O5'	1.42	1.12
8:W:523:SER:HB2	8:W:526:TYR:HB2	1.12	1.12
5:G:51:LEU:CD2	4:H:91:ILE:HG21	1.79	1.11
6:I:-77:DC:OP2	8:W:1254[A]:ARG:NH2	1.82	1.11
6:I:-18:DC:H5''	8:M:434:LEU:HD21	1.22	1.11
7:J:-21:DG:H2''	7:J:-20:DC:O5'	1.38	1.11
2:B:45:ARG:HD3	7:J:8:DG:H5'	1.25	1.11
6:I:20:DG:C3'	8:W:524:SER:OG	1.98	1.11
6:I:21:DC:P	8:W:524:SER:OG	2.09	1.10
7:J:-25:DC:C2'	7:J:-24:DT:H72	1.81	1.10
7:J:20:DG:H5''	8:M:496:LEU:HD23	1.33	1.10
1:E:116:ARG:HB3	7:J:-3:DA:OP1	1.47	1.10
6:I:23:DA:OP1	8:W:519:LYS:HE3	1.48	1.10
6:I:-3:DG:C2'	6:I:-2:DC:C5	2.34	1.10
7:J:6:DA:H2''	7:J:7:DC:C5	1.87	1.10
2:F:30:THR:HB	7:J:-13:DA:H3'	1.24	1.10
2:F:30:THR:HG21	7:J:-13:DA:C5'	1.81	1.10
6:I:-18:DC:C4'	8:M:434:LEU:HD21	1.81	1.10
7:J:-17:DT:C5	7:J:-16:DT:C4	2.39	1.10
8:W:295:ARG:HD2	8:W:1198:ARG:NH2	1.66	1.10
6:I:-30:DG:C8	6:I:-29:DC:C5	2.40	1.09
7:J:21:DG:H4'	8:M:517:ARG:HH21	0.93	1.09
8:W:408:THR:HG23	8:W:440:TRP:CZ3	1.87	1.09
8:W:615:ARG:HB3	8:W:822:LYS:HD3	1.11	1.09
7:J:-19:DG:OP1	8:W:772:ARG:HB2	1.49	1.09
2:F:45:ARG:CA	6:I:8:DC:OP1	2.00	1.09
6:I:30:DT:C6	6:I:31:DT:C7	2.34	1.09
1:A:63:ARG:HE	7:J:17:DA:H4'	1.10	1.09
3:C:40:ALA:CB	4:D:86:ILE:CD1	2.30	1.09
4:D:62:PHE:HA	2:F:98:TYR:CE1	1.86	1.09
7:J:-25:DC:H2'	7:J:-24:DT:H72	1.32	1.09
3:C:34:LEU:CD2	3:C:39:TYR:CE2	2.28	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:30:THR:CG2	7:J:-13:DA:H4'	1.81	1.09
6:I:43:DT:H2''	6:I:44:DC:O5'	1.44	1.09
8:W:390:LEU:HD12	8:W:393:LYS:HD2	1.20	1.08
3:C:30:VAL:HG13	4:D:67:PHE:HE1	1.15	1.08
8:W:419:ILE:HG21	8:W:451:LEU:HD11	1.35	1.08
8:W:1150:TYR:CD1	8:W:1156:LYS:HE2	1.87	1.08
1:A:120:MET:HB3	1:A:121:PRO:HD2	1.29	1.08
8:W:481:LYS:CD	8:W:483:MET:HE1	1.84	1.08
6:I:-62:DC:O2	7:J:63:DG:N2	1.86	1.08
7:J:26:DA:N7	7:J:27:DG:C6	2.20	1.08
6:I:-68:DG:N2	7:J:69:DC:N3	2.02	1.07
8:W:345:LYS:HE2	8:W:1037:ASP:HB2	1.22	1.07
1:A:73:GLU:HG2	2:B:22:LEU:O	1.54	1.07
6:I:-3:DG:H2'	6:I:-2:DC:C5	1.90	1.07
7:J:24:DC:C2'	7:J:25:DT:H71	1.84	1.07
7:J:72:DA:C8	7:J:73:DT:H72	1.89	1.07
6:I:34:DT:H2''	6:I:35:DC:C5	1.90	1.07
3:C:79:ILE:HG23	3:C:80:PRO:HD2	1.31	1.07
2:F:15:ALA:HA	8:W:729:ASP:HB3	1.15	1.07
1:A:63:ARG:NE	7:J:17:DA:C5'	2.17	1.06
6:I:-80:DG:N2	7:J:82:DG:H21	1.52	1.06
6:I:-23:DC:N4	6:I:-22:DA:H62	1.52	1.06
6:I:-3:DG:H2''	6:I:-2:DC:C6	1.89	1.06
7:J:-25:DC:C2'	7:J:-24:DT:C7	2.34	1.06
7:J:-46:DT:C2'	7:J:-45:DG:C6	2.28	1.06
1:A:85:GLN:HG2	6:I:-24:DG:P	1.95	1.06
7:J:-11:DC:N4	7:J:-10:DG:C6	2.23	1.06
7:J:34:DC:H2'	7:J:35:DT:C7	1.85	1.06
7:J:34:DC:H2'	7:J:35:DT:H71	1.07	1.05
7:J:-37:DG:H2''	7:J:-36:DG:C8	1.90	1.05
7:J:42:DA:H2''	7:J:43:DA:O5'	1.48	1.05
6:I:-86:DA:N6	7:J:87:DT:O4	1.89	1.05
6:I:-23:DC:N4	6:I:-22:DA:N6	2.04	1.05
6:I:-3:DG:C4	6:I:-2:DC:C4	2.33	1.05
3:C:77:ARG:CB	6:I:-55:DG:OP1	2.04	1.05
8:M:778:ILE:HG22	8:M:779:ASN:H	1.17	1.05
8:W:345:LYS:HB3	8:W:1036:ALA:HB1	1.11	1.05
6:I:20:DG:O3'	8:W:524:SER:HB2	1.50	1.05
8:W:1055:MET:HE3	8:W:1121:PHE:CE2	1.92	1.05
3:C:40:ALA:CB	4:D:86:ILE:HD12	1.87	1.04
6:I:-86:DA:C2	7:J:87:DT:N3	2.21	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:I:20:DG:O3'	8:W:524:SER:CB	2.04	1.04
6:I:-35:DA:C5	6:I:-34:DG:C6	2.44	1.04
8:W:481:LYS:CG	8:W:483:MET:CE	2.28	1.04
1:A:73:GLU:CG	2:B:22:LEU:O	2.05	1.04
7:J:32:DG:H2''	7:J:33:DT:H71	1.05	1.04
6:I:-23:DC:C2'	6:I:-22:DA:H5'	1.87	1.04
6:I:-19:DG:H2'	8:M:743:GLY:O	1.58	1.04
1:A:63:ARG:NE	7:J:17:DA:H4'	1.72	1.04
6:I:-76:DG:H1	7:J:76:DG:N2	1.49	1.04
6:I:-19:DG:O5'	8:M:743:GLY:CA	2.05	1.04
3:C:32:ARG:HH21	6:I:-43:DT:H72	1.24	1.03
1:A:63:ARG:HE	7:J:17:DA:C4'	1.71	1.03
3:C:34:LEU:HD22	3:C:39:TYR:HE2	0.88	1.03
3:C:112:GLN:HB2	3:C:115:LEU:HD12	1.37	1.03
2:F:30:THR:HB	7:J:-13:DA:C3'	1.88	1.03
7:J:4:DG:H2'	7:J:5:DT:H71	1.40	1.03
6:I:-19:DG:H3'	8:M:743:GLY:HA2	1.41	1.03
1:E:66:PRO:HB2	2:F:29:ILE:HG12	1.35	1.03
6:I:-80:DG:C2	7:J:82:DG:N2	2.25	1.03
6:I:-16:DT:OP2	8:M:459:ASN:HB3	1.58	1.03
1:E:60:LEU:HD13	1:E:93:GLN:CD	1.84	1.02
7:J:-25:DC:H2''	7:J:-24:DT:C7	1.89	1.02
1:A:65:LEU:HD22	7:J:17:DA:OP2	1.60	1.02
1:E:60:LEU:HD13	1:E:93:GLN:NE2	1.73	1.02
7:J:-17:DT:C5	7:J:-16:DT:O4	2.12	1.02
7:J:-17:DT:H71	7:J:-16:DT:O4	1.57	1.02
8:W:1138:ASP:HB3	8:W:1260:LEU:HD23	1.37	1.02
2:B:78:ARG:HB3	7:J:28:DA:P	1.99	1.02
8:W:643:GLY:HA2	8:W:646:PHE:CZ	1.93	1.02
8:W:599:LYS:O	8:W:601:ASP:N	1.91	1.02
7:J:-46:DT:C1'	7:J:-45:DG:C6	2.42	1.02
8:W:518:LEU:CD1	8:W:555:LEU:CD1	2.37	1.02
8:W:645:HIS:CE1	8:W:649:LEU:HD11	1.93	1.02
7:J:-33:DG:H2''	7:J:-32:DT:O5'	1.56	1.01
7:J:-32:DT:H2''	7:J:-31:DA:C8	1.95	1.01
1:A:117:VAL:CB	6:I:-3:DG:OP1	2.09	1.01
6:I:-12:DC:N4	6:I:-11:DG:O6	1.94	1.01
8:W:345:LYS:HB3	8:W:1036:ALA:HB3	1.33	1.01
8:W:607:PRO:HG3	8:W:812:ASN:N	1.73	1.01
8:W:523:SER:CB	8:W:526:TYR:HB2	1.91	1.01
7:J:32:DG:H2''	7:J:33:DT:C7	1.90	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:46:ILE:N	6:I:8:DC:OP1	1.94	1.00
4:D:84:SER:OG	6:I:-35:DA:H3'	1.60	1.00
6:I:-35:DA:N7	6:I:-34:DG:C5	2.29	1.00
7:J:20:DG:H4'	8:M:496:LEU:HD22	1.42	1.00
8:W:295:ARG:HD2	8:W:1198:ARG:HH22	1.22	1.00
1:A:100:LEU:HD23	2:B:37:LEU:HD13	1.43	1.00
7:J:24:DC:H2''	7:J:25:DT:H71	1.41	1.00
7:J:33:DT:H2''	7:J:34:DC:H5	1.26	1.00
1:E:63:ARG:HE	7:J:-13:DA:H5'	0.83	1.00
8:W:474:ASN:HB2	8:W:475:PRO:HD2	1.39	0.99
2:F:46:ILE:O	6:I:7:DC:H3'	1.62	0.99
4:H:62:PHE:O	4:H:66:VAL:HG23	1.62	0.99
4:D:85:THR:N	6:I:-34:DG:OP1	1.95	0.99
6:I:-28:DT:H2''	6:I:-27:DC:C6	1.97	0.99
3:C:40:ALA:HB2	4:D:86:ILE:HD12	1.41	0.99
6:I:-37:DG:H2''	6:I:-36:DT:C5	1.96	0.99
3:C:32:ARG:HD2	6:I:-44:DA:P	2.02	0.99
6:I:-79:DG:N2	7:J:80:DC:O2	1.96	0.99
2:B:78:ARG:HB3	7:J:28:DA:OP1	0.81	0.99
3:C:97:LEU:HD11	4:D:62:PHE:HE2	1.28	0.99
2:F:17:ARG:CB	8:W:722:ARG:HH21	1.69	0.99
7:J:33:DT:H2''	7:J:34:DC:C5	1.98	0.99
2:F:30:THR:HG21	7:J:-13:DA:H4'	1.45	0.99
2:F:17:ARG:HA	8:W:722:ARG:HH22	1.28	0.98
2:F:30:THR:CG2	7:J:-13:DA:C4'	2.40	0.98
1:A:85:GLN:CA	6:I:-24:DG:P	2.50	0.98
6:I:-6:DT:C5	6:I:-5:DA:N6	2.30	0.98
8:W:345:LYS:HE2	8:W:1037:ASP:CB	1.92	0.98
8:W:518:LEU:HD11	8:W:555:LEU:CD1	1.93	0.98
7:J:24:DC:H2''	7:J:25:DT:C5	1.97	0.98
5:G:67:GLY:HA2	5:G:78:ILE:HD11	1.43	0.98
7:J:-11:DC:C4	7:J:-10:DG:C5	2.51	0.98
6:I:-84:DA:N1	7:J:86:DA:N1	2.10	0.98
6:I:-49:DG:H1	7:J:49:DC:H42	1.05	0.98
6:I:-18:DC:H5''	8:M:434:LEU:CD2	1.92	0.98
7:J:-19:DG:OP1	8:W:772:ARG:CB	2.12	0.98
1:A:63:ARG:NH2	7:J:17:DA:C4'	2.27	0.98
2:F:30:THR:CB	7:J:-13:DA:H5''	1.95	0.97
6:I:-70:DC:O2	7:J:71:DG:N2	1.95	0.97
6:I:-19:DG:C2'	8:M:743:GLY:O	2.12	0.97
6:I:21:DC:P	8:W:524:SER:HG	1.87	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:W:611:GLU:HG2	8:W:816:VAL:HG12	1.46	0.97
2:F:45:ARG:C	6:I:8:DC:OP1	2.07	0.97
7:J:34:DC:C6	7:J:34:DC:H5'	2.00	0.97
6:I:-18:DC:H4'	8:M:434:LEU:HD21	1.47	0.97
8:W:523:SER:HB2	8:W:526:TYR:CB	1.94	0.97
6:I:15:DT:H2''	6:I:16:DA:C8	2.00	0.97
6:I:-3:DG:C2'	6:I:-2:DC:C6	2.48	0.97
7:J:24:DC:H2''	7:J:25:DT:C6	1.98	0.97
7:J:24:DC:H2''	7:J:25:DT:C7	1.95	0.97
6:I:-77:DC:OP2	8:W:1254[B]:ARG:NH1	1.97	0.96
7:J:-11:DC:C5	7:J:-10:DG:N7	2.33	0.96
8:W:650:ASN:HA	8:W:654:GLU:CB	1.95	0.96
1:E:65:LEU:H	1:E:66:PRO:HD2	1.29	0.96
8:W:345:LYS:CE	8:W:1037:ASP:HB2	1.94	0.96
2:B:98:TYR:CE1	4:H:62:PHE:HA	1.99	0.96
1:A:100:LEU:CD2	2:B:37:LEU:HD13	1.94	0.96
2:F:47:SER:HA	6:I:7:DC:O5'	1.65	0.96
6:I:-35:DA:C8	6:I:-34:DG:C5	2.52	0.96
8:W:770:SER:HB2	8:W:773:ALA:HB3	1.45	0.96
2:F:30:THR:HG21	7:J:-13:DA:C4'	1.95	0.96
6:I:-23:DC:H2''	6:I:-22:DA:H5'	0.98	0.96
1:A:59:GLU:OE2	1:A:60:LEU:O	1.84	0.96
8:W:367:GLN:CD	8:W:371:ILE:HD11	1.91	0.96
7:J:6:DA:H2''	7:J:7:DC:C6	1.99	0.96
7:J:78:DG:C6	7:J:79:DG:C6	2.53	0.96
4:H:51:ILE:HD13	4:H:56:MET:HE3	1.48	0.95
8:W:609:LYS:HA	8:W:814:VAL:HB	1.47	0.95
7:J:60:DA:H2''	7:J:61:DC:C5	2.02	0.95
8:W:502:LEU:O	8:W:507:TRP:HZ3	1.50	0.95
7:J:24:DC:C2'	7:J:25:DT:C7	2.44	0.95
8:W:770:SER:CB	8:W:773:ALA:HB3	1.96	0.95
8:W:390:LEU:HD13	8:W:393:LYS:HD2	1.49	0.95
5:G:84:GLN:NE2	5:G:102:ILE:CG1	2.30	0.95
8:W:518:LEU:O	8:W:518:LEU:CD1	2.13	0.95
5:G:41:GLU:O	6:I:39:DA:H5''	1.66	0.95
3:C:63:LEU:HD12	4:D:41:VAL:HG12	1.47	0.95
2:B:45:ARG:CD	7:J:8:DG:H5'	1.97	0.94
3:C:32:ARG:HH21	6:I:-43:DT:C7	1.79	0.94
2:F:32:PRO:O	2:F:36:ARG:HG2	1.67	0.94
8:W:650:ASN:CA	8:W:654:GLU:HB3	1.97	0.94
5:G:97:LEU:O	5:G:100:VAL:HG22	1.67	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:I:-6:DT:H2''	6:I:-5:DA:N7	1.82	0.94
5:G:91:GLU:O	5:G:95:LYS:CD	2.14	0.94
4:H:36:ILE:CD1	6:I:49:DC:OP2	2.15	0.94
6:I:30:DT:C5	6:I:31:DT:H72	2.02	0.94
7:J:20:DG:H4'	7:J:21:DG:OP1	1.64	0.94
1:A:85:GLN:HG2	6:I:-24:DG:OP1	0.77	0.94
7:J:-33:DG:C2'	7:J:-32:DT:O5'	2.15	0.94
3:C:30:VAL:HG13	4:D:67:PHE:CE1	2.02	0.94
8:W:656:LYS:HE2	8:W:826:GLU:HA	1.48	0.94
1:E:65:LEU:HD13	6:I:17:DA:H2'	1.49	0.94
2:F:15:ALA:CA	8:W:729:ASP:HB3	1.98	0.94
7:J:20:DG:N2	7:J:21:DG:C6	2.36	0.94
8:W:229:THR:HG22	8:W:230:TYR:H	1.32	0.94
5:G:15:LYS:HZ1	6:I:46:DA:H4'	1.20	0.94
7:J:-17:DT:H5'	8:W:493:GLU:HB3	0.94	0.94
7:J:19:DC:C5	7:J:20:DG:O6	2.21	0.94
8:W:607:PRO:HD2	8:W:810:GLN:O	1.68	0.94
2:B:98:TYR:HE1	4:H:62:PHE:HA	1.28	0.93
8:W:1246:VAL:HG13	8:W:1247:PRO:HA	1.51	0.93
2:F:15:ALA:HA	8:W:729:ASP:CB	1.99	0.93
7:J:26:DA:C2'	7:J:27:DG:N7	2.30	0.93
7:J:26:DA:C8	7:J:27:DG:C5	2.56	0.93
1:A:63:ARG:NH2	7:J:17:DA:C5'	2.21	0.93
2:B:45:ARG:HD3	7:J:8:DG:C5'	1.97	0.93
4:H:55:ALA:HA	4:H:58:ILE:HD12	1.50	0.93
3:C:65:LEU:CD2	3:C:90:ASP:OD2	2.16	0.93
8:W:481:LYS:CD	8:W:483:MET:CE	2.45	0.93
5:G:51:LEU:HD21	4:H:91:ILE:HG21	1.46	0.93
8:W:390:LEU:HD12	8:W:393:LYS:CD	1.97	0.93
3:C:40:ALA:HB2	4:D:86:ILE:HD11	1.48	0.93
6:I:-16:DT:OP2	8:M:459:ASN:CB	2.15	0.93
3:C:43:VAL:HG12	7:J:38:DG:H3'	1.51	0.93
1:E:65:LEU:HB3	6:I:17:DA:O5'	1.68	0.93
6:I:23:DA:C5	6:I:24:DA:N6	2.37	0.93
7:J:5:DT:H2''	7:J:6:DA:C8	2.04	0.93
8:W:414:PHE:CE2	8:W:538:MET:CE	2.52	0.93
6:I:34:DT:C2'	6:I:35:DC:C5	2.51	0.93
7:J:-25:DC:H2''	7:J:-24:DT:C6	2.03	0.92
6:I:-37:DG:H2''	6:I:-36:DT:C7	1.99	0.92
8:W:656:LYS:HE3	8:W:829:VAL:CG2	2.00	0.92
2:B:84:MET:HE1	2:B:88:TYR:OH	1.67	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:I:-79:DG:N2	7:J:80:DC:C2	2.37	0.92
8:W:813:HIS:O	8:W:814:VAL:HG23	1.68	0.92
1:A:63:ARG:HH21	7:J:17:DA:C4'	1.80	0.92
5:G:15:LYS:HZ3	6:I:46:DA:H4'	1.21	0.92
8:W:470:GLU:HG2	8:W:485:PHE:CE2	2.04	0.92
1:A:65:LEU:HB3	1:A:66:PRO:HD3	1.50	0.92
8:W:347:LEU:HD22	8:W:483:MET:O	1.68	0.92
2:B:25:ASN:OD1	2:B:26:ILE:N	2.03	0.92
6:I:34:DT:H2''	6:I:35:DC:H6	1.28	0.92
7:J:-38:DA:C5	7:J:-37:DG:O6	2.22	0.92
7:J:14:DT:H2''	7:J:15:DT:C7	1.99	0.92
8:W:607:PRO:HG3	8:W:811:LYS:CA	1.98	0.92
8:W:794:ASN:OD1	8:W:795:PRO:HD2	1.68	0.92
6:I:-73:DC:C4	6:I:-72:DA:N6	2.38	0.92
7:J:-16:DT:OP2	8:W:497:LYS:CD	2.17	0.92
8:W:474:ASN:CB	8:W:475:PRO:CD	2.48	0.92
8:W:607:PRO:HB2	8:W:813:HIS:H	0.77	0.92
8:W:1026:ASN:HA	8:W:1052:TYR:OH	1.70	0.92
5:G:51:LEU:HD23	4:H:91:ILE:HG21	1.47	0.92
8:W:611:GLU:HG2	8:W:816:VAL:CG1	1.99	0.92
6:I:19:DC:H42	7:J:-19:DG:H22	1.02	0.92
8:W:433:PRO:HD3	8:W:513:ASP:HB3	1.49	0.92
1:A:116:ARG:NH1	1:A:120:MET:HG2	1.84	0.91
7:J:26:DA:C8	7:J:27:DG:C6	2.59	0.91
8:W:607:PRO:CD	8:W:811:LYS:HA	1.98	0.91
1:E:63:ARG:CZ	7:J:-13:DA:H5'	2.00	0.91
2:F:17:ARG:CA	8:W:722:ARG:NH2	2.32	0.91
6:I:23:DA:C6	6:I:24:DA:N6	2.38	0.91
1:A:41:TYR:HB3	1:A:45:THR:HG21	1.53	0.91
1:E:65:LEU:HB2	6:I:17:DA:H3'	1.49	0.91
2:F:46:ILE:N	6:I:8:DC:P	2.41	0.91
8:W:398:ILE:HG12	8:W:539:LEU:HD21	1.52	0.91
8:W:379:PHE:HE1	8:W:597:ARG:HD2	1.31	0.91
3:C:79:ILE:HG12	4:D:52:SER:HB3	1.49	0.91
4:D:62:PHE:HA	2:F:98:TYR:HE1	1.31	0.91
1:E:42:ARG:H	1:E:43:PRO:CD	1.82	0.91
2:F:46:ILE:O	6:I:7:DC:H5'	1.70	0.91
8:W:1073:ILE:HG21	8:W:1110:LYS:HE2	1.53	0.91
7:J:-17:DT:C5'	8:W:493:GLU:CB	2.37	0.91
7:J:-46:DT:H1'	7:J:-45:DG:C4	2.06	0.91
8:W:654:GLU:OE2	8:W:664:LEU:HD23	1.71	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:J:21:DG:H2''	7:J:22:DT:O5'	1.68	0.90
2:F:17:ARG:HA	8:W:722:ARG:NH2	1.87	0.90
1:E:61:LEU:HD12	2:F:37:LEU:HD12	0.91	0.90
6:I:-23:DC:C5	6:I:-22:DA:N7	2.40	0.90
7:J:-35:DG:H2''	7:J:-34:DA:H8	1.31	0.90
7:J:-33:DG:H2''	7:J:-32:DT:C5'	2.01	0.90
8:W:646:PHE:HA	8:W:649:LEU:HD12	1.53	0.90
1:A:88:ALA:HA	2:B:83:ALA:HB2	1.53	0.90
4:H:87:THR:HG22	4:H:90:GLU:HG2	1.52	0.90
6:I:-22:DA:C5	6:I:-21:DC:C4	2.60	0.90
8:W:419:ILE:HG21	8:W:451:LEU:CD1	2.00	0.90
5:G:47:ALA:HB3	5:G:48:PRO:HD3	1.54	0.90
2:B:58:LEU:CD2	2:B:62:LEU:HD11	2.01	0.90
5:G:91:GLU:HB3	5:G:95:LYS:HE3	1.52	0.90
5:G:83:LEU:HD13	4:H:59:MET:SD	2.12	0.89
6:I:-30:DG:N7	6:I:-29:DC:C4	2.40	0.89
5:G:26:PRO:O	5:G:30:VAL:HG22	1.72	0.89
6:I:-28:DT:C2'	6:I:-27:DC:C5	2.54	0.89
7:J:-37:DG:C2'	7:J:-36:DG:N7	2.36	0.89
7:J:-17:DT:H2''	7:J:-16:DT:O5'	1.71	0.89
1:A:117:VAL:CB	6:I:-3:DG:P	2.57	0.89
7:J:-38:DA:N7	7:J:-37:DG:O6	2.05	0.89
8:W:629:ILE:HG21	8:W:650:ASN:ND2	1.87	0.89
8:W:638:THR:HB	8:W:667:ASN:ND2	1.87	0.89
1:E:65:LEU:CD1	6:I:17:DA:H2'	2.02	0.89
5:G:84:GLN:NE2	5:G:102:ILE:HG13	1.88	0.89
6:I:-12:DC:C4	6:I:-11:DG:O6	2.25	0.89
7:J:26:DA:C8	7:J:27:DG:N7	2.41	0.89
1:A:83:ARG:C	1:A:84:PHE:CD1	2.51	0.89
4:D:28:LYS:NZ	7:J:51:DG:H5''	1.88	0.89
6:I:-84:DA:C2	7:J:86:DA:N1	2.41	0.89
8:W:315:ASN:OD1	8:W:316:TYR:N	2.04	0.89
1:E:116:ARG:CZ	7:J:-2:DC:OP2	2.21	0.89
1:E:63:ARG:NE	2:F:30:THR:HG21	1.87	0.89
7:J:-35:DG:C5	7:J:-34:DA:C6	2.61	0.89
8:M:778:ILE:HG22	8:M:779:ASN:N	1.84	0.89
6:I:-68:DG:N2	7:J:69:DC:C2	2.40	0.88
7:J:-46:DT:H2''	7:J:-45:DG:O6	1.72	0.88
1:A:63:ARG:NE	7:J:17:DA:C4'	2.35	0.88
1:A:88:ALA:HA	2:B:83:ALA:CB	2.02	0.88
2:B:39:ARG:HG2	2:B:39:ARG:HH11	1.38	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:30:THR:HG22	7:J:-13:DA:H4'	1.55	0.88
7:J:-35:DG:C2'	7:J:-34:DA:C8	2.56	0.88
8:W:691:ILE:HD12	8:W:697:MET:HB3	1.52	0.88
3:C:81:ARG:O	3:C:85:LEU:HG	1.73	0.88
4:D:30:ARG:NH2	6:I:-45:DA:OP1	2.07	0.88
8:W:436:THR:O	8:W:440:TRP:CD1	2.27	0.88
7:J:-46:DT:H2''	7:J:-45:DG:C6	1.62	0.88
8:W:777:GLY:O	8:W:778:ILE:CG2	2.21	0.88
1:A:84:PHE:CD1	2:B:81:VAL:HB	2.07	0.88
6:I:24:DA:H2''	6:I:25:DG:C8	2.09	0.88
7:J:34:DC:H2''	7:J:35:DT:O5'	1.73	0.88
7:J:69:DC:H2''	7:J:70:DT:H71	1.53	0.88
1:A:48:LEU:HA	1:A:51:ILE:HD12	1.54	0.88
7:J:67:DT:H2''	7:J:68:DT:C7	2.04	0.88
1:A:85:GLN:CB	6:I:-24:DG:P	2.62	0.88
8:W:471:PHE:HE1	8:W:481:LYS:HE2	1.38	0.88
8:W:376:LEU:HD13	8:W:380:GLN:HB3	1.54	0.88
1:A:73:GLU:HG3	2:B:25:ASN:HD22	1.38	0.87
6:I:-19:DG:C5'	8:M:743:GLY:HA3	2.02	0.87
7:J:39:DA:H2''	7:J:40:DC:H5'	1.56	0.87
8:W:617:GLU:OE1	8:W:618:LEU:O	1.92	0.87
2:F:66:ILE:O	2:F:70:VAL:HG23	1.73	0.87
8:M:206:ASN:O	8:M:210:ASN:HB2	1.74	0.87
8:W:615:ARG:CB	8:W:822:LYS:HD3	2.00	0.87
1:A:120:MET:HB3	1:A:121:PRO:CD	2.04	0.87
7:J:14:DT:H2'	7:J:15:DT:H72	1.56	0.87
1:E:84:PHE:N	7:J:-23:DT:OP1	2.08	0.87
6:I:5:DC:C2'	6:I:6:DC:C5	2.58	0.87
8:W:348:PRO:HG2	8:W:483:MET:HB3	1.56	0.87
7:J:20:DG:C4'	8:M:496:LEU:HD22	2.03	0.87
1:E:116:ARG:CB	7:J:-3:DA:OP1	2.22	0.87
6:I:-66:DA:H2''	6:I:-65:DT:H71	1.55	0.87
6:I:-38:DC:N3	6:I:-37:DG:C6	2.43	0.87
6:I:-19:DG:C3'	8:M:743:GLY:CA	2.52	0.87
7:J:-18:DG:O4'	8:W:493:GLU:OE2	1.91	0.87
7:J:19:DC:C2'	7:J:20:DG:C8	2.56	0.87
2:B:45:ARG:CD	7:J:8:DG:C5'	2.52	0.87
7:J:51:DG:H2''	7:J:52:DC:OP2	1.73	0.87
8:M:778:ILE:CG2	8:M:779:ASN:H	1.87	0.87
8:W:474:ASN:CB	8:W:475:PRO:HD2	2.03	0.87
8:W:767:PHE:CE2	8:W:769:LEU:HD11	2.09	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:63:ARG:NE	7:J:17:DA:H5''	1.88	0.87
5:G:103:ALA:C	5:G:104:GLN:OE1	2.18	0.87
7:J:-17:DT:C5'	8:W:493:GLU:CG	2.52	0.87
8:W:182:VAL:HG11	8:W:245:TYR:CE2	2.10	0.86
4:D:28:LYS:NZ	7:J:51:DG:C5'	2.38	0.86
6:I:-12:DC:C4	6:I:-11:DG:C6	2.63	0.86
7:J:14:DT:C2'	7:J:15:DT:H72	2.05	0.86
8:W:1119:PHE:CE2	8:W:1129:ALA:HB2	2.10	0.86
6:I:-82:DG:C2	7:J:84:DG:N2	2.43	0.86
6:I:-77:DC:P	8:W:1254[A]:ARG:HH21	1.98	0.86
6:I:15:DT:H2''	6:I:16:DA:H8	1.37	0.86
7:J:14:DT:H2''	7:J:15:DT:C6	2.10	0.86
8:W:1164:PRO:HD2	8:W:1176:LYS:HE3	1.57	0.86
6:I:-80:DG:H22	7:J:82:DG:H21	1.23	0.86
8:W:295:ARG:CD	8:W:1198:ARG:NH2	2.38	0.86
8:W:786:VAL:CG2	8:W:816:VAL:HG22	2.06	0.86
3:C:26:PRO:HG3	4:D:37:TYR:CZ	2.11	0.86
7:J:69:DC:H2''	7:J:70:DT:C7	2.05	0.86
7:J:-16:DT:OP2	8:W:497:LYS:CG	2.23	0.86
7:J:14:DT:C2'	7:J:15:DT:C7	2.52	0.86
4:D:84:SER:OG	6:I:-35:DA:C3'	2.23	0.85
5:G:28:GLY:HA3	7:J:-43:DA:P	2.15	0.85
7:J:32:DG:C2'	7:J:33:DT:C7	2.51	0.85
2:F:30:THR:CG2	7:J:-13:DA:C5'	2.54	0.85
7:J:20:DG:H5''	8:M:496:LEU:CD2	2.06	0.85
2:B:26:ILE:CD1	2:B:59:LYS:HD3	2.06	0.85
6:I:-4:DC:N3	7:J:4:DG:N2	2.24	0.85
7:J:-28:DC:C5	7:J:-27:DC:N4	2.44	0.85
1:A:63:ARG:CZ	7:J:17:DA:C4'	2.55	0.85
6:I:-58:DG:C2	7:J:58:DG:N1	2.45	0.85
7:J:23:DG:C8	7:J:24:DC:H5	1.95	0.85
6:I:21:DC:C4	6:I:22:DC:N4	2.44	0.85
5:G:15:LYS:HZ2	6:I:46:DA:H4'	1.02	0.85
7:J:58:DG:H2''	7:J:59:DC:C5	2.12	0.84
8:W:720:MET:SD	8:W:721:VAL:N	2.49	0.84
1:A:89:VAL:HG12	1:A:90:MET:CE	2.07	0.84
7:J:34:DC:C2'	7:J:35:DT:C6	2.60	0.84
2:F:44:LYS:O	6:I:8:DC:H5''	1.77	0.84
6:I:34:DT:C2'	6:I:35:DC:C6	2.57	0.84
7:J:-25:DC:H2''	7:J:-24:DT:C5	2.12	0.84
7:J:4:DG:C2'	7:J:5:DT:C6	2.60	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:W:307:TYR:HD2	8:W:327:ILE:HD13	1.41	0.84
8:W:551:GLU:O	8:W:555:LEU:HD13	1.77	0.84
8:W:681:MET:SD	8:W:682:THR:N	2.50	0.84
8:W:182:VAL:HG11	8:W:245:TYR:CD2	2.13	0.84
8:W:436:THR:O	8:W:440:TRP:HD1	1.59	0.84
8:W:1059:ALA:HB2	8:W:1132:LEU:HD21	1.58	0.84
1:A:85:GLN:CA	6:I:-24:DG:OP2	2.25	0.84
6:I:-18:DC:H5''	8:M:434:LEU:HD11	1.57	0.84
6:I:-13:DA:N6	7:J:12:DG:O6	2.10	0.84
8:W:793:TRP:O	8:W:794:ASN:HB2	1.75	0.84
3:C:39:TYR:CZ	4:D:71:ALA:HB1	2.12	0.84
2:F:32:PRO:HG2	7:J:-13:DA:H2'	1.59	0.84
6:I:-19:DG:H2''	6:I:-18:DC:C5	2.13	0.84
7:J:-16:DT:OP2	8:W:497:LYS:HD3	1.78	0.84
7:J:-11:DC:C6	7:J:-10:DG:N7	2.45	0.84
7:J:37:DC:C2	7:J:38:DG:N7	2.46	0.84
7:J:51:DG:C5	7:J:52:DC:C4	2.65	0.84
1:A:85:GLN:CA	6:I:-24:DG:O5'	2.23	0.84
6:I:-30:DG:C5	6:I:-29:DC:C4	2.66	0.84
7:J:19:DC:H2''	7:J:20:DG:N7	1.92	0.84
8:W:457:MET:HG3	8:W:457:MET:O	1.77	0.84
8:W:1132:LEU:HD12	8:W:1133:LEU:N	1.93	0.84
8:W:524:SER:O	8:W:528:SER:HB2	1.77	0.84
2:B:58:LEU:HD23	2:B:62:LEU:CD1	2.07	0.84
4:D:28:LYS:HZ2	7:J:51:DG:H5''	1.42	0.84
7:J:19:DC:C2'	7:J:20:DG:N7	2.41	0.84
1:E:63:ARG:NE	7:J:-13:DA:C5'	2.27	0.83
8:W:207:CYS:HA	8:W:211:TYR:CD2	2.13	0.83
1:E:117:VAL:CG2	7:J:-4:DG:H5''	2.08	0.83
8:W:609:LYS:HD2	8:W:814:VAL:HG11	1.60	0.83
6:I:-66:DA:H2''	6:I:-65:DT:C7	2.08	0.83
6:I:-19:DG:H3'	8:M:743:GLY:HA3	1.59	0.83
6:I:20:DG:O3'	8:W:524:SER:OG	1.92	0.83
7:J:30:DC:H2''	7:J:31:DT:O5'	1.78	0.83
8:W:723:MET:HE3	8:W:789:PHE:CE2	2.14	0.83
2:B:58:LEU:HD23	2:B:62:LEU:HD11	1.57	0.83
6:I:-19:DG:C3'	8:M:743:GLY:HA3	2.09	0.83
8:W:502:LEU:O	8:W:507:TRP:CZ3	2.32	0.83
1:A:43:PRO:HB2	6:I:-5:DA:H5''	1.59	0.83
8:W:481:LYS:HD2	8:W:483:MET:HE1	1.58	0.83
4:H:113:LYS:O	4:H:117:LYS:HG3	1.77	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:W:806:HIS:ND1	8:W:814:VAL:HG21	1.93	0.83
3:C:31:HIS:HB2	3:C:48:PRO:HB3	1.61	0.83
7:J:13:DT:P	8:M:241:ARG:HG2	2.18	0.83
7:J:21:DG:C4'	8:M:517:ARG:NH2	2.25	0.83
2:F:30:THR:HG21	7:J:-13:DA:H5''	1.59	0.82
7:J:24:DC:H2'	7:J:25:DT:H71	1.61	0.82
8:W:387:MET:HE3	8:W:538:MET:HE2	1.61	0.82
3:C:45:ALA:N	7:J:38:DG:OP1	2.12	0.82
1:A:88:ALA:CA	2:B:83:ALA:HB2	2.09	0.82
4:D:28:LYS:NZ	7:J:51:DG:O5'	2.12	0.82
6:I:-20:DC:H2''	6:I:-19:DG:C8	2.14	0.82
8:W:591:GLN:HG3	8:W:592:PRO:HD3	1.60	0.82
5:G:42:ARG:HB3	6:I:38:DT:H4'	1.61	0.82
6:I:27:DG:H2''	6:I:28:DG:C8	2.15	0.82
1:A:116:ARG:HH11	1:A:120:MET:HG2	1.42	0.82
6:I:-52:DG:H2''	6:I:-51:DC:O5'	1.79	0.82
7:J:67:DT:H2''	7:J:68:DT:C5	2.14	0.82
2:F:88:TYR:OH	4:H:80:TYR:CE1	2.32	0.82
6:I:-57:DC:H2''	6:I:-56:DC:C5	2.14	0.82
8:W:1143:LYS:HD3	8:W:1187:PHE:CE1	2.14	0.82
7:J:-32:DT:H2''	7:J:-31:DA:H8	1.43	0.82
8:W:1150:TYR:CE2	8:W:1157:PHE:HA	2.15	0.82
2:F:48:GLY:HA2	2:F:51:TYR:HE2	1.44	0.82
3:C:26:PRO:HG3	4:D:37:TYR:CE2	2.15	0.82
1:E:134:ARG:NH1	1:E:135:ALA:HB3	1.95	0.82
6:I:-23:DC:C4	6:I:-22:DA:N7	2.48	0.81
6:I:4:DC:H2''	6:I:5:DC:O5'	1.78	0.81
7:J:17:DA:H2''	7:J:18:DG:C8	2.15	0.81
7:J:24:DC:H2'	7:J:25:DT:C7	2.09	0.81
8:W:345:LYS:CB	8:W:1036:ALA:HB1	1.99	0.81
8:W:345:LYS:HB2	8:W:1036:ALA:CB	2.09	0.81
2:F:30:THR:CG2	7:J:-13:DA:H5''	2.09	0.81
7:J:20:DG:C4'	8:M:496:LEU:CD2	2.58	0.81
8:W:348:PRO:HB3	8:W:425:ASN:O	1.80	0.81
8:W:602:VAL:HG13	8:W:808:ILE:HG23	1.61	0.81
8:W:807:ARG:HH22	9:W:1502:ADP:PB	2.03	0.81
1:A:73:GLU:HG3	2:B:22:LEU:O	1.80	0.81
1:A:83:ARG:C	1:A:84:PHE:HD1	1.87	0.81
1:A:83:ARG:HH22	7:J:26:DA:H4'	1.45	0.81
1:A:95:ALA:HB2	2:B:97:LEU:HD11	1.62	0.81
2:F:17:ARG:CA	8:W:722:ARG:HH22	1.93	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:I:-86:DA:C6	7:J:87:DT:O4	2.33	0.81
6:I:-19:DG:H2''	6:I:-18:DC:H5	1.43	0.81
7:J:-38:DA:C6	7:J:-37:DG:C6	2.68	0.81
8:W:612:ARG:N	8:W:816:VAL:O	2.13	0.81
2:B:20:LYS:HE2	8:M:666:ASP:OD2	1.78	0.81
2:F:75:HIS:ND1	4:H:93:THR:HG21	1.95	0.81
1:A:85:GLN:CG	6:I:-24:DG:P	2.62	0.81
8:W:1025:GLY:HA3	8:W:1139:LEU:HD21	1.60	0.81
6:I:5:DC:H2''	6:I:6:DC:H5	1.46	0.81
6:I:30:DT:C2	6:I:31:DT:C6	2.68	0.81
2:F:80:THR:OG1	6:I:28:DG:H5''	1.81	0.81
4:H:36:ILE:CD1	6:I:49:DC:P	2.69	0.81
6:I:-18:DC:C4'	8:M:434:LEU:CD2	2.58	0.81
6:I:19:DC:N4	7:J:-19:DG:H22	1.77	0.81
1:E:61:LEU:CD1	2:F:37:LEU:CD1	2.40	0.81
6:I:-12:DC:H2'	6:I:-11:DG:C8	2.16	0.81
8:W:807:ARG:NH2	9:W:1502:ADP:O3B	2.13	0.81
1:A:132:GLY:O	3:C:99:ARG:NH1	2.14	0.81
7:J:4:DG:H2'	7:J:5:DT:C7	2.10	0.80
1:E:103:LEU:O	1:E:107:THR:HG23	1.80	0.80
5:G:51:LEU:HD21	4:H:91:ILE:HG12	1.63	0.80
6:I:-3:DG:C4	6:I:-2:DC:C2	2.68	0.80
5:G:25:PHE:CD2	5:G:52:ALA:O	2.34	0.80
7:J:23:DG:C8	7:J:24:DC:C5	2.70	0.80
7:J:34:DC:H5'	7:J:34:DC:H6	1.45	0.80
8:W:655:LEU:CD2	8:W:825:VAL:HB	2.11	0.80
1:A:76:GLN:OE1	2:B:21:VAL:HA	1.81	0.80
8:W:476:ARG:NH1	8:W:480:LYS:O	2.13	0.80
6:I:-18:DC:H4'	8:M:434:LEU:CD2	2.12	0.80
7:J:-16:DT:OP2	8:W:497:LYS:HG2	1.80	0.80
8:W:348:PRO:CG	8:W:483:MET:HB3	2.10	0.80
8:W:387:MET:CE	8:W:538:MET:HE2	2.12	0.80
1:A:70:LEU:HD13	2:B:25:ASN:CG	2.07	0.80
3:C:100:VAL:HG21	2:F:98:TYR:HE2	1.46	0.80
8:W:1246:VAL:CG1	8:W:1247:PRO:HA	2.11	0.80
6:I:-38:DC:C5	6:I:-37:DG:O6	2.34	0.80
6:I:-38:DC:N4	6:I:-37:DG:O6	2.15	0.80
8:W:345:LYS:HB2	8:W:1036:ALA:HB3	1.64	0.80
1:E:42:ARG:H	1:E:43:PRO:HD2	1.45	0.80
8:W:315:ASN:HD21	8:W:458:GLY:HA2	1.47	0.80
8:W:794:ASN:OD1	8:W:795:PRO:CD	2.29	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:W:1119:PHE:HE2	8:W:1129:ALA:HB2	1.46	0.80
3:C:25:PHE:CG	3:C:26:PRO:HD2	2.16	0.80
6:I:-35:DA:C5	6:I:-34:DG:C5	2.69	0.80
6:I:-3:DG:H2'	6:I:-2:DC:H5	1.41	0.80
7:J:4:DG:H2''	7:J:5:DT:C6	2.17	0.80
8:W:713:ARG:HA	8:W:765:PHE:HB2	1.64	0.80
2:B:90:LEU:CD1	2:B:97:LEU:HD11	2.12	0.79
7:J:26:DA:N9	7:J:27:DG:C5	2.51	0.79
8:W:429:ILE:HG23	8:W:510:MET:SD	2.22	0.79
8:W:663:TYR:OH	8:W:672:VAL:HG11	1.81	0.79
8:W:429:ILE:HB	8:W:507:TRP:CD1	2.18	0.79
8:W:1039:THR:HG22	8:W:1040:LEU:HD12	1.62	0.79
1:A:43:PRO:HG2	6:I:-5:DA:H5'	1.62	0.79
8:W:254:GLN:HA	8:W:258:LEU:HB2	1.64	0.79
8:W:433:PRO:CD	8:W:513:ASP:HB3	2.13	0.79
8:W:607:PRO:HB2	8:W:813:HIS:CA	2.11	0.79
3:C:79:ILE:HG23	3:C:80:PRO:CD	2.11	0.79
7:J:-8:DG:H2''	7:J:-7:DG:C8	2.18	0.79
3:C:110:ASN:O	3:C:111:ILE:HD13	1.82	0.79
5:G:51:LEU:HD21	4:H:91:ILE:CG2	2.13	0.79
5:G:50:TYR:O	5:G:54:VAL:HG23	1.83	0.79
4:H:51:ILE:HD13	4:H:56:MET:CE	2.13	0.79
6:I:-76:DG:C2	7:J:76:DG:N2	2.50	0.79
2:B:45:ARG:HB3	7:J:8:DG:OP1	1.83	0.79
1:E:122:LYS:O	1:E:125:GLN:N	2.14	0.79
6:I:-35:DA:N7	6:I:-34:DG:O6	2.15	0.79
8:W:390:LEU:CD1	8:W:393:LYS:CD	2.53	0.79
8:W:615:ARG:HB3	8:W:822:LYS:CD	2.05	0.79
3:C:32:ARG:CD	6:I:-44:DA:P	2.71	0.79
6:I:-38:DC:H2''	6:I:-37:DG:OP2	1.81	0.79
8:W:177:HIS:CE1	8:W:217:TRP:CE2	2.71	0.79
7:J:19:DC:C5	7:J:20:DG:C6	2.71	0.79
8:W:606:LEU:C	8:W:606:LEU:HD12	2.08	0.79
8:W:518:LEU:HD13	8:W:555:LEU:HD12	1.66	0.78
3:C:32:ARG:CD	6:I:-44:DA:OP2	2.31	0.78
8:W:398:ILE:HG23	8:W:539:LEU:CD1	2.10	0.78
8:W:645:HIS:CE1	8:W:649:LEU:CD1	2.66	0.78
3:C:44:GLY:HA3	4:D:87:THR:HA	1.64	0.78
6:I:-78:DC:N4	7:J:78:DG:H1	1.80	0.78
7:J:20:DG:H3'	8:M:496:LEU:CD2	2.13	0.78
8:W:624:GLU:OE1	8:W:625:TYR:CD1	2.36	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:32:ARG:HD3	6:I:-44:DA:OP2	1.84	0.78
1:E:84:PHE:O	7:J:-23:DT:OP1	2.00	0.78
2:F:47:SER:O	2:F:50:ILE:HG22	1.84	0.78
5:G:15:LYS:HZ1	6:I:46:DA:C4'	1.81	0.78
7:J:5:DT:H2''	7:J:6:DA:N7	1.98	0.78
8:M:268:GLU:O	8:M:272:MET:HB2	1.84	0.78
8:W:419:ILE:CG2	8:W:451:LEU:HD11	2.11	0.78
8:W:813:HIS:O	8:W:814:VAL:CG2	2.31	0.78
1:E:74:ILE:HG21	2:F:59:LYS:HE3	1.65	0.78
7:J:26:DA:H2''	7:J:27:DG:H8	0.95	0.78
8:W:324:ALA:O	8:W:327:ILE:HG22	1.83	0.78
3:C:44:GLY:N	4:D:86:ILE:O	2.18	0.77
3:C:79:ILE:CG2	3:C:80:PRO:HD2	2.13	0.77
2:F:82:THR:HG22	2:F:84:MET:H	1.47	0.77
1:A:117:VAL:CA	6:I:-3:DG:OP1	2.32	0.77
6:I:-86:DA:N1	7:J:87:DT:O4	2.17	0.77
8:W:391:TRP:CE3	8:W:391:TRP:O	2.38	0.77
8:W:656:LYS:CE	8:W:826:GLU:HA	2.13	0.77
3:C:32:ARG:NH2	6:I:-43:DT:H72	2.00	0.77
1:E:66:PRO:HB2	2:F:29:ILE:CG1	2.15	0.77
1:E:48:LEU:HA	1:E:51:ILE:HD12	1.65	0.77
2:F:75:HIS:HE2	4:H:90:GLU:CD	1.92	0.77
4:H:97:LEU:HD12	4:H:98:LEU:N	1.99	0.77
5:G:31:HIS:CD2	5:G:43:VAL:HG11	2.19	0.77
7:J:20:DG:C5'	8:M:496:LEU:HD23	2.12	0.77
5:G:80:PRO:HG3	4:H:55:ALA:HB2	1.65	0.77
6:I:-80:DG:N2	7:J:82:DG:N2	2.31	0.77
2:B:90:LEU:HD12	2:B:97:LEU:HD11	1.67	0.77
4:D:121:ALA:O	4:D:122:LYS:HB2	1.83	0.77
7:J:67:DT:H2''	7:J:68:DT:H71	1.66	0.77
4:D:28:LYS:HZ2	7:J:51:DG:C5'	1.96	0.77
2:F:32:PRO:HD2	7:J:-13:DA:H3'	1.66	0.77
7:J:-17:DT:C4	7:J:-16:DT:C4	2.73	0.77
7:J:24:DC:OP1	8:M:793:TRP:NE1	2.18	0.77
4:D:84:SER:C	6:I:-34:DG:OP1	2.28	0.77
6:I:7:DC:H42	7:J:-7:DG:H1	1.33	0.77
8:W:379:PHE:HE1	8:W:597:ARG:CD	1.97	0.77
6:I:-49:DG:H1	7:J:49:DC:N4	1.79	0.76
6:I:30:DT:N1	6:I:31:DT:H72	2.00	0.76
8:W:408:THR:HG23	8:W:440:TRP:CE3	2.19	0.76
6:I:32:DA:H1'	6:I:33:DC:H5'	1.65	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:63:LEU:HD12	4:D:41:VAL:CG1	2.15	0.76
6:I:-79:DG:C2	7:J:79:DG:N2	2.53	0.76
1:A:65:LEU:CD2	7:J:17:DA:OP2	2.32	0.76
1:A:85:GLN:HB3	6:I:-24:DG:OP2	1.86	0.76
2:F:34:ILE:HD11	2:F:55:ARG:HH11	1.48	0.76
6:I:-12:DC:H42	7:J:11:DC:N4	1.82	0.76
8:W:350:TYR:HE1	8:W:1042:VAL:CG1	1.98	0.76
8:W:474:ASN:HB3	8:W:475:PRO:CD	2.14	0.76
6:I:-68:DG:N2	7:J:69:DC:O2	2.17	0.76
8:W:434:LEU:HD12	8:W:435:SER:N	1.99	0.76
3:C:39:TYR:O	4:D:75:SER:OG	2.01	0.76
8:W:433:PRO:HG2	8:W:514:GLU:OE1	1.85	0.76
3:C:65:LEU:HD23	3:C:90:ASP:OD2	1.85	0.76
1:E:75:ALA:HB1	1:E:82:LEU:CD2	2.15	0.76
7:J:-33:DG:C5	7:J:-32:DT:C4	2.72	0.76
8:W:200:THR:O	8:W:258:LEU:HD13	1.86	0.76
8:W:654:GLU:O	8:W:658:ALA:N	2.19	0.76
8:W:715:LEU:HD21	8:W:780:LEU:HD22	1.67	0.76
8:W:723:MET:HE3	8:W:789:PHE:HE2	1.49	0.76
8:W:508:GLN:HB2	8:W:535:ALA:HB3	1.68	0.76
8:W:607:PRO:C	8:W:813:HIS:HA	2.09	0.76
8:W:654:GLU:O	8:W:657:LYS:N	2.18	0.76
2:B:45:ARG:NE	7:J:8:DG:C5'	2.49	0.76
5:G:84:GLN:NE2	5:G:102:ILE:HG12	2.00	0.76
7:J:78:DG:C6	7:J:79:DG:O6	2.39	0.76
2:B:26:ILE:HD13	2:B:59:LYS:CD	2.14	0.75
8:W:608:SER:N	8:W:813:HIS:HA	2.00	0.75
1:E:89:VAL:HA	1:E:92:LEU:HD12	1.68	0.75
1:A:63:ARG:HE	7:J:17:DA:C5'	1.90	0.75
2:F:45:ARG:HA	6:I:8:DC:P	2.26	0.75
1:A:84:PHE:CE1	2:B:81:VAL:CB	2.66	0.75
1:A:119:ILE:HD11	2:B:46:ILE:HG12	1.68	0.75
6:I:-68:DG:H2''	6:I:-67:DA:C8	2.21	0.75
6:I:-3:DG:C6	6:I:-2:DC:N3	2.53	0.75
7:J:-46:DT:H1'	7:J:-45:DG:C6	2.15	0.75
1:A:89:VAL:HG12	1:A:90:MET:HE2	1.67	0.75
3:C:46:GLY:C	4:D:88:SER:HB3	2.11	0.75
4:D:79:HIS:NE2	5:G:38:ASN:ND2	2.35	0.75
7:J:26:DA:C1'	7:J:27:DG:C8	2.70	0.75
8:W:518:LEU:HD11	8:W:555:LEU:HD12	1.53	0.75
3:C:32:ARG:NH2	6:I:-43:DT:C7	2.49	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:63:LEU:HD13	4:D:42:LEU:N	2.02	0.75
5:G:25:PHE:CE1	5:G:56:GLU:HA	2.22	0.75
6:I:-28:DT:C6	6:I:-27:DC:N4	2.55	0.75
8:W:1119:PHE:HE2	8:W:1129:ALA:CB	1.99	0.75
7:J:79:DG:H2''	7:J:80:DC:OP2	1.87	0.75
8:W:376:LEU:HD13	8:W:380:GLN:CB	2.17	0.75
8:W:432:VAL:HG11	8:W:440:TRP:CD1	2.21	0.75
8:W:586:LEU:HG	8:W:590:ILE:HD12	1.69	0.75
3:C:39:TYR:CE2	4:D:71:ALA:HB1	2.21	0.74
6:I:-18:DC:H5''	8:M:434:LEU:CD1	2.16	0.74
8:W:474:ASN:HB2	8:W:475:PRO:CD	2.12	0.74
6:I:30:DT:C2	6:I:31:DT:C5	2.74	0.74
8:W:540:ILE:HD12	8:W:540:ILE:O	1.86	0.74
8:W:617:GLU:CD	8:W:618:LEU:N	2.45	0.74
8:W:638:THR:HB	8:W:667:ASN:HD22	1.51	0.74
8:W:666:ASP:OD1	8:W:667:ASN:N	2.18	0.74
1:A:85:GLN:CB	6:I:-24:DG:OP2	2.35	0.74
3:C:110:ASN:C	3:C:111:ILE:HD13	2.12	0.74
7:J:60:DA:H2''	7:J:61:DC:C6	2.21	0.74
8:W:345:LYS:HE2	8:W:1037:ASP:CA	2.16	0.74
3:C:63:LEU:CD1	4:D:41:VAL:HG12	2.17	0.74
6:I:45:DC:C4	7:J:-46:DT:C4	2.74	0.74
7:J:24:DC:C2'	7:J:25:DT:C5	2.68	0.74
7:J:69:DC:H2''	7:J:70:DT:C5	2.23	0.74
8:W:177:HIS:NE2	8:W:217:TRP:CG	2.55	0.74
8:W:180:ASP:HB2	8:W:218:THR:HA	1.68	0.74
8:W:620:ASP:OD1	8:W:621:VAL:N	2.16	0.74
5:G:83:LEU:CD1	4:H:59:MET:SD	2.76	0.74
6:I:23:DA:H2''	6:I:24:DA:OP2	1.87	0.74
7:J:20:DG:C3'	8:M:496:LEU:CD2	2.64	0.74
8:W:466:ILE:O	8:W:470:GLU:HB2	1.87	0.74
2:B:97:LEU:HD23	5:G:101:THR:CG2	2.18	0.74
1:E:65:LEU:H	1:E:66:PRO:CD	2.01	0.74
6:I:23:DA:H2''	6:I:24:DA:C8	2.23	0.74
6:I:-29:DC:H2''	6:I:-28:DT:O5'	1.88	0.74
7:J:4:DG:H2'	7:J:5:DT:C6	2.21	0.74
8:W:690:LEU:O	8:W:697:MET:SD	2.46	0.74
1:A:73:GLU:OE1	1:A:74:ILE:HD12	1.88	0.74
6:I:-30:DG:N7	6:I:-29:DC:C5	2.56	0.74
6:I:7:DC:H2''	6:I:8:DC:C6	2.22	0.74
8:W:602:VAL:CG1	8:W:808:ILE:HG23	2.18	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:47:ALA:CB	4:D:91:ILE:HD11	2.19	0.73
2:F:29:ILE:HG22	2:F:30:THR:N	2.01	0.73
2:B:82:THR:HG22	2:B:84:MET:H	1.52	0.73
2:F:15:ALA:CB	8:W:690:LEU:CD1	2.66	0.73
5:G:88:ARG:O	5:G:94:ASN:ND2	2.21	0.73
6:I:-32:DC:H2''	6:I:-31:DA:C8	2.23	0.73
6:I:-31:DA:H2''	6:I:-30:DG:OP2	1.88	0.73
7:J:-38:DA:H2''	7:J:-37:DG:O5'	1.88	0.73
7:J:14:DT:H2''	7:J:15:DT:C5	2.23	0.73
8:W:624:GLU:OE1	8:W:625:TYR:CE1	2.41	0.73
1:A:117:VAL:HG11	6:I:-4:DC:H5''	1.68	0.73
3:C:28:GLY:O	6:I:-44:DA:H5''	1.87	0.73
3:C:30:VAL:CG1	4:D:67:PHE:HE1	1.96	0.73
2:F:46:ILE:O	6:I:7:DC:C3'	2.35	0.73
8:W:385:ASN:O	8:W:389:PHE:HB2	1.87	0.73
8:W:591:GLN:CG	8:W:592:PRO:HD3	2.17	0.73
3:C:25:PHE:CD1	3:C:26:PRO:HD2	2.24	0.73
3:C:43:VAL:HG12	7:J:38:DG:C3'	2.18	0.73
6:I:5:DC:H1'	6:I:6:DC:C6	2.23	0.73
7:J:-21:DG:C2'	7:J:-20:DC:O5'	2.29	0.73
7:J:4:DG:H2''	7:J:5:DT:H6	1.52	0.73
7:J:38:DG:C2	7:J:39:DA:C4	2.77	0.73
6:I:23:DA:H2''	6:I:24:DA:H8	1.52	0.73
8:W:178:GLY:O	8:W:218:THR:OG1	2.05	0.73
8:W:613:ILE:O	8:W:614:LEU:HD12	1.87	0.73
3:C:34:LEU:HD23	3:C:39:TYR:CE2	2.19	0.73
2:F:80:THR:OG1	6:I:28:DG:C5'	2.35	0.73
1:E:65:LEU:CB	6:I:17:DA:H3'	2.18	0.73
1:E:84:PHE:O	7:J:-23:DT:P	2.47	0.73
6:I:-82:DG:N2	7:J:84:DG:C2	2.56	0.73
8:W:298:LEU:HD11	8:W:304:GLN:HG2	1.70	0.73
8:W:481:LYS:HD3	8:W:483:MET:HE1	1.68	0.73
2:B:79:LYS:O	2:B:81:VAL:N	2.22	0.73
8:W:607:PRO:HD3	8:W:811:LYS:HA	1.68	0.73
8:W:807:ARG:NH2	9:W:1502:ADP:PB	2.62	0.73
1:A:73:GLU:HG3	2:B:25:ASN:ND2	2.03	0.73
7:J:61:DC:H2''	7:J:62:DC:H5''	1.71	0.73
4:D:91:ILE:O	4:D:95:VAL:HG23	1.88	0.73
2:F:48:GLY:HA2	2:F:51:TYR:CE2	2.23	0.73
8:W:348:PRO:HG2	8:W:483:MET:CB	2.18	0.73
8:W:656:LYS:HE3	8:W:829:VAL:HG23	1.69	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:W:1039:THR:HG22	8:W:1040:LEU:CD1	2.19	0.73
6:I:-23:DC:H42	6:I:-22:DA:N6	1.87	0.72
6:I:-4:DC:N4	7:J:4:DG:H1	1.86	0.72
7:J:50:DG:H2''	7:J:51:DG:OP2	1.88	0.72
8:W:354:TYR:CE2	8:W:359:PRO:HG3	2.23	0.72
8:W:1146:ILE:HG13	8:W:1150:TYR:HB2	1.71	0.72
1:A:58:THR:HB	5:G:104:GLN:HB3	1.71	0.72
4:D:46:HIS:HB3	4:D:49:THR:OG1	1.89	0.72
1:A:95:ALA:CB	2:B:90:LEU:HD11	2.18	0.72
1:A:124:ILE:HD12	2:B:50:ILE:HG21	1.72	0.72
8:W:795:PRO:HG3	8:W:836:LYS:HB2	1.72	0.72
8:W:1119:PHE:HE2	8:W:1129:ALA:CA	2.02	0.72
1:A:100:LEU:HD23	2:B:37:LEU:CD1	2.19	0.72
4:D:83:ARG:HE	6:I:-34:DG:H2''	1.54	0.72
8:M:417:TRP:O	8:M:421:ALA:HB3	1.88	0.72
2:B:66:ILE:O	2:B:70:VAL:HG23	1.90	0.72
7:J:-30:DA:C8	7:J:-29:DT:C7	2.72	0.72
1:A:41:TYR:HB3	1:A:45:THR:CG2	2.19	0.72
1:A:42:ARG:O	1:A:45:THR:HG22	1.89	0.72
2:B:63:GLU:O	2:B:66:ILE:HG13	1.90	0.72
4:H:51:ILE:CD1	4:H:56:MET:HE3	2.19	0.72
8:W:608:SER:O	8:W:814:VAL:N	2.23	0.72
5:G:96:LEU:HD12	4:H:100:PRO:HD3	1.70	0.72
5:G:97:LEU:HB3	5:G:100:VAL:CG2	2.20	0.72
2:F:47:SER:HA	6:I:7:DC:P	2.29	0.72
7:J:26:DA:C5	7:J:27:DG:O6	2.36	0.72
7:J:42:DA:C2'	7:J:43:DA:O5'	2.33	0.72
6:I:5:DC:H1'	6:I:6:DC:C5	2.25	0.72
7:J:26:DA:C8	7:J:27:DG:O6	2.43	0.72
3:C:79:ILE:HG12	4:D:52:SER:CB	2.20	0.71
5:G:24:GLN:O	4:H:37:TYR:CD2	2.43	0.71
7:J:-21:DG:C5	7:J:-20:DC:C4	2.77	0.71
6:I:-79:DG:N2	7:J:79:DG:N2	2.38	0.71
7:J:26:DA:C4	7:J:27:DG:C5	2.77	0.71
8:W:470:GLU:HG2	8:W:485:PHE:HE2	1.50	0.71
8:W:518:LEU:CD1	8:W:555:LEU:HD11	2.20	0.71
3:C:65:LEU:HD22	3:C:90:ASP:OD2	1.90	0.71
1:E:117:VAL:HG22	7:J:-4:DG:H5''	1.72	0.71
6:I:-25:DA:H1'	6:I:-24:DG:C8	2.25	0.71
7:J:15:DT:O2	7:J:16:DA:C5	2.43	0.71
8:W:781:MET:HE1	9:W:1502:ADP:H4'	1.73	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:31:HIS:O	3:C:35:ARG:HG3	1.89	0.71
2:F:84:MET:CE	2:F:101:GLY:O	2.39	0.71
5:G:84:GLN:HE21	5:G:102:ILE:CG1	2.01	0.71
5:G:91:GLU:O	5:G:95:LYS:HD2	1.91	0.71
8:W:616:VAL:CG1	8:W:695:GLY:HA3	2.21	0.71
3:C:80:PRO:HD3	4:D:55:ALA:HB2	1.71	0.71
5:G:43:VAL:N	6:I:39:DA:P	2.47	0.71
6:I:-82:DG:N2	7:J:84:DG:N2	2.37	0.71
1:A:116:ARG:HD3	6:I:-3:DG:H3'	1.71	0.71
1:A:117:VAL:N	6:I:-3:DG:OP1	2.24	0.71
4:D:89:ARG:O	4:D:92:GLN:HB3	1.91	0.71
1:E:62:ILE:HD13	2:F:33:ALA:O	1.89	0.71
2:F:35:ARG:HH21	2:F:39:ARG:HH22	1.37	0.71
6:I:-17:DT:P	8:M:493:GLU:OE2	2.49	0.71
7:J:-26:DC:H2''	7:J:-25:DC:C6	2.26	0.71
7:J:78:DG:C5	7:J:79:DG:C6	2.79	0.71
8:W:607:PRO:CG	8:W:811:LYS:C	2.55	0.71
2:B:36:ARG:NH2	6:I:-13:DA:OP2	2.24	0.71
5:G:25:PHE:CZ	5:G:56:GLU:HA	2.25	0.71
6:I:45:DC:H4'	6:I:46:DA:O4'	1.90	0.71
7:J:-11:DC:H2''	7:J:-10:DG:O4'	1.90	0.71
2:F:17:ARG:CB	8:W:722:ARG:HH22	2.02	0.71
2:F:88:TYR:HH	4:H:80:TYR:HE1	1.31	0.71
5:G:26:PRO:HD3	4:H:37:TYR:CD2	2.25	0.71
5:G:34:LEU:HD23	4:H:67:PHE:HZ	1.54	0.71
7:J:20:DG:C5'	8:M:496:LEU:CD2	2.69	0.71
1:E:61:LEU:HD12	2:F:37:LEU:HD13	1.67	0.71
1:A:95:ALA:CB	2:B:90:LEU:CD1	2.69	0.70
3:C:42:ARG:HB3	7:J:38:DG:H4'	1.72	0.70
8:W:429:ILE:CG2	8:W:510:MET:SD	2.78	0.70
7:J:-38:DA:C8	7:J:-37:DG:N7	2.59	0.70
7:J:19:DC:C6	7:J:20:DG:C6	2.79	0.70
8:W:229:THR:HG22	8:W:230:TYR:N	2.06	0.70
8:W:470:GLU:HG2	8:W:485:PHE:CZ	2.26	0.70
8:W:545:LEU:HD13	8:W:552:LEU:HD13	1.73	0.70
6:I:45:DC:H5''	6:I:46:DA:P	2.31	0.70
7:J:-11:DC:C5	7:J:-10:DG:C5	2.78	0.70
7:J:15:DT:H2''	7:J:16:DA:C8	2.26	0.70
7:J:26:DA:C4	7:J:27:DG:C6	2.79	0.70
8:W:740:ARG:HB2	8:W:768:LEU:HD11	1.74	0.70
5:G:47:ALA:N	5:G:48:PRO:CD	2.55	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:I:-6:DT:C2'	6:I:-5:DA:N7	2.54	0.70
6:I:0:DC:H2'	6:I:1:DT:H72	1.72	0.70
8:W:616:VAL:HG22	8:W:699:LEU:HD12	1.74	0.70
6:I:-35:DA:C6	6:I:-34:DG:C6	2.80	0.70
7:J:-46:DT:C2'	7:J:-45:DG:O6	2.34	0.70
7:J:34:DC:H2'	7:J:35:DT:C5	2.27	0.70
8:W:388:ALA:N	8:W:414:PHE:HE1	1.89	0.70
8:W:627:LYS:O	8:W:630:LEU:HG	1.91	0.70
8:W:768:LEU:HD12	8:W:768:LEU:O	1.91	0.70
8:W:179:ILE:HD13	8:W:217:TRP:CZ3	2.26	0.70
3:C:45:ALA:HB2	7:J:38:DG:OP1	1.90	0.70
6:I:-22:DA:C5	6:I:-21:DC:N4	2.59	0.70
7:J:84:DG:H2''	7:J:85:DT:C5	2.27	0.70
1:E:46:VAL:HG12	1:E:50:GLU:HG3	1.74	0.70
6:I:45:DC:N4	7:J:-46:DT:C4	2.59	0.70
7:J:-25:DC:C2	7:J:-24:DT:C4	2.80	0.70
7:J:-11:DC:C6	7:J:-10:DG:C8	2.80	0.70
5:G:97:LEU:HD22	5:G:100:VAL:HG11	1.74	0.70
6:I:-28:DT:C6	6:I:-27:DC:C4	2.80	0.70
7:J:-7:DG:H2''	7:J:-6:DG:N7	2.06	0.70
2:F:46:ILE:O	6:I:7:DC:C5'	2.39	0.69
5:G:25:PHE:HB3	5:G:52:ALA:HB1	1.74	0.69
5:G:65:LEU:HD12	5:G:68:ASN:HB2	1.72	0.69
8:W:660:ASN:CB	8:W:696:LYS:HZ2	2.04	0.69
6:I:-30:DG:H2''	6:I:-29:DC:OP2	1.92	0.69
6:I:30:DT:H2'	6:I:31:DT:H73	1.74	0.69
7:J:30:DC:C4	7:J:31:DT:C4	2.79	0.69
8:M:256:VAL:HG12	8:M:257:ARG:HG3	1.74	0.69
8:W:474:ASN:HB3	8:W:475:PRO:HD3	1.74	0.69
2:F:88:TYR:OH	4:H:80:TYR:HE1	1.73	0.69
6:I:-86:DA:C2	7:J:87:DT:C2	2.79	0.69
6:I:24:DA:H2''	6:I:25:DG:N7	2.06	0.69
7:J:-11:DC:C4	7:J:-10:DG:O6	2.30	0.69
8:W:357:GLN:HG3	8:W:358:ARG:H	1.58	0.69
1:A:83:ARG:HH12	7:J:26:DA:C4'	2.04	0.69
8:W:398:ILE:CG2	8:W:539:LEU:HD11	2.13	0.69
8:W:602:VAL:HG12	8:W:808:ILE:HD12	1.73	0.69
2:B:96:THR:O	5:G:101:THR:HG22	1.93	0.69
3:C:41:GLU:OE1	6:I:-35:DA:H5''	1.91	0.69
6:I:-58:DG:H2''	6:I:-57:DC:C5	2.28	0.69
8:W:602:VAL:CG1	8:W:808:ILE:HD12	2.23	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:85:GLN:HA	6:I:-24:DG:OP2	1.90	0.69
2:F:48:GLY:O	2:F:51:TYR:CE2	2.46	0.69
8:W:328:VAL:HG21	8:W:1201:PRO:HB2	1.74	0.69
8:W:380:GLN:O	8:W:384:ILE:HG13	1.93	0.69
8:W:656:LYS:HA	8:W:825:VAL:HG13	1.74	0.69
1:A:113:HIS:HB2	1:E:126:LEU:HD21	1.75	0.69
7:J:38:DG:N2	7:J:39:DA:N3	2.40	0.69
4:D:109:SER:O	4:D:112:THR:HG22	1.92	0.69
4:H:30:ARG:HG2	4:H:32:GLU:OE2	1.92	0.69
6:I:-37:DG:H4'	6:I:-36:DT:OP1	1.92	0.69
8:W:184:ASN:OD1	8:W:185:HIS:N	2.25	0.69
8:W:431:VAL:O	8:W:431:VAL:HG13	1.92	0.69
8:W:1014:VAL:HG12	8:W:1124:VAL:CG2	2.23	0.69
1:A:83:ARG:NH2	7:J:26:DA:H4'	2.07	0.69
4:D:84:SER:OG	6:I:-34:DG:P	2.51	0.69
5:G:24:GLN:CD	4:H:41:VAL:HG12	2.18	0.69
5:G:34:LEU:HD23	4:H:67:PHE:CZ	2.28	0.69
5:G:51:LEU:CD2	4:H:91:ILE:CG2	2.65	0.69
8:W:215:ILE:HD12	8:W:228:GLU:HB2	1.74	0.69
8:W:616:VAL:CG2	8:W:699:LEU:HD12	2.22	0.69
2:B:98:TYR:HE1	4:H:62:PHE:CA	2.04	0.69
4:D:51:ILE:O	4:D:51:ILE:HD12	1.93	0.68
4:D:77:LEU:HD12	4:D:78:ALA:N	2.08	0.68
6:I:-84:DA:H2''	6:I:-83:DC:C5	2.28	0.68
6:I:-74:DC:H1'	6:I:-73:DC:H5'	1.74	0.68
6:I:9:DG:C5	6:I:10:DC:C4	2.81	0.68
8:M:385:ASN:O	8:M:389:PHE:HB2	1.92	0.68
8:W:656:LYS:HE2	8:W:826:GLU:CA	2.23	0.68
7:J:34:DC:C2'	7:J:35:DT:O5'	2.41	0.68
8:W:482:THR:O	8:W:483:MET:HB2	1.91	0.68
7:J:-17:DT:C6	7:J:-16:DT:C4	2.81	0.68
8:W:532:PHE:O	8:W:533:LYS:C	2.33	0.68
8:W:181:ILE:HG22	8:W:182:VAL:N	2.08	0.68
8:W:263:THR:HG22	8:W:264:ALA:H	1.59	0.68
8:W:473:THR:OG1	8:W:476:ARG:NH2	2.26	0.68
8:W:1192:GLY:HA2	8:W:1194:TRP:CH2	2.28	0.68
1:A:104:PHE:CD2	2:B:38:ALA:HA	2.28	0.68
2:F:84:MET:HE1	2:F:101:GLY:O	1.94	0.68
6:I:43:DT:C2'	6:I:44:DC:O5'	2.31	0.68
8:W:575:GLN:HB2	8:W:578:GLU:HB2	1.74	0.68
4:H:38:VAL:O	4:H:42:LEU:HG	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:H:114:ALA:HA	4:H:117:LYS:HD2	1.74	0.68
1:A:47:ALA:O	1:A:51:ILE:HG13	1.92	0.68
3:C:116:LEU:CD1	3:C:118:LYS:HB2	2.24	0.68
2:F:30:THR:OG1	2:F:33:ALA:HB2	1.94	0.68
8:W:1143:LYS:HA	8:W:1187:PHE:HE1	1.57	0.68
8:W:189:THR:OG1	8:W:210:ASN:OD1	2.11	0.68
8:W:655:LEU:HD23	8:W:825:VAL:HB	1.75	0.68
2:B:90:LEU:HD12	2:B:97:LEU:CD1	2.23	0.68
3:C:46:GLY:HA3	4:D:88:SER:CB	2.24	0.68
3:C:77:ARG:HB2	6:I:-55:DG:P	2.33	0.68
1:E:65:LEU:CB	6:I:17:DA:O5'	2.36	0.68
6:I:-43:DT:C4	6:I:-42:DT:O4	2.46	0.68
7:J:-33:DG:H2''	7:J:-32:DT:H5'	1.76	0.68
8:W:347:LEU:HB3	8:W:348:PRO:HD2	1.76	0.68
7:J:17:DA:H2''	7:J:18:DG:H8	1.58	0.67
7:J:33:DT:C2'	7:J:34:DC:H5	2.06	0.67
8:W:377:ARG:NE	8:W:602:VAL:HG23	2.09	0.67
8:W:430:ILE:CG1	8:W:511:ALA:HB3	2.23	0.67
8:W:491:THR:HB	8:W:494:TYR:CD2	2.29	0.67
8:W:607:PRO:CG	8:W:811:LYS:CA	2.72	0.67
8:W:616:VAL:HG22	8:W:699:LEU:CD1	2.24	0.67
8:W:650:ASN:O	8:W:655:LEU:N	2.27	0.67
2:B:68:ASP:OD1	2:B:72:TYR:HE1	1.77	0.67
6:I:-86:DA:H2	7:J:87:DT:C2	2.12	0.67
6:I:-35:DA:C6	6:I:-34:DG:N1	2.61	0.67
7:J:34:DC:C2	7:J:35:DT:C4	2.81	0.67
8:M:1132:SER:O	8:M:1136:ARG:HB2	1.93	0.67
2:F:30:THR:CB	7:J:-13:DA:C5'	2.72	0.67
4:H:95:VAL:HG13	4:H:99:LEU:HD13	1.76	0.67
7:J:-17:DT:C4	7:J:-16:DT:N3	2.62	0.67
7:J:23:DG:C4	7:J:24:DC:C5	2.82	0.67
7:J:51:DG:N7	7:J:52:DC:N4	2.42	0.67
8:W:1039:THR:C	8:W:1040:LEU:HD12	2.20	0.67
1:A:123:ASP:OD1	1:E:113:HIS:NE2	2.18	0.67
3:C:34:LEU:HD11	3:C:51:LEU:HD23	1.76	0.67
1:E:42:ARG:N	1:E:43:PRO:CD	2.56	0.67
1:E:63:ARG:HD3	6:I:17:DA:H5''	1.76	0.67
7:J:-25:DC:H2''	7:J:-24:DT:H73	1.73	0.67
8:W:185:HIS:O	8:W:186:ARG:NH1	2.27	0.67
8:W:608:SER:O	8:W:813:HIS:C	2.36	0.67
7:J:-38:DA:N7	7:J:-37:DG:C6	2.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:W:358:ARG:HD3	8:W:392:SER:O	1.94	0.67
8:W:1205:ILE:HD12	8:W:1208:LYS:HD2	1.77	0.67
2:F:32:PRO:HD3	7:J:-12:DA:OP2	1.95	0.67
7:J:32:DG:H2'	7:J:33:DT:H71	1.70	0.67
8:W:350:TYR:HE1	8:W:1042:VAL:HG13	1.58	0.67
8:W:430:ILE:HG13	8:W:511:ALA:HB3	1.76	0.67
4:D:32:GLU:HG2	7:J:49:DC:H5''	1.75	0.67
4:D:45:VAL:O	4:D:46:HIS:ND1	2.27	0.67
2:F:75:HIS:ND1	4:H:93:THR:CG2	2.58	0.67
6:I:-72:DA:H2''	6:I:-71:DT:H71	1.76	0.67
8:W:284:PHE:O	8:W:311:TRP:CD1	2.47	0.67
8:W:541:THR:HG23	8:W:543:THR:H	1.60	0.67
8:W:654:GLU:O	8:W:655:LEU:C	2.38	0.67
5:G:67:GLY:CA	5:G:78:ILE:HD11	2.23	0.67
4:H:54:LYS:O	4:H:58:ILE:HG13	1.94	0.67
7:J:-11:DC:N3	7:J:-10:DG:C6	2.61	0.67
8:W:419:ILE:CD1	8:W:451:LEU:HD13	2.24	0.67
8:W:660:ASN:OD1	8:W:821:SER:HB2	1.95	0.67
6:I:-28:DT:C2'	6:I:-27:DC:C6	2.78	0.67
7:J:-25:DC:H2'	7:J:-24:DT:C7	2.06	0.67
8:W:307:TYR:CD2	8:W:327:ILE:HD13	2.27	0.67
8:W:738:PHE:O	8:W:739:GLN:OE1	2.13	0.67
2:B:62:LEU:O	2:B:66:ILE:HG23	1.95	0.67
1:E:134:ARG:HH12	1:E:135:ALA:HB3	1.58	0.67
5:G:59:THR:O	5:G:63:LEU:HB2	1.95	0.67
7:J:4:DG:H2'	7:J:5:DT:C5	2.29	0.67
2:F:15:ALA:HB3	8:W:690:LEU:HD11	1.77	0.66
4:D:78:ALA:O	4:D:83:ARG:O	2.13	0.66
7:J:-37:DG:C2'	7:J:-36:DG:C8	2.74	0.66
8:W:415:ILE:HA	8:W:418:LEU:CD2	2.25	0.66
3:C:39:TYR:CZ	4:D:71:ALA:CB	2.78	0.66
2:F:29:ILE:CG2	2:F:30:THR:N	2.57	0.66
6:I:22:DC:H5''	8:W:519:LYS:HB3	1.77	0.66
6:I:23:DA:C2'	6:I:24:DA:C8	2.78	0.66
7:J:-3:DA:H2''	7:J:-2:DC:C6	2.30	0.66
8:W:177:HIS:CE1	8:W:217:TRP:CD2	2.84	0.66
8:W:655:LEU:HD21	8:W:825:VAL:HB	1.76	0.66
8:W:1180:GLU:O	8:W:1183:LEU:HG	1.96	0.66
1:A:100:LEU:CD2	2:B:37:LEU:CD1	2.70	0.66
2:B:45:ARG:CD	7:J:8:DG:H5''	2.23	0.66
3:C:46:GLY:CA	4:D:88:SER:HB3	2.25	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:67:GLY:HA2	3:C:78:ILE:HD11	1.77	0.66
5:G:97:LEU:HB3	5:G:100:VAL:HG21	1.77	0.66
6:I:-73:DC:O2	7:J:74:DG:N2	2.28	0.66
8:W:345:LYS:HE2	8:W:1037:ASP:N	2.11	0.66
8:W:656:LYS:CD	8:W:826:GLU:HA	2.24	0.66
3:C:40:ALA:HB3	4:D:86:ILE:HD12	1.74	0.66
5:G:24:GLN:NE2	4:H:44:GLN:OE1	2.29	0.66
8:W:180:ASP:O	8:W:181:ILE:HG13	1.95	0.66
1:E:48:LEU:HB3	1:E:52:ARG:HH12	1.61	0.66
6:I:-3:DG:C1'	6:I:-2:DC:C5	2.79	0.66
1:E:117:VAL:HG21	7:J:-4:DG:H5''	1.78	0.66
5:G:42:ARG:HB3	6:I:38:DT:C4'	2.25	0.66
7:J:34:DC:H2''	7:J:35:DT:C6	2.30	0.66
7:J:34:DC:H2''	7:J:35:DT:H6	1.61	0.66
8:W:177:HIS:HE2	8:W:217:TRP:CG	2.13	0.66
8:W:419:ILE:HD12	8:W:451:LEU:HD13	1.78	0.66
8:W:614:LEU:HB2	8:W:819:LEU:HA	1.77	0.66
8:W:1170:TRP:HE3	8:W:1174:TRP:NE1	1.94	0.66
1:A:60:LEU:HD13	1:A:93:GLN:HG2	1.77	0.65
6:I:5:DC:C1'	6:I:6:DC:C5	2.79	0.65
7:J:-32:DT:C2'	7:J:-31:DA:C8	2.77	0.65
1:E:69:ARG:HB3	2:F:24:ASP:CB	2.26	0.65
5:G:57:TYR:HH	4:H:106:HIS:HD1	1.45	0.65
6:I:-57:DC:H2''	6:I:-56:DC:C6	2.31	0.65
8:W:525:LEU:HA	8:W:528:SER:HB3	1.77	0.65
7:J:-38:DA:H2''	7:J:-37:DG:C8	2.31	0.65
7:J:-38:DA:C4	7:J:-37:DG:C6	2.85	0.65
7:J:-37:DG:C4	7:J:-36:DG:C6	2.85	0.65
7:J:-25:DC:C2'	7:J:-24:DT:C5	2.77	0.65
8:W:655:LEU:HD23	8:W:825:VAL:CB	2.26	0.65
8:W:660:ASN:CG	8:W:696:LYS:NZ	2.54	0.65
8:W:1171:SER:HB3	8:W:1245:LYS:HE3	1.77	0.65
7:J:14:DT:H2''	7:J:15:DT:H73	1.78	0.65
8:W:315:ASN:ND2	8:W:458:GLY:HA2	2.11	0.65
8:W:471:PHE:CE1	8:W:481:LYS:HE2	2.24	0.65
8:W:611:GLU:CG	8:W:816:VAL:CG1	2.74	0.65
3:C:41:GLU:HB3	4:D:84:SER:O	1.96	0.65
4:D:65:ASP:OD2	2:F:98:TYR:OH	2.12	0.65
4:D:76:ARG:NH2	4:D:80:TYR:OH	2.30	0.65
4:D:116:THR:O	4:D:119:THR:HG22	1.97	0.65
8:W:599:LYS:C	8:W:601:ASP:N	2.54	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:W:606:LEU:HD12	8:W:607:PRO:O	1.96	0.65
8:W:1183:LEU:HD12	8:W:1184:ILE:N	2.11	0.65
4:D:70:ILE:HD13	4:D:98:LEU:CD1	2.27	0.65
4:D:121:ALA:O	4:D:122:LYS:CB	2.44	0.65
6:I:9:DG:N7	6:I:10:DC:N4	2.45	0.65
6:I:37:DC:H42	7:J:-38:DA:N6	1.95	0.65
8:W:223:LEU:HD11	8:W:285:HIS:HA	1.79	0.65
8:W:795:PRO:HG3	8:W:836:LYS:CB	2.26	0.65
3:C:97:LEU:HB3	3:C:100:VAL:CG2	2.27	0.65
5:G:42:ARG:C	6:I:39:DA:OP1	2.38	0.65
7:J:78:DG:C2'	7:J:79:DG:C8	2.79	0.65
8:W:214:LEU:HD21	8:W:225:ASN:HB2	1.77	0.65
8:W:656:LYS:HA	8:W:825:VAL:CG1	2.26	0.65
8:W:1013:GLU:HG2	8:W:1041:PRO:HG2	1.79	0.65
2:B:98:TYR:OH	4:H:65:ASP:HB3	1.97	0.65
2:F:30:THR:HB	7:J:-13:DA:H5''	1.78	0.65
6:I:-73:DC:N3	6:I:-72:DA:N6	2.45	0.65
7:J:-39:DT:H2''	7:J:-38:DA:OP2	1.97	0.65
8:W:290:ILE:O	8:W:341:ARG:NH2	2.29	0.65
8:W:813:HIS:C	8:W:814:VAL:HG23	2.22	0.65
1:A:86:SER:N	6:I:-24:DG:OP2	2.30	0.65
8:W:362:GLU:N	8:W:362:GLU:OE1	2.30	0.65
8:W:508:GLN:OE1	8:W:508:GLN:N	2.30	0.65
8:W:795:PRO:HD3	8:W:836:LYS:HD2	1.79	0.65
2:B:31:LYS:HB3	2:B:32:PRO:HD3	1.79	0.64
7:J:-35:DG:C6	7:J:-34:DA:C6	2.85	0.64
7:J:15:DT:N3	7:J:16:DA:N6	2.44	0.64
7:J:26:DA:N9	7:J:27:DG:N7	2.45	0.64
8:W:391:TRP:HD1	8:W:414:PHE:CZ	2.14	0.64
8:W:437:MET:HE1	8:W:457:MET:SD	2.36	0.64
7:J:-35:DG:C4	7:J:-34:DA:C5	2.86	0.64
1:A:76:GLN:HG3	1:A:80:THR:HG22	1.78	0.64
8:W:654:GLU:OE2	8:W:658:ALA:HB2	1.97	0.64
1:A:88:ALA:HB2	2:B:83:ALA:N	2.13	0.64
8:W:607:PRO:CD	8:W:810:GLN:O	2.45	0.64
8:W:696:LYS:HG2	8:W:819:LEU:HD23	1.80	0.64
8:W:1025:GLY:CA	8:W:1139:LEU:HD21	2.27	0.64
2:B:39:ARG:HG2	2:B:39:ARG:NH1	2.07	0.64
8:W:1099:PRO:HG2	8:W:1102:ASN:HB3	1.78	0.64
1:A:63:ARG:NH2	7:J:17:DA:O4'	2.25	0.64
3:C:112:GLN:HE22	1:E:108:ASN:CG	2.06	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:76:ALA:O	2:F:77:LYS:CG	2.45	0.64
7:J:-38:DA:C4	7:J:-37:DG:C5	2.86	0.64
8:W:603:GLU:HG2	8:W:603:GLU:O	1.98	0.64
8:W:1143:LYS:HD3	8:W:1187:PHE:CD1	2.32	0.64
1:A:70:LEU:CD1	2:B:25:ASN:CG	2.70	0.64
2:B:68:ASP:OD2	2:B:89:ALA:HA	1.97	0.64
7:J:-17:DT:C4	7:J:-16:DT:O4	2.51	0.64
7:J:14:DT:H2''	7:J:15:DT:H6	1.62	0.64
8:W:720:MET:SD	8:W:720:MET:C	2.79	0.64
8:W:807:ARG:NH2	9:W:1502:ADP:O1B	2.30	0.64
2:B:84:MET:CE	2:B:88:TYR:OH	2.43	0.64
3:C:45:ALA:HB2	7:J:38:DG:P	2.38	0.64
8:W:437:MET:CG	8:W:438:PRO:HD3	2.28	0.64
8:W:650:ASN:HA	8:W:654:GLU:CG	2.26	0.64
2:F:30:THR:CB	7:J:-13:DA:C3'	2.71	0.64
6:I:-80:DG:C8	6:I:-79:DG:C6	2.86	0.64
6:I:-23:DC:H2''	6:I:-22:DA:O5'	1.98	0.64
8:W:317:ASP:OD1	8:W:318:GLU:N	2.31	0.64
1:A:133:GLU:HA	3:C:99:ARG:HH22	1.63	0.63
3:C:97:LEU:CD1	4:D:62:PHE:HE2	2.07	0.63
1:E:47:ALA:N	6:I:9:DG:OP1	2.31	0.63
6:I:-30:DG:N7	6:I:-29:DC:N4	2.46	0.63
7:J:-38:DA:C2'	7:J:-37:DG:C8	2.81	0.63
7:J:19:DC:H2'	7:J:20:DG:N7	2.11	0.63
8:W:371:ILE:HG13	8:W:371:ILE:O	1.98	0.63
8:W:387:MET:CB	8:W:414:PHE:CE1	2.80	0.63
8:W:656:LYS:HD2	8:W:826:GLU:HA	1.80	0.63
3:C:34:LEU:CD2	3:C:39:TYR:CZ	2.82	0.63
5:G:42:ARG:HG2	6:I:39:DA:H5'	1.80	0.63
6:I:-52:DG:C2'	6:I:-51:DC:O5'	2.46	0.63
6:I:-35:DA:C8	6:I:-34:DG:C8	2.85	0.63
6:I:23:DA:C5	6:I:24:DA:C6	2.87	0.63
3:C:112:GLN:NE2	1:E:108:ASN:CG	2.56	0.63
7:J:6:DA:H8	7:J:6:DA:OP2	1.80	0.63
8:W:293:SER:HB3	8:W:307:TYR:CD1	2.33	0.63
8:W:510:MET:O	8:W:538:MET:HB3	1.98	0.63
1:A:84:PHE:O	6:I:-24:DG:H3'	1.98	0.63
2:B:26:ILE:CD1	2:B:59:LYS:CD	2.76	0.63
7:J:21:DG:OP1	8:M:496:LEU:HD22	1.98	0.63
8:W:643:GLY:HA2	8:W:646:PHE:CE2	2.33	0.63
8:W:1104:LEU:HD12	8:W:1105:THR:N	2.14	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:46:VAL:O	1:A:50:GLU:HG3	1.98	0.63
3:C:100:VAL:HG21	2:F:98:TYR:CE2	2.33	0.63
6:I:-59:DT:C2	6:I:-58:DG:C2	2.86	0.63
7:J:-17:DT:H2'	7:J:-16:DT:C6	2.34	0.63
8:W:387:MET:C	8:W:414:PHE:CE1	2.76	0.63
8:W:612:ARG:O	8:W:817:TYR:HA	1.97	0.63
7:J:23:DG:H2''	7:J:24:DC:O5'	1.99	0.63
8:M:1068:GLU:HG2	8:M:1071:ARG:HH22	1.64	0.63
1:A:63:ARG:NH1	7:J:17:DA:H5'	2.05	0.63
2:B:98:TYR:OH	4:H:65:ASP:CG	2.42	0.63
6:I:-80:DG:H22	7:J:82:DG:N2	1.95	0.63
6:I:30:DT:H2'	6:I:31:DT:C7	2.29	0.63
8:W:402:GLU:CD	8:W:403:MET:N	2.56	0.63
6:I:-12:DC:N3	6:I:-11:DG:C6	2.67	0.63
8:W:674:GLN:OE1	8:W:674:GLN:N	2.32	0.63
2:B:98:TYR:OH	4:H:65:ASP:CB	2.47	0.62
3:C:47:ALA:HB1	4:D:91:ILE:HD11	1.81	0.62
5:G:26:PRO:HB3	4:H:37:TYR:CZ	2.35	0.62
6:I:-17:DT:H5'	8:M:493:GLU:CD	2.24	0.62
8:W:607:PRO:CG	8:W:811:LYS:HA	2.27	0.62
8:W:1098:GLN:OE1	8:W:1104:LEU:HD21	1.99	0.62
1:A:63:ARG:CZ	7:J:17:DA:H5''	2.17	0.62
3:C:63:LEU:HD22	4:D:42:LEU:HB2	1.81	0.62
3:C:112:GLN:HE22	1:E:108:ASN:ND2	1.97	0.62
1:E:61:LEU:HD13	2:F:37:LEU:HA	0.70	0.62
5:G:15:LYS:HZ2	6:I:46:DA:C4'	1.91	0.62
6:I:-23:DC:C4	6:I:-22:DA:C5	2.88	0.62
7:J:78:DG:C5	7:J:79:DG:C5	2.87	0.62
8:W:481:LYS:HG3	8:W:483:MET:HE3	0.71	0.62
8:W:599:LYS:O	8:W:600:LYS:C	2.43	0.62
8:W:660:ASN:CB	8:W:696:LYS:NZ	2.61	0.62
8:W:1070:ARG:NH2	8:W:1113:GLU:HG2	2.14	0.62
1:A:63:ARG:CZ	7:J:17:DA:H4'	2.22	0.62
2:F:44:LYS:O	6:I:8:DC:C5'	2.47	0.62
5:G:42:ARG:CG	6:I:39:DA:H5'	2.29	0.62
6:I:24:DA:C2'	6:I:25:DG:C8	2.82	0.62
6:I:30:DT:C4	6:I:31:DT:C4	2.87	0.62
7:J:20:DG:H3'	8:M:496:LEU:HD21	1.81	0.62
8:W:348:PRO:HG2	8:W:483:MET:CG	2.29	0.62
2:B:59:LYS:O	2:B:63:GLU:HG3	1.99	0.62
1:A:52:ARG:HD2	5:G:111:ILE:HD11	1.79	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:81:ARG:O	3:C:85:LEU:CG	2.47	0.62
2:F:30:THR:OG1	7:J:-13:DA:H5''	1.98	0.62
8:W:556:VAL:HG22	8:W:593:PHE:HE2	1.63	0.62
8:W:730:TYR:CD2	8:W:731:LEU:HD12	2.34	0.62
2:B:52:GLU:OE1	2:B:52:GLU:N	2.30	0.62
6:I:-6:DT:C6	6:I:-5:DA:N6	2.68	0.62
8:W:207:CYS:HG	8:W:246:CYS:HG	1.36	0.62
5:G:116:LEU:HD12	5:G:117:PRO:HD3	1.80	0.62
7:J:-30:DA:C8	7:J:-29:DT:H73	2.34	0.62
8:M:435:SER:O	8:M:751:ARG:NH2	2.33	0.62
1:E:48:LEU:HB3	1:E:52:ARG:NH1	2.15	0.62
6:I:5:DC:H2''	6:I:6:DC:C6	2.32	0.62
7:J:13:DT:OP2	8:M:241:ARG:NE	2.32	0.62
7:J:24:DC:OP1	8:M:793:TRP:HD1	1.78	0.62
7:J:43:DA:H2''	7:J:44:DT:OP2	1.99	0.62
8:M:580:GLU:O	8:M:584:HIS:HB2	2.00	0.62
8:W:488:LEU:CD2	8:W:490:THR:HG22	2.30	0.62
1:A:83:ARG:HB2	2:B:80:THR:OG1	1.98	0.62
3:C:40:ALA:CB	4:D:86:ILE:HD13	2.25	0.62
4:D:46:HIS:CB	4:D:49:THR:OG1	2.47	0.62
6:I:23:DA:C4	6:I:24:DA:C5	2.88	0.62
7:J:-38:DA:C6	7:J:-37:DG:N1	2.68	0.62
7:J:-11:DC:N3	7:J:-10:DG:C5	2.68	0.62
8:W:181:ILE:CG2	8:W:182:VAL:N	2.63	0.62
8:W:241:ARG:O	8:W:244:ASN:OD1	2.18	0.62
8:W:414:PHE:O	8:W:418:LEU:HD23	2.00	0.62
8:W:1023:LYS:HZ2	8:W:1024:PHE:HE1	1.48	0.62
1:A:64:LYS:HB3	7:J:18:DG:OP2	1.99	0.62
4:D:97:LEU:C	4:D:97:LEU:HD12	2.25	0.62
1:E:63:ARG:HD2	2:F:30:THR:HG23	1.82	0.62
8:W:781:MET:O	8:W:810:GLN:NE2	2.32	0.62
1:A:117:VAL:HG11	6:I:-4:DC:C3'	2.30	0.61
5:G:28:GLY:C	7:J:-44:DG:H5''	2.25	0.61
6:I:-73:DC:N4	6:I:-72:DA:N6	2.48	0.61
7:J:-15:DA:OP2	7:J:-15:DA:H8	1.83	0.61
7:J:25:DT:OP2	7:J:25:DT:H6	1.83	0.61
8:W:1174:TRP:HE1	8:W:1247:PRO:HD3	1.63	0.61
1:A:100:LEU:HD22	2:B:37:LEU:HD13	1.79	0.61
6:I:-8:DC:N3	6:I:-7:DG:C6	2.69	0.61
6:I:-7:DG:H2''	6:I:-6:DT:C5	2.34	0.61
7:J:50:DG:C6	7:J:51:DG:C6	2.87	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:W:611:GLU:HA	8:W:816:VAL:HB	1.83	0.61
8:W:660:ASN:HB2	8:W:696:LYS:HZ2	1.64	0.61
8:W:1043:LYS:HD2	8:W:1048:TYR:CE1	2.34	0.61
1:A:132:GLY:O	3:C:99:ARG:CZ	2.48	0.61
3:C:83:LEU:HD21	4:D:55:ALA:HB1	1.82	0.61
1:E:79:LYS:HD2	1:E:80:THR:H	1.65	0.61
6:I:-18:DC:H5''	8:M:434:LEU:CG	2.29	0.61
8:W:629:ILE:CG2	8:W:650:ASN:ND2	2.63	0.61
8:W:1164:PRO:CD	8:W:1176:LYS:HE3	2.29	0.61
3:C:43:VAL:HG12	7:J:39:DA:P	2.40	0.61
8:W:784:ASP:OD1	8:W:785:THR:N	2.32	0.61
3:C:71:ARG:HH12	4:D:49:THR:HG23	1.65	0.61
7:J:4:DG:C2'	7:J:5:DT:H6	2.06	0.61
7:J:51:DG:C8	7:J:52:DC:C5	2.89	0.61
8:M:440:TRP:O	8:M:444:PHE:HB2	2.01	0.61
2:B:68:ASP:OD1	2:B:72:TYR:CE1	2.53	0.61
2:B:73:THR:OG1	2:B:81:VAL:HG22	2.01	0.61
4:D:83:ARG:HE	6:I:-34:DG:C2'	2.13	0.61
2:F:97:LEU:HD22	2:F:100:PHE:CD2	2.35	0.61
5:G:24:GLN:O	4:H:37:TYR:HD2	1.82	0.61
6:I:-78:DC:C2	7:J:79:DG:N2	2.69	0.61
6:I:-16:DT:P	8:M:459:ASN:HB2	2.40	0.61
6:I:15:DT:C2'	6:I:16:DA:C8	2.80	0.61
8:W:390:LEU:HD11	8:W:395:ASP:HB2	1.83	0.61
8:W:391:TRP:O	8:W:391:TRP:HE3	1.82	0.61
8:W:723:MET:HA	8:W:726:ILE:HD12	1.82	0.61
2:B:50:ILE:O	2:B:54:THR:HG23	2.00	0.61
6:I:-4:DC:N4	7:J:4:DG:N1	2.48	0.61
8:W:414:PHE:HE2	8:W:509:PHE:CZ	2.19	0.61
8:W:1170:TRP:HE3	8:W:1174:TRP:CD1	2.18	0.61
7:J:46:DG:H4'	7:J:47:DA:OP1	2.00	0.61
8:W:1192:GLY:HA2	8:W:1194:TRP:CZ3	2.36	0.61
1:A:62:ILE:HG22	1:A:63:ARG:N	2.15	0.61
3:C:34:LEU:HD23	3:C:39:TYR:OH	2.01	0.61
7:J:69:DC:C2'	7:J:70:DT:H71	2.29	0.61
8:W:1264:ARG:HH11	8:W:1264:ARG:HG3	1.65	0.61
1:A:47:ALA:HB1	2:B:39:ARG:NH2	2.15	0.61
6:I:-22:DA:C6	6:I:-21:DC:N4	2.69	0.61
7:J:51:DG:N7	7:J:52:DC:C4	2.69	0.61
8:W:834:ARG:O	8:W:838:ILE:HG13	2.01	0.61
1:E:121:PRO:O	2:F:53:GLU:OE1	2.18	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:I:30:DT:C5	6:I:31:DT:C7	2.77	0.60
7:J:-35:DG:C5	7:J:-34:DA:N6	2.68	0.60
8:W:379:PHE:CE1	8:W:597:ARG:NE	2.69	0.60
1:A:65:LEU:HD13	7:J:17:DA:OP2	2.01	0.60
2:B:45:ARG:O	2:B:46:ILE:HG13	2.01	0.60
7:J:26:DA:C5	7:J:27:DG:N1	2.68	0.60
8:W:313:ARG:NH2	8:W:751:ARG:NH2	2.48	0.60
8:W:1059:ALA:CB	8:W:1132:LEU:HD11	2.31	0.60
1:E:62:ILE:HA	2:F:33:ALA:HB1	1.83	0.60
7:J:15:DT:C2	7:J:16:DA:C5	2.88	0.60
7:J:51:DG:H1'	7:J:52:DC:H5'	1.83	0.60
8:W:295:ARG:CD	8:W:1198:ARG:HH22	2.01	0.60
8:W:664:LEU:HG	8:W:664:LEU:O	2.01	0.60
1:A:51:ILE:O	1:A:55:GLN:HG3	2.01	0.60
2:F:33:ALA:HA	2:F:36:ARG:HG3	1.84	0.60
7:J:23:DG:N9	7:J:24:DC:C5	2.68	0.60
8:W:419:ILE:HD12	8:W:451:LEU:CD1	2.31	0.60
8:W:609:LYS:HD3	8:W:806:HIS:CG	2.36	0.60
8:W:696:LYS:HE2	8:W:819:LEU:HB3	1.83	0.60
4:H:55:ALA:O	4:H:59:MET:HG2	2.01	0.60
4:H:73:GLU:O	4:H:77:LEU:HD13	2.02	0.60
6:I:36:DC:H2''	6:I:37:DC:C6	2.37	0.60
8:W:586:LEU:C	8:W:586:LEU:HD23	2.26	0.60
8:W:795:PRO:O	8:W:796:GLN:HB2	2.02	0.60
2:B:58:LEU:CD2	2:B:62:LEU:CD1	2.73	0.60
3:C:44:GLY:HA3	4:D:87:THR:CA	2.29	0.60
3:C:112:GLN:NE2	1:E:108:ASN:ND2	2.49	0.60
2:F:82:THR:HG22	2:F:84:MET:N	2.16	0.60
7:J:69:DC:C2'	7:J:70:DT:C7	2.78	0.60
8:W:696:LYS:CG	8:W:819:LEU:HD23	2.31	0.60
7:J:86:DA:H2''	7:J:87:DT:H71	1.83	0.60
8:W:379:PHE:CE1	8:W:597:ARG:CD	2.83	0.60
8:W:642:LYS:C	8:W:646:PHE:CE2	2.79	0.60
8:W:1026:ASN:OD1	8:W:1028:LYS:HG2	2.01	0.60
3:C:45:ALA:CA	7:J:38:DG:OP1	2.50	0.60
2:F:50:ILE:O	2:F:54:THR:HG23	2.02	0.60
4:H:98:LEU:HG	4:H:99:LEU:HD12	1.82	0.60
6:I:-58:DG:N1	7:J:58:DG:C6	2.70	0.60
6:I:-38:DC:N4	7:J:37:DC:H42	2.00	0.60
8:W:210:ASN:O	8:W:211:TYR:CD1	2.55	0.60
8:W:368:PRO:O	8:W:370:PHE:N	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:W:540:ILE:O	8:W:540:ILE:CG1	2.46	0.60
2:B:45:ARG:CB	7:J:8:DG:OP1	2.50	0.60
3:C:63:LEU:HD13	4:D:42:LEU:CA	2.31	0.60
6:I:-12:DC:N4	7:J:11:DC:N4	2.50	0.60
6:I:38:DT:H2'	6:I:39:DA:C8	2.36	0.60
6:I:0:DC:H2''	6:I:1:DT:C6	2.37	0.60
7:J:-30:DA:C8	7:J:-29:DT:H71	2.36	0.60
7:J:78:DG:H2''	7:J:79:DG:O5'	2.01	0.60
6:I:-22:DA:C6	6:I:-21:DC:C4	2.90	0.59
6:I:-3:DG:N9	6:I:-2:DC:C5	2.40	0.59
7:J:-11:DC:H2''	7:J:-10:DG:C5'	2.32	0.59
7:J:6:DA:C2'	7:J:7:DC:C5	2.74	0.59
7:J:38:DG:C2	7:J:39:DA:C5	2.89	0.59
8:W:386:TRP:HA	8:W:389:PHE:HB3	1.85	0.59
3:C:46:GLY:HA3	4:D:88:SER:OG	2.02	0.59
2:F:30:THR:HB	7:J:-13:DA:C4'	2.31	0.59
3:C:23:LEU:HD13	3:C:53:ALA:HA	1.82	0.59
3:C:63:LEU:CD1	4:D:41:VAL:CG1	2.79	0.59
4:H:78:ALA:O	4:H:83:ARG:N	2.35	0.59
6:I:-38:DC:C2	6:I:-37:DG:C5	2.90	0.59
7:J:38:DG:N2	7:J:39:DA:C2	2.70	0.59
8:W:255:GLN:CG	8:W:255:GLN:O	2.50	0.59
8:W:330:LEU:HD12	8:W:331:ALA:N	2.17	0.59
8:W:390:LEU:HD12	8:W:393:LYS:HB2	1.84	0.59
8:W:645:HIS:HE1	8:W:649:LEU:HD11	1.63	0.59
8:W:660:ASN:HB3	8:W:696:LYS:CE	2.32	0.59
6:I:-4:DC:H2''	6:I:-3:DG:C8	2.37	0.59
6:I:-3:DG:H2''	6:I:-2:DC:H6	1.62	0.59
6:I:5:DC:O3'	6:I:6:DC:C6	2.56	0.59
7:J:-28:DC:C6	7:J:-27:DC:N4	2.70	0.59
8:M:751:ARG:NH2	8:M:778:ILE:HD11	2.17	0.59
8:W:208:LYS:HG2	8:W:230:TYR:CD2	2.38	0.59
8:W:357:GLN:HG3	8:W:358:ARG:N	2.18	0.59
8:W:616:VAL:HG11	8:W:695:GLY:HA3	1.82	0.59
5:G:115:LEU:C	5:G:115:LEU:HD12	2.26	0.59
6:I:24:DA:H1'	6:I:25:DG:C8	2.38	0.59
1:A:108:ASN:ND2	2:B:42:GLY:O	2.36	0.59
1:E:76:GLN:NE2	1:E:80:THR:HA	2.17	0.59
8:W:368:PRO:C	8:W:370:PHE:H	2.10	0.59
6:I:-14:DA:C2	6:I:-13:DA:C4	2.90	0.59
7:J:20:DG:N2	7:J:21:DG:C5	2.71	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:W:660:ASN:CG	8:W:696:LYS:HZ1	2.10	0.59
3:C:45:ALA:CB	7:J:38:DG:OP1	2.50	0.59
4:D:84:SER:N	6:I:-34:DG:OP1	2.36	0.59
5:G:42:ARG:HA	6:I:39:DA:P	2.42	0.59
8:W:649:LEU:O	8:W:654:GLU:CB	2.51	0.59
2:F:84:MET:SD	2:F:101:GLY:HA3	2.42	0.59
5:G:55:LEU:O	5:G:59:THR:HG23	2.03	0.59
8:W:380:GLN:HG3	9:W:1502:ADP:N6	2.18	0.59
1:E:74:ILE:HG21	2:F:59:LYS:CE	2.33	0.59
4:H:86:ILE:HG22	4:H:91:ILE:HD11	1.83	0.59
7:J:23:DG:C5	7:J:24:DC:C5	2.91	0.59
8:W:348:PRO:CD	8:W:483:MET:HB3	2.33	0.59
8:W:350:TYR:CE1	8:W:1042:VAL:CG1	2.82	0.59
8:W:367:GLN:CG	8:W:371:ILE:HD11	2.33	0.59
8:W:626:TYR:CE1	8:W:824:THR:HG22	2.38	0.59
8:W:767:PHE:CD2	8:W:769:LEU:HD11	2.37	0.59
2:F:29:ILE:HD13	2:F:55:ARG:NH2	2.17	0.58
4:H:63:VAL:O	4:H:67:PHE:N	2.34	0.58
6:I:-78:DC:H1'	6:I:-77:DC:H5'	1.84	0.58
8:W:388:ALA:HA	8:W:391:TRP:HB2	1.85	0.58
2:B:45:ARG:NE	7:J:8:DG:H5''	2.16	0.58
6:I:-28:DT:C5	6:I:-27:DC:N4	2.71	0.58
7:J:78:DG:C2'	7:J:79:DG:H8	2.16	0.58
4:D:49:THR:O	6:I:-54:DA:OP1	2.22	0.58
1:E:50:GLU:HB3	1:E:54:TYR:CE2	2.38	0.58
1:E:66:PRO:HA	2:F:23:ARG:O	2.03	0.58
6:I:-49:DG:N2	7:J:50:DG:C2	2.72	0.58
6:I:36:DC:OP2	6:I:36:DC:H6	1.86	0.58
7:J:78:DG:C4	7:J:79:DG:C5	2.91	0.58
8:W:361:PHE:CE1	8:W:362:GLU:O	2.56	0.58
8:W:1246:VAL:CG1	8:W:1247:PRO:CA	2.81	0.58
1:A:116:ARG:NH1	1:A:120:MET:CG	2.64	0.58
3:C:79:ILE:CG2	3:C:80:PRO:CD	2.79	0.58
1:E:66:PRO:HG2	1:E:67:PHE:H	1.68	0.58
5:G:35:ARG:HG3	5:G:43:VAL:HG21	1.86	0.58
5:G:55:LEU:HA	5:G:58:LEU:HD12	1.85	0.58
7:J:-28:DC:C6	7:J:-27:DC:C4	2.91	0.58
7:J:17:DA:C2'	7:J:18:DG:C8	2.86	0.58
8:M:434:LEU:HD23	8:M:491:THR:HG21	1.85	0.58
8:M:1023:LEU:O	8:M:1136:ARG:NH1	2.36	0.58
6:I:-78:DC:N4	7:J:78:DG:N1	2.44	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:I:-45:DA:H2''	6:I:-44:DA:C8	2.39	0.58
6:I:23:DA:N9	6:I:24:DA:N7	2.52	0.58
7:J:-38:DA:C6	7:J:-37:DG:O6	2.56	0.58
8:W:207:CYS:HA	8:W:211:TYR:HD2	1.62	0.58
8:W:400:ALA:H	8:W:595:LEU:HB2	1.69	0.58
8:W:509:PHE:HZ	8:W:538:MET:CE	2.16	0.58
8:W:540:ILE:O	8:W:540:ILE:CD1	2.51	0.58
3:C:43:VAL:CG1	7:J:38:DG:H3'	2.29	0.58
6:I:-73:DC:C2	6:I:-72:DA:N7	2.72	0.58
6:I:-19:DG:H3'	8:M:743:GLY:C	2.28	0.58
6:I:45:DC:H3'	6:I:46:DA:OP2	2.02	0.58
8:W:177:HIS:HE2	8:W:217:TRP:CD1	2.21	0.58
8:W:655:LEU:O	8:W:659:SER:HB3	2.03	0.58
6:I:24:DA:C4	6:I:25:DG:C6	2.92	0.58
8:W:305:LEU:HD21	8:W:307:TYR:OH	2.03	0.58
8:W:402:GLU:HB3	8:W:405:LEU:HG	1.86	0.58
8:W:654:GLU:OE2	8:W:664:LEU:CD2	2.48	0.58
2:F:15:ALA:HB3	8:W:690:LEU:CD1	2.32	0.58
4:H:97:LEU:HD12	4:H:97:LEU:C	2.29	0.58
7:J:33:DT:C2'	7:J:34:DC:C5	2.82	0.58
7:J:80:DC:O3'	7:J:81:DC:O4'	2.21	0.58
8:W:244:ASN:OD1	8:W:245:TYR:N	2.37	0.58
8:W:707:LEU:HD23	8:W:712:HIS:HB2	1.86	0.58
1:A:73:GLU:OE1	1:A:74:ILE:CD1	2.51	0.58
2:B:73:THR:CB	2:B:81:VAL:HG22	2.34	0.58
5:G:78:ILE:O	5:G:78:ILE:HG22	2.03	0.58
4:H:84:SER:HB2	7:J:-35:DG:H4'	1.84	0.58
6:I:9:DG:C5	6:I:10:DC:N4	2.72	0.58
8:W:206:ASN:O	8:W:210:ASN:N	2.36	0.58
8:W:518:LEU:HD12	8:W:555:LEU:CD1	2.31	0.58
8:W:593:PHE:O	8:W:594:ILE:HD13	2.04	0.58
6:I:-17:DT:OP1	8:M:494:TYR:OH	2.17	0.58
6:I:20:DG:C3'	8:W:524:SER:CB	2.77	0.58
8:W:628:ASN:OD1	8:W:633:ASN:ND2	2.36	0.58
4:D:84:SER:OG	6:I:-35:DA:O3'	2.21	0.57
6:I:-11:DG:H2''	6:I:-10:DC:C6	2.38	0.57
2:B:58:LEU:HD21	2:B:62:LEU:HD11	1.85	0.57
5:G:80:PRO:HG3	4:H:55:ALA:CB	2.35	0.57
7:J:26:DA:H2'	7:J:27:DG:N7	2.17	0.57
7:J:34:DC:C2'	7:J:35:DT:C5	2.87	0.57
8:W:345:LYS:CG	8:W:1036:ALA:HB3	2.31	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:W:607:PRO:CG	8:W:812:ASN:N	2.58	0.57
1:E:116:ARG:CA	7:J:-3:DA:OP1	2.51	0.57
5:G:97:LEU:HD11	4:H:62:PHE:HE2	1.68	0.57
7:J:51:DG:C5	7:J:52:DC:N3	2.72	0.57
8:W:221:SER:HB3	8:W:311:TRP:CZ2	2.39	0.57
8:W:589:ARG:O	8:W:593:PHE:HE1	1.86	0.57
8:W:681:MET:HE3	8:W:682:THR:O	2.04	0.57
5:G:47:ALA:HB3	5:G:48:PRO:CD	2.31	0.57
6:I:5:DC:C2'	6:I:6:DC:C6	2.88	0.57
7:J:-40:DC:C6	7:J:-39:DT:H72	2.40	0.57
7:J:-25:DC:C2'	7:J:-24:DT:C6	2.84	0.57
7:J:37:DC:C2	7:J:38:DG:C5	2.92	0.57
7:J:37:DC:O2	7:J:38:DG:C5	2.58	0.57
8:M:1067:GLU:HG2	8:M:1118:VAL:HG22	1.85	0.57
8:W:348:PRO:HD2	8:W:483:MET:HB3	1.86	0.57
8:W:593:PHE:O	8:W:594:ILE:HG12	2.03	0.57
8:W:723:MET:O	8:W:723:MET:SD	2.62	0.57
1:E:46:VAL:O	1:E:49:ARG:N	2.37	0.57
6:I:-41:DG:C6	6:I:-40:DG:C6	2.92	0.57
7:J:-46:DT:N1	7:J:-45:DG:C6	2.72	0.57
7:J:-35:DG:N7	7:J:-34:DA:N6	2.53	0.57
7:J:-25:DC:H2''	7:J:-24:DT:H6	1.60	0.57
8:W:361:PHE:CD1	8:W:362:GLU:N	2.72	0.57
1:A:65:LEU:HB3	1:A:66:PRO:CD	2.31	0.57
2:B:78:ARG:HD2	7:J:28:DA:O5'	2.05	0.57
4:H:84:SER:O	4:H:85:THR:HG23	2.04	0.57
4:H:87:THR:HG23	4:H:89:ARG:H	1.69	0.57
8:W:347:LEU:HD13	8:W:483:MET:O	2.04	0.57
8:W:463:ARG:O	8:W:467:ARG:HG3	2.05	0.57
8:W:483:MET:HE2	8:W:483:MET:HA	1.86	0.57
8:W:681:MET:SD	8:W:682:THR:HG22	2.45	0.57
1:A:101:VAL:HG13	2:B:41:GLY:N	2.19	0.57
3:C:65:LEU:CD2	3:C:90:ASP:CG	2.75	0.57
5:G:42:ARG:CB	6:I:38:DT:H4'	2.32	0.57
8:W:180:ASP:C	8:W:181:ILE:HG13	2.30	0.57
8:W:730:TYR:HD2	8:W:731:LEU:HD12	1.69	0.57
8:W:770:SER:HB2	8:W:773:ALA:CB	2.27	0.57
8:W:1119:PHE:CD2	8:W:1129:ALA:HB2	2.39	0.57
3:C:31:HIS:NE2	3:C:35:ARG:HD2	2.19	0.57
3:C:34:LEU:HD23	3:C:39:TYR:CZ	2.39	0.57
2:F:30:THR:HB	7:J:-13:DA:C5'	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:I:22:DC:P	8:W:520:ASN:HB2	2.37	0.57
7:J:67:DT:C2'	7:J:68:DT:C7	2.80	0.57
8:W:387:MET:HB2	8:W:414:PHE:CE1	2.40	0.57
1:A:65:LEU:HD22	7:J:17:DA:P	2.44	0.57
1:A:99:TYR:HD1	1:A:100:LEU:HD12	1.69	0.57
2:F:39:ARG:O	2:F:42:GLY:N	2.38	0.57
2:F:86:VAL:O	2:F:89:ALA:HB3	2.05	0.57
5:G:32:ARG:NE	7:J:-45:DG:H3'	2.20	0.57
6:I:-52:DG:C2'	6:I:-51:DC:C6	2.88	0.57
6:I:-23:DC:C2'	6:I:-22:DA:C5'	2.61	0.57
6:I:-16:DT:P	8:M:459:ASN:CB	2.93	0.57
6:I:27:DG:H2''	6:I:28:DG:N7	2.19	0.57
7:J:-35:DG:C6	7:J:-34:DA:N1	2.73	0.57
8:M:622:GLN:O	8:M:626:TYR:HB2	2.05	0.57
8:W:183:ILE:HG23	8:W:281:PHE:CD2	2.40	0.57
8:W:460:GLN:O	8:W:463:ARG:HB3	2.05	0.57
6:I:-43:DT:C2	6:I:-42:DT:C4	2.93	0.57
6:I:36:DC:H2''	6:I:37:DC:H6	1.70	0.57
7:J:32:DG:H2''	7:J:33:DT:C5	2.40	0.57
8:W:181:ILE:CG2	8:W:182:VAL:H	2.18	0.57
8:W:741:LEU:HD22	8:W:769:LEU:HG	1.87	0.57
8:W:827:GLU:HG3	8:W:828:GLU:CD	2.30	0.57
1:A:76:GLN:CG	1:A:80:THR:HG22	2.36	0.56
1:E:63:ARG:HD2	2:F:30:THR:CG2	2.35	0.56
2:F:75:HIS:CE1	4:H:90:GLU:HA	2.40	0.56
6:I:-22:DA:C4	6:I:-21:DC:C5	2.92	0.56
6:I:-6:DT:C4	6:I:-5:DA:N6	2.73	0.56
7:J:34:DC:H2'	7:J:35:DT:C6	2.38	0.56
8:M:583:ILE:O	8:M:587:HIS:HB2	2.04	0.56
8:W:387:MET:C	8:W:414:PHE:HE1	2.12	0.56
2:F:47:SER:HA	6:I:7:DC:C5'	2.35	0.56
6:I:-12:DC:H42	7:J:11:DC:H42	1.53	0.56
1:E:66:PRO:CB	2:F:29:ILE:HG12	2.23	0.56
5:G:53:ALA:O	5:G:56:GLU:HB3	2.05	0.56
4:H:87:THR:O	4:H:91:ILE:HD12	2.04	0.56
6:I:-67:DA:C2	7:J:68:DT:O2	2.59	0.56
6:I:-64:DC:H2''	6:I:-63:DC:C5	2.40	0.56
6:I:-49:DG:H1'	6:I:-48:DC:C2	2.40	0.56
6:I:-22:DA:C4	6:I:-21:DC:C4	2.93	0.56
6:I:-20:DC:H2''	6:I:-19:DG:H8	1.66	0.56
6:I:4:DC:C2'	6:I:5:DC:O5'	2.51	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:I:38:DT:C2'	6:I:39:DA:C8	2.88	0.56
8:W:470:GLU:HA	8:W:485:PHE:HE2	1.69	0.56
8:W:603:GLU:HA	8:W:606:LEU:HD23	1.86	0.56
8:W:650:ASN:C	8:W:654:GLU:HB3	2.30	0.56
8:W:744:THR:HG22	8:W:744:THR:O	2.04	0.56
8:W:1059:ALA:CB	8:W:1132:LEU:HD21	2.32	0.56
2:B:97:LEU:HD23	5:G:101:THR:HG21	1.87	0.56
4:D:70:ILE:CD1	4:D:98:LEU:CD1	2.84	0.56
4:D:119:THR:O	4:D:121:ALA:O	2.23	0.56
5:G:25:PHE:CZ	5:G:56:GLU:CA	2.89	0.56
5:G:31:HIS:HD2	5:G:43:VAL:HG11	1.68	0.56
5:G:84:GLN:HE22	5:G:102:ILE:HG12	1.68	0.56
6:I:-23:DC:C6	6:I:-22:DA:N7	2.73	0.56
3:C:79:ILE:CG1	4:D:52:SER:HB3	2.29	0.56
6:I:19:DC:H42	7:J:-19:DG:N2	1.87	0.56
8:M:546:GLN:NE2	8:M:841:TYR:O	2.38	0.56
8:M:583:ILE:O	8:M:587:HIS:CB	2.53	0.56
8:W:618:LEU:HG	8:W:622:GLN:CD	2.31	0.56
8:W:1014:VAL:HG12	8:W:1124:VAL:HG22	1.87	0.56
6:I:-49:DG:N2	7:J:50:DG:N2	2.54	0.56
6:I:34:DT:C2'	6:I:35:DC:H5	2.14	0.56
7:J:26:DA:C1'	7:J:27:DG:N7	2.69	0.56
8:W:471:PHE:HE1	8:W:481:LYS:CE	2.14	0.56
8:W:505:ILE:O	8:W:507:TRP:CE3	2.59	0.56
8:W:586:LEU:HG	8:W:590:ILE:CD1	2.36	0.56
8:W:601:ASP:C	8:W:603:GLU:H	2.14	0.56
8:W:648:LEU:HA	8:W:651:ILE:HD12	1.86	0.56
8:W:754:ILE:HG12	8:W:778:ILE:HD11	1.87	0.56
1:A:88:ALA:CB	2:B:83:ALA:CA	2.84	0.56
2:B:98:TYR:CE1	4:H:62:PHE:CA	2.83	0.56
5:G:87:VAL:O	5:G:94:ASN:HB3	2.05	0.56
5:G:90:ASP:HB2	5:G:93:LEU:HB2	1.86	0.56
8:M:417:TRP:O	8:M:421:ALA:CB	2.52	0.56
8:W:263:THR:HG22	8:W:264:ALA:N	2.21	0.56
8:W:656:LYS:HE3	8:W:829:VAL:HG21	1.85	0.56
8:W:691:ILE:HD11	8:W:697:MET:O	2.05	0.56
8:W:781:MET:CE	9:W:1502:ADP:H4'	2.35	0.56
3:C:46:GLY:CA	4:D:88:SER:CB	2.84	0.56
3:C:97:LEU:CD1	4:D:62:PHE:CE2	2.72	0.56
4:D:81:ASN:O	4:D:82:LYS:HB2	2.06	0.56
4:H:62:PHE:O	4:H:66:VAL:CG2	2.47	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:M:290:ILE:O	8:M:341:ARG:NH2	2.38	0.56
8:W:611:GLU:HA	8:W:816:VAL:O	2.06	0.56
8:W:643:GLY:N	8:W:646:PHE:CE2	2.74	0.56
4:H:46:HIS:O	4:H:49:THR:HB	2.05	0.56
6:I:-38:DC:C5	6:I:-37:DG:C6	2.92	0.56
6:I:-38:DC:H42	7:J:37:DC:H42	1.54	0.56
6:I:-37:DG:H2''	6:I:-36:DT:H71	1.86	0.56
7:J:21:DG:C2'	7:J:22:DT:O5'	2.49	0.56
7:J:58:DG:H2''	7:J:59:DC:H5	1.70	0.56
7:J:80:DC:O5'	7:J:80:DC:H6	1.89	0.56
8:W:590:ILE:O	8:W:594:ILE:HG12	2.05	0.56
1:E:65:LEU:HD12	6:I:17:DA:H2'	1.84	0.56
6:I:30:DT:N1	6:I:31:DT:C5	2.74	0.56
8:W:305:LEU:HD21	8:W:307:TYR:CZ	2.41	0.56
8:W:1009:ILE:HA	8:W:1043:LYS:HE2	1.87	0.56
1:E:122:LYS:O	1:E:123:ASP:C	2.49	0.55
5:G:42:ARG:HA	6:I:39:DA:C5'	2.37	0.55
6:I:23:DA:P	8:W:519:LYS:CE	2.91	0.55
8:W:183:ILE:HB	8:W:214:LEU:HD22	1.87	0.55
8:W:347:LEU:CD2	8:W:483:MET:O	2.48	0.55
8:W:717:PHE:CE1	8:W:769:LEU:CB	2.88	0.55
1:A:63:ARG:NH2	7:J:17:DA:H4'	2.18	0.55
1:A:117:VAL:CG1	6:I:-4:DC:O3'	2.54	0.55
2:B:91:LYS:HD2	4:D:76:ARG:HH22	1.71	0.55
7:J:-18:DG:H2''	7:J:-17:DT:OP2	2.05	0.55
8:W:183:ILE:HD11	8:W:216:LYS:CE	2.36	0.55
8:W:414:PHE:CE2	8:W:509:PHE:CZ	2.94	0.55
8:W:427:PRO:HA	8:W:486:ASN:HA	1.87	0.55
8:W:766:VAL:O	8:W:766:VAL:HG13	2.07	0.55
8:W:291:ILE:HB	8:W:308:LEU:HD23	1.88	0.55
8:W:311:TRP:HZ3	8:W:319:ALA:HA	1.71	0.55
8:W:379:PHE:CE1	8:W:597:ARG:HD2	2.24	0.55
8:W:591:GLN:HG3	8:W:592:PRO:CD	2.33	0.55
8:W:1139:LEU:HD12	8:W:1140:LYS:N	2.21	0.55
5:G:97:LEU:HB3	5:G:100:VAL:HG22	1.87	0.55
6:I:-67:DA:H2	7:J:68:DT:O2	1.89	0.55
6:I:27:DG:C2	6:I:28:DG:C2	2.95	0.55
7:J:-6:DG:H2''	7:J:-5:DG:C8	2.41	0.55
7:J:26:DA:C6	7:J:27:DG:N1	2.74	0.55
8:W:179:ILE:HD12	8:W:215:ILE:HG21	1.87	0.55
1:A:83:ARG:HH12	7:J:26:DA:H4'	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:G:25:PHE:HA	4:H:37:TYR:CD2	2.40	0.55
5:G:31:HIS:CD2	5:G:31:HIS:C	2.84	0.55
6:I:-72:DA:C2'	6:I:-71:DT:H71	2.36	0.55
6:I:-9:DA:C8	6:I:-8:DC:C5	2.94	0.55
7:J:20:DG:C4'	7:J:21:DG:OP1	2.46	0.55
7:J:30:DC:C4	7:J:31:DT:O4	2.60	0.55
7:J:68:DT:H2''	7:J:69:DC:C5	2.42	0.55
8:W:417:TRP:O	8:W:421:ALA:HB3	2.06	0.55
8:W:433:PRO:HD3	8:W:513:ASP:CB	2.32	0.55
8:W:607:PRO:CG	8:W:813:HIS:H	2.15	0.55
5:G:91:GLU:HB3	5:G:95:LYS:CE	2.29	0.55
7:J:-19:DG:OP1	8:W:772:ARG:HB3	2.01	0.55
7:J:-17:DT:H2''	7:J:-16:DT:C5'	2.37	0.55
8:M:347:LEU:HD22	8:M:349:GLN:HE22	1.72	0.55
3:C:25:PHE:CD2	3:C:26:PRO:HD2	2.41	0.55
5:G:97:LEU:O	5:G:100:VAL:N	2.36	0.55
8:W:182:VAL:CG1	8:W:245:TYR:CE2	2.87	0.55
8:W:417:TRP:O	8:W:417:TRP:CD1	2.60	0.55
8:W:429:ILE:HB	8:W:507:TRP:NE1	2.22	0.55
8:W:1157:PHE:CE2	8:W:1183:LEU:HD21	2.41	0.55
5:G:39:TYR:O	5:G:40:ALA:HB2	2.06	0.55
6:I:-19:DG:C2'	8:M:743:GLY:C	2.79	0.55
8:M:720:MET:N	8:M:720:MET:SD	2.80	0.55
8:W:359:PRO:HG2	8:W:422:ARG:HD2	1.89	0.55
8:W:434:LEU:HD12	8:W:434:LEU:C	2.32	0.55
8:W:1170:TRP:HB2	8:W:1174:TRP:HD1	1.72	0.55
4:D:62:PHE:CA	2:F:98:TYR:CE1	2.76	0.55
8:M:483:MET:N	8:M:483:MET:SD	2.80	0.55
8:W:295:ARG:HG2	8:W:303:SER:OG	2.07	0.55
8:W:786:VAL:HG22	8:W:816:VAL:HG22	1.85	0.55
2:B:78:ARG:CB	7:J:28:DA:P	2.77	0.55
1:E:50:GLU:HG2	1:E:53:ARG:HH21	1.72	0.55
1:E:76:GLN:HE22	1:E:80:THR:HA	1.71	0.55
6:I:26:DG:H2''	6:I:27:DG:C8	2.41	0.55
8:W:437:MET:HG2	8:W:438:PRO:HD3	1.87	0.55
2:B:39:ARG:HH11	2:B:39:ARG:CG	2.16	0.54
2:F:84:MET:SD	2:F:101:GLY:O	2.64	0.54
4:H:97:LEU:HD12	4:H:98:LEU:CA	2.37	0.54
6:I:-35:DA:N6	6:I:-34:DG:N1	2.55	0.54
2:F:97:LEU:HD22	2:F:100:PHE:HD2	1.73	0.54
6:I:-61:DG:H2''	6:I:-60:DG:C8	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:M:464:ASP:OD1	8:M:467:ARG:NH2	2.34	0.54
8:W:376:LEU:HD22	9:W:1502:ADP:N6	2.22	0.54
8:W:593:PHE:O	8:W:594:ILE:CG1	2.56	0.54
1:E:89:VAL:HG13	1:E:90:MET:N	2.21	0.54
8:M:696:LYS:O	8:M:700:LEU:HB2	2.06	0.54
8:W:518:LEU:HD12	8:W:555:LEU:HD11	1.88	0.54
8:W:707:LEU:HD23	8:W:712:HIS:CB	2.38	0.54
8:W:717:PHE:CE1	8:W:769:LEU:HB3	2.43	0.54
8:W:767:PHE:CD2	8:W:769:LEU:CD1	2.91	0.54
4:D:84:SER:H	6:I:-34:DG:P	2.29	0.54
6:I:30:DT:N1	6:I:31:DT:C7	2.66	0.54
7:J:-45:DG:N2	7:J:-44:DG:C2	2.75	0.54
7:J:-38:DA:C8	7:J:-37:DG:C5	2.95	0.54
7:J:23:DG:C5	7:J:24:DC:C4	2.96	0.54
7:J:37:DC:O2	7:J:38:DG:C8	2.60	0.54
8:W:544:PRO:HG2	8:W:796:GLN:OE1	2.07	0.54
8:W:614:LEU:N	8:W:818:ARG:O	2.41	0.54
8:W:1029:GLU:HG2	8:W:1030:ILE:HG23	1.88	0.54
3:C:39:TYR:C	4:D:75:SER:HG	2.14	0.54
3:C:97:LEU:HD21	4:D:62:PHE:CE2	2.43	0.54
1:E:119:ILE:HG23	2:F:43:VAL:HG21	1.88	0.54
6:I:-19:DG:C2'	6:I:-18:DC:C5	2.88	0.54
6:I:32:DA:H2''	6:I:33:DC:O5'	2.07	0.54
7:J:34:DC:C1'	7:J:35:DT:C6	2.90	0.54
8:M:599:LYS:HD3	8:M:609:LYS:HE2	1.89	0.54
8:W:1247:PRO:HB2	8:W:1251:HIS:HB2	1.89	0.54
2:B:27:GLN:O	2:B:28:GLY:C	2.50	0.54
7:J:52:DC:H2''	7:J:53:DC:C5	2.42	0.54
8:W:625:TYR:OH	8:W:667:ASN:O	2.20	0.54
8:W:794:ASN:OD1	8:W:795:PRO:N	2.40	0.54
1:E:120:MET:C	2:F:50:ILE:HD12	2.32	0.54
5:G:29:ARG:HA	7:J:-44:DG:OP1	2.07	0.54
6:I:-23:DC:H41	6:I:-22:DA:H62	1.47	0.54
6:I:-22:DA:C8	6:I:-21:DC:C5	2.95	0.54
6:I:23:DA:C1'	6:I:24:DA:C8	2.91	0.54
8:M:348:PRO:HB3	8:M:427:PRO:HD3	1.89	0.54
8:W:476:ARG:HD2	8:W:480:LYS:HB2	1.88	0.54
8:W:660:ASN:HB3	8:W:696:LYS:HE3	1.90	0.54
8:W:768:LEU:HD12	8:W:768:LEU:C	2.32	0.54
8:W:1055:MET:HA	8:W:1121:PHE:CE1	2.43	0.54
3:C:44:GLY:H	4:D:86:ILE:C	2.14	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:G:29:ARG:N	7:J:-44:DG:H5''	2.23	0.54
4:H:84:SER:HB2	7:J:-35:DG:C3'	2.38	0.54
6:I:-38:DC:H2''	6:I:-37:DG:C8	2.43	0.54
6:I:17:DA:H1'	6:I:18:DC:H5'	1.90	0.54
8:W:482:THR:O	8:W:483:MET:CB	2.56	0.54
3:C:77:ARG:HG3	4:D:51:ILE:N	2.23	0.54
4:D:84:SER:CA	6:I:-34:DG:OP1	2.56	0.54
1:E:119:ILE:HG13	2:F:50:ILE:HD13	1.88	0.54
5:G:34:LEU:HD21	4:H:67:PHE:HE1	1.73	0.54
8:W:476:ARG:HG2	8:W:480:LYS:C	2.33	0.54
1:A:95:ALA:HB2	2:B:90:LEU:CD1	2.37	0.54
2:B:32:PRO:HA	2:B:35:ARG:NH1	2.23	0.54
3:C:41:GLU:CD	6:I:-35:DA:H5''	2.32	0.54
1:E:42:ARG:H	1:E:43:PRO:HD3	1.70	0.54
2:F:30:THR:CG2	7:J:-13:DA:C3'	2.86	0.54
5:G:104:GLN:OE1	5:G:104:GLN:N	2.41	0.54
7:J:37:DC:O2	7:J:38:DG:N7	2.41	0.54
8:W:503:GLY:HA2	8:W:532:PHE:CD1	2.43	0.54
8:W:518:LEU:HD11	8:W:555:LEU:HD11	1.82	0.54
8:W:793:TRP:O	8:W:794:ASN:CB	2.48	0.54
3:C:32:ARG:HD2	6:I:-44:DA:O5'	2.08	0.53
5:G:116:LEU:HD12	5:G:117:PRO:CD	2.38	0.53
4:H:93:THR:CG2	4:H:94:ALA:N	2.71	0.53
6:I:-49:DG:H2''	6:I:-48:DC:C5	2.43	0.53
6:I:-23:DC:C6	6:I:-22:DA:C8	2.95	0.53
7:J:51:DG:C2'	7:J:52:DC:OP2	2.52	0.53
8:W:328:VAL:CG2	8:W:1201:PRO:HB2	2.38	0.53
8:W:643:GLY:CA	8:W:646:PHE:CZ	2.80	0.53
8:W:1114:LYS:O	8:W:1115:LYS:HG2	2.07	0.53
8:W:1132:LEU:HD12	8:W:1132:LEU:C	2.31	0.53
1:A:88:ALA:CB	2:B:83:ALA:N	2.70	0.53
1:A:113:HIS:CB	1:E:126:LEU:HD21	2.37	0.53
1:A:116:ARG:NH2	1:E:113:HIS:HE1	2.07	0.53
4:D:103:LEU:HD23	4:D:103:LEU:C	2.34	0.53
2:F:78:ARG:NH2	6:I:28:DG:H3'	2.23	0.53
6:I:30:DT:H2''	6:I:31:DT:O5'	2.07	0.53
8:M:458:GLY:HA3	8:M:462:SER:HB2	1.90	0.53
8:W:295:ARG:CD	8:W:1198:ARG:HH21	2.18	0.53
1:A:45:THR:HG23	1:A:46:VAL:HG23	1.89	0.53
1:E:63:ARG:HD3	6:I:17:DA:C5'	2.38	0.53
1:E:85:GLN:NE2	2:F:82:THR:HA	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:G:96:LEU:HD12	4:H:100:PRO:CD	2.38	0.53
7:J:14:DT:H2'	7:J:15:DT:C7	2.26	0.53
8:W:220:GLU:OE1	8:W:220:GLU:HA	2.08	0.53
1:A:63:ARG:HH21	7:J:17:DA:H4'	1.72	0.53
3:C:25:PHE:HD2	3:C:52:ALA:HB1	1.72	0.53
5:G:102:ILE:O	5:G:103:ALA:C	2.50	0.53
8:W:615:ARG:HD2	8:W:822:LYS:HG2	1.89	0.53
2:B:78:ARG:CA	7:J:28:DA:OP1	2.53	0.53
1:E:117:VAL:N	7:J:-3:DA:OP1	2.41	0.53
2:F:30:THR:CB	7:J:-13:DA:C4'	2.86	0.53
2:F:75:HIS:HE1	4:H:90:GLU:HA	1.73	0.53
6:I:-78:DC:N4	7:J:78:DG:C6	2.70	0.53
7:J:10:DG:H2''	7:J:11:DC:H5'	1.90	0.53
7:J:15:DT:C2	7:J:16:DA:N7	2.77	0.53
8:W:377:ARG:HE	8:W:602:VAL:CG2	2.20	0.53
8:W:486:ASN:OD1	8:W:487:VAL:N	2.41	0.53
3:C:65:LEU:HD23	3:C:90:ASP:CG	2.32	0.53
5:G:42:ARG:HB3	6:I:38:DT:O3'	2.08	0.53
4:H:70:ILE:HD12	4:H:70:ILE:H	1.73	0.53
6:I:-19:DG:P	8:M:743:GLY:H	2.31	0.53
8:W:183:ILE:HA	8:W:281:PHE:CE2	2.44	0.53
8:W:418:LEU:HD11	8:W:428:HIS:CE1	2.44	0.53
2:F:73:THR:OG1	2:F:81:VAL:HG22	2.08	0.53
5:G:34:LEU:HD21	4:H:67:PHE:CE1	2.44	0.53
6:I:-17:DT:OP1	8:M:494:TYR:CZ	2.62	0.53
6:I:23:DA:C6	6:I:24:DA:C6	2.96	0.53
7:J:24:DC:C2	7:J:25:DT:C4	2.97	0.53
8:W:650:ASN:HA	8:W:654:GLU:HG2	1.91	0.53
8:W:715:LEU:HD21	8:W:780:LEU:CD2	2.38	0.53
1:A:100:LEU:HD22	2:B:37:LEU:CD1	2.36	0.53
1:E:70:LEU:HD13	2:F:24:ASP:O	2.09	0.53
2:F:64:ASN:O	2:F:67:ARG:HB3	2.09	0.53
5:G:81:ARG:HG2	5:G:85:LEU:HD13	1.90	0.53
6:I:-86:DA:H2	7:J:87:DT:O2	1.90	0.53
6:I:30:DT:C6	6:I:31:DT:C5	2.97	0.53
7:J:-33:DG:C6	7:J:-32:DT:C4	2.95	0.53
8:M:515:ALA:H	8:M:541:THR:HB	1.73	0.53
8:W:176:PHE:CD2	8:W:237:ARG:HD2	2.44	0.53
2:B:30:THR:HB	6:I:-12:DC:P	2.49	0.53
2:F:33:ALA:HA	2:F:36:ARG:CG	2.39	0.53
6:I:-6:DT:C7	6:I:-5:DA:N6	2.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:J:78:DG:O6	7:J:79:DG:O6	2.27	0.53
8:M:358:ARG:NH1	8:M:391:TRP:O	2.42	0.53
8:M:714:VAL:HA	8:M:785:THR:HB	1.91	0.53
8:W:786:VAL:HG23	8:W:786:VAL:O	2.08	0.53
1:A:65:LEU:HD21	1:A:69:ARG:NE	2.24	0.52
3:C:51:LEU:HD11	4:D:70:ILE:HG21	1.91	0.52
1:E:62:ILE:HG23	2:F:33:ALA:HB1	1.90	0.52
2:F:76:ALA:O	2:F:77:LYS:HG3	2.10	0.52
6:I:-78:DC:N3	7:J:79:DG:N2	2.56	0.52
6:I:-52:DG:H2''	6:I:-51:DC:C6	2.44	0.52
6:I:-48:DC:H1'	6:I:-47:DT:H5'	1.91	0.52
6:I:-16:DT:H1'	6:I:-15:DA:C8	2.44	0.52
8:W:415:ILE:HA	8:W:418:LEU:HD21	1.91	0.52
8:W:626:TYR:CE1	8:W:655:LEU:HD11	2.44	0.52
8:W:794:ASN:CG	8:W:795:PRO:HD2	2.33	0.52
6:I:-57:DC:C2	7:J:58:DG:N2	2.77	0.52
6:I:-4:DC:C2	7:J:4:DG:N2	2.66	0.52
8:W:611:GLU:HG2	8:W:816:VAL:CB	2.39	0.52
8:W:718:SER:HB3	8:W:724:LEU:HD21	1.90	0.52
1:A:70:LEU:HD13	2:B:25:ASN:OD1	2.09	0.52
2:B:78:ARG:CG	7:J:28:DA:P	2.98	0.52
5:G:24:GLN:HB3	4:H:40:LYS:HE3	1.90	0.52
6:I:-58:DG:H22	7:J:59:DC:H42	1.55	0.52
6:I:-16:DT:OP2	8:M:459:ASN:HB2	2.04	0.52
6:I:45:DC:C4	7:J:-46:DT:O4	2.62	0.52
7:J:-3:DA:N7	7:J:-2:DC:N4	2.57	0.52
7:J:-3:DA:C5	7:J:-2:DC:C4	2.98	0.52
8:W:1025:GLY:HA3	8:W:1139:LEU:CD2	2.34	0.52
8:W:1102:ASN:O	8:W:1105:THR:HG22	2.09	0.52
3:C:97:LEU:HB3	3:C:100:VAL:HG22	1.91	0.52
1:E:121:PRO:HB2	2:F:53:GLU:OE2	2.09	0.52
4:H:73:GLU:OE2	4:H:97:LEU:HD21	2.09	0.52
7:J:38:DG:H2''	7:J:39:DA:OP2	2.09	0.52
8:W:284:PHE:CE1	8:W:314:LEU:HD22	2.44	0.52
2:B:45:ARG:NE	7:J:8:DG:H5'	2.19	0.52
2:F:64:ASN:OD1	2:F:65:VAL:N	2.43	0.52
5:G:31:HIS:CD2	5:G:31:HIS:O	2.62	0.52
5:G:84:GLN:OE1	5:G:88:ARG:HG2	2.09	0.52
6:I:-69:DA:H2''	6:I:-68:DG:C8	2.44	0.52
8:W:284:PHE:HE1	8:W:314:LEU:HD13	1.74	0.52
8:W:359:PRO:O	8:W:360:ARG:C	2.52	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:W:593:PHE:O	8:W:594:ILE:CD1	2.58	0.52
8:W:643:GLY:CA	8:W:646:PHE:CE2	2.92	0.52
1:E:62:ILE:HD11	2:F:37:LEU:HD22	1.92	0.52
6:I:-43:DT:C6	6:I:-42:DT:H73	2.44	0.52
7:J:-33:DG:C6	7:J:-32:DT:O4	2.63	0.52
8:W:380:GLN:OE1	8:W:410:GLN:HG3	2.10	0.52
8:W:387:MET:HB2	8:W:414:PHE:CD1	2.44	0.52
8:W:1013:GLU:CG	8:W:1041:PRO:HG2	2.39	0.52
8:W:1099:PRO:O	8:W:1100:LYS:C	2.52	0.52
1:E:100:LEU:HD13	2:F:37:LEU:CD2	2.40	0.52
5:G:76:THR:O	4:H:49:THR:HA	2.09	0.52
5:G:83:LEU:O	5:G:87:VAL:HG23	2.10	0.52
4:H:51:ILE:CD1	4:H:56:MET:CE	2.83	0.52
6:I:-78:DC:N3	7:J:79:DG:C2	2.78	0.52
8:W:606:LEU:CD1	8:W:607:PRO:O	2.57	0.52
8:W:767:PHE:HE2	8:W:769:LEU:HD11	1.69	0.52
8:W:800:GLN:O	8:W:803:ALA:N	2.41	0.52
3:C:28:GLY:O	6:I:-44:DA:H3'	2.09	0.52
6:I:-59:DT:C6	6:I:-58:DG:C6	2.98	0.52
8:W:295:ARG:HH11	8:W:303:SER:CB	2.23	0.52
8:W:431:VAL:O	8:W:512:VAL:HA	2.09	0.52
2:B:65:VAL:HG23	2:B:66:ILE:N	2.24	0.52
3:C:23:LEU:CD1	3:C:53:ALA:HB2	2.39	0.52
2:F:76:ALA:O	2:F:77:LYS:HG2	2.09	0.52
6:I:30:DT:C2'	6:I:31:DT:H73	2.40	0.52
8:W:510:MET:HB3	8:W:537:ARG:HA	1.92	0.52
8:W:622:GLN:NE2	8:W:659:SER:O	2.43	0.52
8:W:655:LEU:CD2	8:W:825:VAL:CB	2.85	0.52
8:W:1143:LYS:HA	8:W:1187:PHE:CE1	2.42	0.52
1:A:40:ARG:HG3	7:J:10:DG:H5'	1.92	0.52
1:A:104:PHE:HD2	2:B:38:ALA:HA	1.75	0.52
3:C:39:TYR:OH	4:D:71:ALA:CB	2.57	0.52
3:C:97:LEU:HD21	4:D:62:PHE:HE2	1.74	0.52
6:I:-61:DG:C2	7:J:62:DC:O2	2.63	0.52
6:I:-30:DG:O6	7:J:29:DG:O6	2.28	0.52
7:J:-44:DG:C6	7:J:-43:DA:C6	2.98	0.52
7:J:78:DG:H2'	7:J:79:DG:C8	2.45	0.52
8:W:200:THR:HG22	8:W:201:VAL:HG23	1.92	0.52
8:W:433:PRO:HG2	8:W:514:GLU:CD	2.34	0.52
8:W:1009:ILE:HG13	8:W:1013:GLU:HB2	1.90	0.52
8:W:1171:SER:CB	8:W:1245:LYS:HE3	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:117:PRO:O	3:C:118:LYS:C	2.53	0.51
2:F:47:SER:CB	6:I:7:DC:OP1	2.58	0.51
6:I:-64:DC:H2''	6:I:-63:DC:C6	2.45	0.51
7:J:17:DA:C6	7:J:18:DG:C6	2.99	0.51
8:W:208:LYS:HG2	8:W:230:TYR:HD2	1.73	0.51
8:W:1119:PHE:CE2	8:W:1129:ALA:CB	2.82	0.51
8:M:1206:ILE:HG22	8:M:1209:LYS:HD2	1.93	0.51
8:W:350:TYR:CE1	8:W:1042:VAL:HG11	2.45	0.51
5:G:91:GLU:CB	5:G:95:LYS:HE3	2.31	0.51
6:I:-47:DT:H2''	6:I:-46:DC:C4	2.45	0.51
6:I:-38:DC:N3	6:I:-37:DG:N1	2.57	0.51
7:J:-29:DT:H2''	7:J:-28:DC:O5'	2.09	0.51
7:J:34:DC:C6	7:J:34:DC:C5'	2.85	0.51
8:M:751:ARG:CZ	8:M:778:ILE:HD11	2.40	0.51
8:W:415:ILE:O	8:W:419:ILE:HG13	2.10	0.51
8:W:729:ASP:O	8:W:733:ILE:HG12	2.10	0.51
8:W:1070:ARG:HH21	8:W:1113:GLU:HG2	1.76	0.51
2:B:75:HIS:HE1	4:D:89:ARG:HD3	1.75	0.51
5:G:35:ARG:CG	5:G:43:VAL:HG21	2.40	0.51
6:I:0:DC:H2'	6:I:1:DT:C7	2.38	0.51
6:I:24:DA:C2	6:I:25:DG:C2	2.98	0.51
7:J:-38:DA:C5	7:J:-37:DG:C5	2.93	0.51
8:M:507:TRP:HB2	8:M:534:VAL:HG12	1.91	0.51
8:W:1118:LEU:C	8:W:1118:LEU:HD12	2.36	0.51
8:W:1198:ARG:HB2	8:W:1209:ILE:HD13	1.92	0.51
1:E:124:ILE:HD12	2:F:53:GLU:OE1	2.10	0.51
5:G:47:ALA:N	5:G:48:PRO:HD2	2.25	0.51
6:I:-28:DT:H4'	6:I:-27:DC:OP1	2.11	0.51
7:J:21:DG:O4'	8:M:517:ARG:NH2	2.43	0.51
8:W:177:HIS:HE1	8:W:217:TRP:CE2	2.28	0.51
1:A:83:ARG:O	2:B:80:THR:HA	2.11	0.51
1:A:42:ARG:O	1:A:45:THR:CG2	2.59	0.51
5:G:54:VAL:O	5:G:58:LEU:HG	2.10	0.51
6:I:-12:DC:N4	6:I:-11:DG:C6	2.73	0.51
6:I:21:DC:C4	6:I:22:DC:C4	2.99	0.51
8:M:289:ARG:HE	8:M:290:ILE:H	1.58	0.51
8:W:350:TYR:CE1	8:W:1042:VAL:HG13	2.43	0.51
8:W:720:MET:SD	8:W:721:VAL:CG1	2.99	0.51
3:C:108:LEU:HD12	3:C:110:ASN:HB2	1.92	0.51
2:F:79:LYS:N	6:I:28:DG:OP1	2.42	0.51
5:G:32:ARG:HA	5:G:35:ARG:HE	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:H:84:SER:HB2	7:J:-35:DG:O3'	2.11	0.51
8:M:1145:ASN:O	8:M:1149:SER:CB	2.59	0.51
8:W:268:GLU:O	8:W:272:MET:HB2	2.10	0.51
8:W:462:SER:O	8:W:463:ARG:C	2.54	0.51
8:W:778:ILE:O	8:W:804:ARG:HD2	2.11	0.51
8:W:799:LEU:O	8:W:802:MET:HG2	2.10	0.51
8:W:1055:MET:HE3	8:W:1121:PHE:CD2	2.43	0.51
1:A:115:LYS:HG2	1:A:115:LYS:O	2.11	0.51
1:E:122:LYS:C	1:E:124:ILE:N	2.68	0.51
2:F:31:LYS:N	7:J:-12:DA:OP2	2.44	0.51
6:I:-8:DC:C2	6:I:-7:DG:C5	2.99	0.51
7:J:38:DG:N3	7:J:39:DA:C4	2.79	0.51
8:W:663:TYR:OH	8:W:672:VAL:CG1	2.53	0.51
8:W:1017:LEU:HD12	8:W:1027:LEU:HD21	1.93	0.51
8:W:1119:PHE:HE2	8:W:1129:ALA:HA	1.76	0.51
2:B:34:ILE:HD11	2:B:55:ARG:HE	1.76	0.51
5:G:42:ARG:CB	6:I:38:DT:O3'	2.59	0.51
6:I:-38:DC:C2	6:I:-37:DG:C6	2.99	0.51
8:M:696:LYS:O	8:M:700:LEU:CB	2.59	0.51
8:W:207:CYS:HA	8:W:211:TYR:HB2	1.93	0.51
2:B:62:LEU:O	2:B:65:VAL:CG2	2.59	0.50
3:C:40:ALA:HB3	4:D:86:ILE:CD1	2.29	0.50
3:C:43:VAL:O	7:J:38:DG:H5''	2.10	0.50
3:C:63:LEU:HB3	4:D:42:LEU:CD1	2.41	0.50
4:H:70:ILE:HD12	4:H:70:ILE:N	2.26	0.50
7:J:-21:DG:C5	7:J:-20:DC:N4	2.79	0.50
7:J:69:DC:H2''	7:J:70:DT:C6	2.46	0.50
8:W:515:ALA:H	8:W:541:THR:HB	1.75	0.50
8:W:764:ASP:OD1	8:W:764:ASP:O	2.29	0.50
8:W:795:PRO:CD	8:W:836:LYS:HD2	2.40	0.50
8:W:1170:TRP:CZ3	8:W:1247:PRO:HG3	2.46	0.50
1:A:83:ARG:NH1	7:J:26:DA:H4'	2.26	0.50
1:A:116:ARG:HH21	1:E:113:HIS:HE1	1.59	0.50
3:C:27:VAL:HG13	3:C:49:VAL:HA	1.92	0.50
6:I:-58:DG:C2	7:J:58:DG:C2	2.99	0.50
8:M:316:TYR:HH	8:M:455:CYS:HG	1.53	0.50
8:W:390:LEU:HD12	8:W:393:LYS:CB	2.41	0.50
8:W:408:THR:HG22	8:W:443:THR:HG21	1.92	0.50
8:W:602:VAL:HG13	8:W:602:VAL:O	2.11	0.50
8:W:1152:ASP:OD1	8:W:1153:ASP:N	2.44	0.50
3:C:39:TYR:OH	4:D:71:ALA:HB3	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:I:-19:DG:H2''	8:M:743:GLY:O	2.04	0.50
6:I:0:DC:H2''	6:I:1:DT:H6	1.74	0.50
7:J:-30:DA:N7	7:J:-29:DT:H73	2.27	0.50
7:J:15:DT:H2''	7:J:16:DA:H8	1.74	0.50
7:J:22:DT:H2''	7:J:23:DG:OP2	2.11	0.50
7:J:78:DG:C4	7:J:79:DG:N7	2.79	0.50
8:W:1102:ASN:OD1	8:W:1104:LEU:HG	2.12	0.50
6:I:-18:DC:C5'	8:M:434:LEU:HD11	2.36	0.50
7:J:37:DC:H2''	7:J:38:DG:OP2	2.12	0.50
7:J:38:DG:N2	7:J:39:DA:C4	2.79	0.50
7:J:51:DG:C5	7:J:52:DC:N4	2.79	0.50
8:W:229:THR:CG2	8:W:230:TYR:H	2.14	0.50
8:W:387:MET:O	8:W:391:TRP:HB2	2.11	0.50
4:D:87:THR:HG23	4:D:89:ARG:H	1.75	0.50
7:J:-14:DA:H2''	7:J:-13:DA:C8	2.47	0.50
7:J:1:DC:H2''	7:J:2:DG:C8	2.46	0.50
8:M:1145:ASN:O	8:M:1149:SER:OG	2.27	0.50
8:W:429:ILE:HG23	8:W:429:ILE:O	2.11	0.50
1:E:63:ARG:NH2	7:J:-13:DA:H5'	2.25	0.50
8:W:183:ILE:HB	8:W:214:LEU:CD2	2.41	0.50
8:W:458:GLY:HA3	8:W:462:SER:CB	2.41	0.50
8:W:488:LEU:HD23	8:W:489:LEU:N	2.26	0.50
8:W:626:TYR:HD2	8:W:627:LYS:HZ2	1.57	0.50
8:W:751:ARG:O	8:W:754:ILE:HG22	2.12	0.50
4:D:48:ASP:OD1	6:I:-54:DA:H4'	2.11	0.50
2:F:75:HIS:NE2	4:H:90:GLU:OE1	2.42	0.50
5:G:26:PRO:HD3	4:H:37:TYR:CG	2.47	0.50
4:H:51:ILE:HD13	4:H:56:MET:HB2	1.92	0.50
6:I:-58:DG:N1	7:J:58:DG:N1	2.60	0.50
6:I:-17:DT:H5'	8:M:493:GLU:OE2	2.10	0.50
6:I:21:DC:H2'	6:I:22:DC:C6	2.46	0.50
6:I:5:DC:O2	6:I:6:DC:N3	2.45	0.50
7:J:-69:DG:H2''	7:J:-68:DA:H8	1.77	0.50
8:M:184:ASN:H	8:M:214:LEU:HB3	1.77	0.50
8:M:437:MET:HG3	8:M:489:LEU:HD22	1.92	0.50
8:W:390:LEU:HD13	8:W:393:LYS:CD	2.32	0.50
8:W:595:LEU:HD13	8:W:597:ARG:HH22	1.76	0.50
8:W:599:LYS:C	8:W:601:ASP:H	2.20	0.50
3:C:42:ARG:HD3	7:J:38:DG:C4'	2.42	0.50
1:E:50:GLU:HB3	1:E:54:TYR:HE2	1.76	0.50
4:H:87:THR:CG2	4:H:90:GLU:HG2	2.35	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:I:-18:DC:C5'	8:M:434:LEU:CD2	2.58	0.50
7:J:19:DC:C6	7:J:20:DG:O6	2.61	0.50
8:M:786:VAL:HG11	8:M:802:MET:HG2	1.94	0.50
8:M:1139:ASP:HB3	8:M:1261:LEU:HD13	1.94	0.50
8:W:431:VAL:O	8:W:431:VAL:CG1	2.58	0.50
8:W:455:CYS:SG	8:W:456:TYR:N	2.84	0.50
1:A:92:LEU:N	2:B:86:VAL:HG11	2.26	0.49
1:E:69:ARG:CB	2:F:24:ASP:CB	2.90	0.49
5:G:25:PHE:CE2	5:G:55:LEU:HB2	2.47	0.49
4:H:35:ALA:HB1	4:H:56:MET:SD	2.52	0.49
6:I:7:DC:H2''	6:I:8:DC:C5	2.46	0.49
8:W:387:MET:HB3	8:W:414:PHE:CE1	2.46	0.49
8:W:398:ILE:HG12	8:W:539:LEU:CD2	2.35	0.49
8:W:415:ILE:HA	8:W:418:LEU:HD23	1.94	0.49
1:A:85:GLN:C	6:I:-24:DG:OP2	2.55	0.49
7:J:-64:DA:H2'	7:J:-63:DT:H71	1.93	0.49
8:M:530:ASN:HA	8:M:537:ARG:HH22	1.77	0.49
8:W:705:THR:O	8:W:708:LYS:HB3	2.12	0.49
8:W:746:PRO:HB2	8:W:749:GLN:HG2	1.94	0.49
2:B:62:LEU:O	2:B:65:VAL:HG22	2.11	0.49
4:D:55:ALA:HA	4:D:58:ILE:HD12	1.94	0.49
2:F:29:ILE:CG2	2:F:30:THR:H	2.24	0.49
6:I:-30:DG:N9	6:I:-29:DC:C6	2.80	0.49
6:I:5:DC:O3'	6:I:6:DC:H6	1.94	0.49
6:I:45:DC:H3'	6:I:46:DA:P	2.53	0.49
7:J:67:DT:H2''	7:J:68:DT:C6	2.48	0.49
8:W:488:LEU:CD2	8:W:490:THR:CG2	2.90	0.49
1:A:73:GLU:CG	2:B:25:ASN:HD22	2.18	0.49
3:C:116:LEU:C	3:C:116:LEU:HD12	2.37	0.49
5:G:34:LEU:CD2	4:H:67:PHE:CZ	2.95	0.49
4:H:84:SER:HB2	7:J:-35:DG:C4'	2.41	0.49
6:I:-4:DC:N3	7:J:4:DG:C2	2.80	0.49
6:I:34:DT:H2'	6:I:35:DC:H5	1.76	0.49
8:W:293:SER:HB3	8:W:307:TYR:HD1	1.75	0.49
8:W:516:HIS:HB3	8:W:543:THR:HB	1.93	0.49
8:W:1034:LEU:O	8:W:1037:ASP:O	2.30	0.49
6:I:-12:DC:N4	7:J:11:DC:H42	2.11	0.49
7:J:-11:DC:H2''	7:J:-10:DG:O5'	2.13	0.49
7:J:79:DG:C2'	7:J:80:DC:OP2	2.60	0.49
8:W:437:MET:CE	8:W:457:MET:SD	3.01	0.49
8:W:611:GLU:OE2	8:W:818:ARG:HB2	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:W:717:PHE:CE1	8:W:769:LEU:HB2	2.48	0.49
4:H:51:ILE:HD13	4:H:56:MET:SD	2.52	0.49
6:I:-58:DG:H2''	6:I:-57:DC:C6	2.47	0.49
7:J:34:DC:H6	7:J:34:DC:C5'	2.20	0.49
8:W:387:MET:HE2	8:W:538:MET:HE2	1.92	0.49
8:W:545:LEU:HD13	8:W:552:LEU:CD1	2.42	0.49
8:W:1114:LYS:O	8:W:1115:LYS:HD3	2.13	0.49
8:W:1124:VAL:HB	8:W:1127:LEU:HD11	1.94	0.49
3:C:32:ARG:NH2	6:I:-43:DT:H71	2.25	0.49
6:I:-40:DG:H1	7:J:40:DC:N4	2.11	0.49
6:I:24:DA:C2'	6:I:25:DG:N7	2.76	0.49
7:J:32:DG:H2''	7:J:33:DT:C6	2.48	0.49
8:M:550:LYS:O	8:M:554:ALA:HB2	2.13	0.49
8:W:177:HIS:NE2	8:W:217:TRP:CD2	2.80	0.49
8:W:1170:TRP:CE3	8:W:1174:TRP:CD1	2.99	0.49
8:W:1247:PRO:HB2	8:W:1251:HIS:CB	2.42	0.49
2:B:78:ARG:HG2	7:J:28:DA:P	2.53	0.49
1:E:116:ARG:HA	7:J:-3:DA:OP2	2.12	0.49
2:F:78:ARG:HH22	6:I:28:DG:H3'	1.78	0.49
6:I:-73:DC:C2	6:I:-72:DA:C5	3.01	0.49
6:I:-17:DT:C5'	8:M:493:GLU:OE2	2.61	0.49
8:W:649:LEU:O	8:W:654:GLU:HB2	2.13	0.49
8:W:1056:MET:HE2	8:W:1133:LEU:HD23	1.95	0.49
8:W:1205:ILE:HD12	8:W:1208:LYS:HB2	1.95	0.49
3:C:34:LEU:CD2	3:C:39:TYR:OH	2.61	0.49
1:E:120:MET:HE3	1:E:121:PRO:HD2	1.93	0.49
4:H:51:ILE:CG1	4:H:56:MET:HE3	2.43	0.49
6:I:5:DC:C1'	6:I:6:DC:C6	2.94	0.49
8:M:1104:PRO:HA	8:M:1107:ARG:HG2	1.93	0.49
1:A:104:PHE:CD2	2:B:38:ALA:CA	2.96	0.49
3:C:42:ARG:HD3	7:J:38:DG:H4'	1.95	0.49
3:C:63:LEU:HB3	4:D:42:LEU:HD12	1.94	0.49
4:D:70:ILE:HD13	4:D:98:LEU:HD12	1.95	0.49
2:F:30:THR:HG21	7:J:-13:DA:H5'	1.87	0.49
2:F:34:ILE:O	2:F:37:LEU:HB3	2.12	0.49
2:F:39:ARG:C	2:F:41:GLY:N	2.68	0.49
6:I:-83:DC:H2''	6:I:-82:DG:C8	2.48	0.49
6:I:41:DT:C2	6:I:42:DC:C5	3.01	0.49
7:J:38:DG:N3	7:J:39:DA:C5	2.81	0.49
7:J:50:DG:H1'	7:J:51:DG:H5'	1.95	0.49
8:W:417:TRP:O	8:W:417:TRP:CG	2.65	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:43:PRO:HB2	6:I:-5:DA:C5'	2.37	0.48
1:A:45:THR:O	1:A:49:ARG:HG3	2.12	0.48
1:A:65:LEU:CD1	7:J:17:DA:OP2	2.61	0.48
3:C:102:ILE:HD11	4:D:58:ILE:CG2	2.42	0.48
4:H:45:VAL:HG12	4:H:46:HIS:ND1	2.28	0.48
6:I:-79:DG:N1	7:J:79:DG:N1	2.61	0.48
6:I:-68:DG:H2''	6:I:-67:DA:N7	2.28	0.48
7:J:24:DC:O2	7:J:25:DT:C2	2.66	0.48
7:J:30:DC:C5	7:J:31:DT:C4	3.01	0.48
7:J:39:DA:C2'	7:J:40:DC:H5'	2.36	0.48
8:M:430:ILE:HD13	8:M:487:VAL:HG13	1.95	0.48
8:W:419:ILE:HD13	8:W:451:LEU:HD13	1.94	0.48
8:W:517:ARG:O	8:W:519:LYS:N	2.44	0.48
8:W:611:GLU:CB	8:W:816:VAL:HB	2.42	0.48
8:W:1094:LYS:HE2	8:W:1097:ASN:HB3	1.95	0.48
3:C:23:LEU:HD11	3:C:53:ALA:HB2	1.94	0.48
3:C:40:ALA:HB2	4:D:86:ILE:HD13	1.73	0.48
3:C:97:LEU:HD11	4:D:62:PHE:CD2	2.40	0.48
6:I:-67:DA:C2	6:I:-66:DA:C2	3.01	0.48
6:I:21:DC:C5	6:I:22:DC:N4	2.81	0.48
7:J:33:DT:C2	7:J:34:DC:N4	2.81	0.48
8:M:292:ASP:H	8:M:308:LEU:HB3	1.78	0.48
8:W:312:ARG:HD3	8:W:313:ARG:N	2.28	0.48
8:W:556:VAL:HG22	8:W:593:PHE:CE2	2.47	0.48
1:E:106:ASP:O	1:E:107:THR:C	2.56	0.48
5:G:24:GLN:CD	4:H:41:VAL:CG1	2.87	0.48
6:I:7:DC:H2''	6:I:8:DC:H6	1.72	0.48
8:M:180:ASP:O	8:M:241:ARG:NH1	2.40	0.48
8:W:295:ARG:HD2	8:W:1198:ARG:HH21	1.66	0.48
8:W:525:LEU:HA	8:W:528:SER:CB	2.43	0.48
8:W:586:LEU:HD23	8:W:587:HIS:N	2.28	0.48
8:W:1077:LEU:HD23	8:W:1107:LEU:HA	1.94	0.48
1:A:125:GLN:HG2	1:A:128:ARG:HH12	1.78	0.48
3:C:63:LEU:HD22	4:D:42:LEU:HD13	1.95	0.48
1:E:61:LEU:HD22	2:F:36:ARG:C	2.38	0.48
2:F:15:ALA:CB	8:W:690:LEU:HD12	2.41	0.48
6:I:-18:DC:C3'	8:M:434:LEU:CD2	2.91	0.48
6:I:-8:DC:C2	6:I:-7:DG:C6	3.02	0.48
6:I:-6:DT:C6	6:I:-5:DA:C6	3.01	0.48
6:I:24:DA:C2	6:I:25:DG:N1	2.82	0.48
7:J:-68:DA:H2'	7:J:-67:DT:H71	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:J:-25:DC:C6	7:J:-24:DT:H72	2.48	0.48
1:A:69:ARG:HB3	2:B:22:LEU:HD23	1.94	0.48
5:G:17:ARG:HD3	5:G:27:VAL:HG11	1.95	0.48
6:I:-75:DC:H2'	6:I:-74:DC:C6	2.49	0.48
6:I:-62:DC:H2''	6:I:-61:DG:H5''	1.96	0.48
6:I:21:DC:N4	6:I:22:DC:N4	2.61	0.48
7:J:58:DG:C2'	7:J:59:DC:C5	2.91	0.48
8:W:221:SER:HB3	8:W:311:TRP:CH2	2.48	0.48
8:W:370:PHE:CE1	8:W:417:TRP:HZ3	2.30	0.48
8:W:520:ASN:ND2	8:W:522:GLU:HB3	2.29	0.48
8:W:814:VAL:HG12	8:W:815:MET:N	2.29	0.48
8:W:1047:LYS:O	8:W:1051:THR:HG23	2.14	0.48
8:W:1174:TRP:NE1	8:W:1247:PRO:HD3	2.29	0.48
1:A:88:ALA:CB	2:B:83:ALA:HA	2.43	0.48
2:F:32:PRO:CD	7:J:-12:DA:OP2	2.60	0.48
2:F:88:TYR:O	2:F:92:ARG:HG2	2.14	0.48
5:G:26:PRO:HB2	5:G:29:ARG:HB3	1.95	0.48
5:G:65:LEU:HA	5:G:68:ASN:OD1	2.14	0.48
5:G:88:ARG:C	5:G:94:ASN:HD22	2.22	0.48
6:I:-78:DC:N3	7:J:78:DG:N2	2.61	0.48
6:I:45:DC:N3	7:J:-46:DT:N3	2.62	0.48
7:J:15:DT:H3	7:J:16:DA:N6	2.11	0.48
7:J:21:DG:H4'	8:M:517:ARG:CZ	2.36	0.48
8:W:309:VAL:HG13	8:W:311:TRP:CH2	2.49	0.48
8:W:376:LEU:HD22	9:W:1502:ADP:HN62	1.78	0.48
8:W:399:LEU:HG	8:W:595:LEU:HD12	1.95	0.48
8:W:681:MET:HE1	8:W:682:THR:HG22	1.95	0.48
8:W:1145:LEU:HD21	8:W:1149:ASN:HD21	1.77	0.48
2:B:55:ARG:O	2:B:59:LYS:HG3	2.14	0.48
5:G:26:PRO:HB3	4:H:37:TYR:OH	2.13	0.48
5:G:103:ALA:HB1	5:G:104:GLN:OE1	2.13	0.48
6:I:5:DC:H1'	6:I:6:DC:C4	2.48	0.48
7:J:-8:DG:C5	7:J:-7:DG:C6	3.02	0.48
7:J:17:DA:C5	7:J:18:DG:C6	3.02	0.48
8:W:517:ARG:HA	8:W:517:ARG:HD2	1.51	0.48
8:W:723:MET:SD	8:W:723:MET:C	2.97	0.48
1:A:117:VAL:HG11	6:I:-4:DC:C5'	2.39	0.48
1:E:116:ARG:HD3	7:J:-3:DA:H3'	1.96	0.48
2:F:46:ILE:O	6:I:7:DC:C4'	2.61	0.48
6:I:-73:DC:H2''	6:I:-72:DA:OP2	2.12	0.48
6:I:-18:DC:C3'	8:M:434:LEU:HD22	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:I:-3:DG:N3	6:I:-2:DC:C2	2.81	0.48
7:J:20:DG:H3'	8:M:496:LEU:HD23	1.94	0.48
4:D:97:LEU:HD12	4:D:97:LEU:O	2.14	0.48
1:E:48:LEU:CB	1:E:52:ARG:HH12	2.27	0.48
6:I:-56:DC:H2''	6:I:-55:DG:C8	2.49	0.48
6:I:-12:DC:C2'	6:I:-11:DG:C8	2.94	0.48
6:I:-11:DG:H2''	6:I:-10:DC:H6	1.79	0.48
7:J:-26:DC:H2''	7:J:-25:DC:C5	2.49	0.48
7:J:43:DA:C8	7:J:44:DT:C7	2.97	0.48
7:J:51:DG:C8	7:J:52:DC:C4	3.01	0.48
7:J:55:DT:H2''	7:J:56:DC:C5	2.49	0.48
8:W:298:LEU:HB2	8:W:302:THR:HG22	1.96	0.48
8:W:315:ASN:HD21	8:W:458:GLY:CA	2.22	0.48
8:W:521:ALA:HA	8:W:526:TYR:CE2	2.49	0.48
8:W:614:LEU:CB	8:W:819:LEU:HA	2.44	0.48
1:A:70:LEU:HD13	2:B:25:ASN:CB	2.44	0.48
3:C:30:VAL:O	3:C:34:LEU:HG	2.14	0.48
6:I:-19:DG:C4'	8:M:743:GLY:HA3	2.43	0.48
6:I:30:DT:N3	6:I:31:DT:C4	2.81	0.48
7:J:-25:DC:C2'	7:J:-24:DT:H73	2.33	0.48
7:J:-17:DT:C2'	7:J:-16:DT:O5'	2.54	0.48
8:W:315:ASN:OD1	8:W:316:TYR:HD1	1.97	0.48
8:W:611:GLU:CG	8:W:816:VAL:HG12	2.32	0.48
1:E:46:VAL:O	1:E:49:ARG:HB3	2.14	0.47
1:E:63:ARG:HE	2:F:30:THR:HG21	1.76	0.47
2:F:34:ILE:HD11	2:F:55:ARG:HD2	1.96	0.47
5:G:17:ARG:NH1	7:J:-43:DA:OP2	2.46	0.47
5:G:42:ARG:HA	6:I:39:DA:OP1	2.14	0.47
6:I:-75:DC:H3'	6:I:-75:DC:H6	1.78	0.47
7:J:-33:DG:H2'	7:J:-32:DT:C6	2.49	0.47
7:J:67:DT:C2'	7:J:68:DT:H71	2.42	0.47
8:W:333:GLU:OE1	8:W:336:LYS:HE3	2.13	0.47
8:W:663:TYR:CE2	8:W:693:SER:HB3	2.48	0.47
2:B:32:PRO:HG2	6:I:-13:DA:H3'	1.95	0.47
3:C:114:VAL:O	3:C:114:VAL:HG12	2.13	0.47
2:F:80:THR:HG23	6:I:27:DG:H4'	1.95	0.47
6:I:-30:DG:C5	6:I:-29:DC:C5	2.99	0.47
6:I:-6:DT:C2'	6:I:-5:DA:C8	2.66	0.47
6:I:24:DA:C4	6:I:25:DG:C5	3.02	0.47
8:W:326:ASP:HA	8:W:329:LYS:CB	2.44	0.47
8:W:399:LEU:HA	8:W:595:LEU:HD12	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:W:488:LEU:HD22	8:W:490:THR:CG2	2.44	0.47
8:W:611:GLU:CA	8:W:816:VAL:HB	2.43	0.47
8:W:681:MET:CE	8:W:682:THR:HG22	2.44	0.47
8:W:754:ILE:HG12	8:W:778:ILE:CD1	2.44	0.47
8:W:1145:LEU:HD23	8:W:1145:LEU:C	2.39	0.47
2:B:27:GLN:O	2:B:29:ILE:N	2.47	0.47
1:E:61:LEU:HD22	2:F:36:ARG:HB2	1.97	0.47
1:E:74:ILE:HG13	1:E:75:ALA:N	2.29	0.47
1:E:104:PHE:HA	1:E:107:THR:OG1	2.14	0.47
6:I:-37:DG:C2'	6:I:-36:DT:C5	2.85	0.47
6:I:-22:DA:C5	6:I:-21:DC:C5	3.03	0.47
8:W:636:ALA:HA	8:W:640:GLY:HA2	1.95	0.47
8:W:1059:ALA:HB1	8:W:1132:LEU:HD11	1.95	0.47
8:W:1157:PHE:CD2	8:W:1183:LEU:HD11	2.49	0.47
1:A:68:GLN:O	1:A:72:ARG:HG2	2.14	0.47
1:A:88:ALA:HA	2:B:83:ALA:CA	2.43	0.47
1:E:47:ALA:CA	6:I:9:DG:OP1	2.63	0.47
6:I:-19:DG:C3'	8:M:743:GLY:C	2.86	0.47
7:J:-20:DC:H4'	8:W:772:ARG:NE	2.29	0.47
7:J:10:DG:H2''	7:J:11:DC:C5'	2.44	0.47
7:J:20:DG:N2	7:J:21:DG:O6	2.44	0.47
7:J:31:DT:H2''	7:J:32:DG:H8	1.79	0.47
8:M:315:ASN:HD21	8:M:458:GLY:HA2	1.78	0.47
8:W:427:PRO:O	8:W:507:TRP:CD1	2.67	0.47
8:W:688:ARG:O	8:W:691:ILE:HG22	2.15	0.47
1:A:99:TYR:CD1	1:A:100:LEU:HD12	2.48	0.47
3:C:31:HIS:HB2	3:C:48:PRO:CB	2.38	0.47
5:G:78:ILE:HD12	4:H:49:THR:CG2	2.44	0.47
7:J:-40:DC:H2''	7:J:-39:DT:OP2	2.14	0.47
7:J:78:DG:H2''	7:J:79:DG:C8	2.49	0.47
8:W:305:LEU:HD21	8:W:307:TYR:CE1	2.50	0.47
8:W:404:GLY:HA2	9:W:1502:ADP:O3B	2.15	0.47
8:W:469:TYR:O	8:W:469:TYR:CG	2.66	0.47
8:W:507:TRP:O	8:W:534:VAL:HA	2.13	0.47
8:W:508:GLN:HB2	8:W:535:ALA:CB	2.42	0.47
8:W:618:LEU:HG	8:W:622:GLN:NE2	2.30	0.47
8:W:663:TYR:OH	8:W:693:SER:HB2	2.15	0.47
8:W:767:PHE:CE2	8:W:769:LEU:CD1	2.92	0.47
8:W:1070:ARG:HG3	8:W:1110:LYS:HE3	1.96	0.47
1:A:61:LEU:HD22	2:B:36:ARG:HD3	1.97	0.47
2:F:51:TYR:O	2:F:54:THR:OG1	2.26	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:G:25:PHE:CE1	5:G:56:GLU:CA	2.95	0.47
6:I:-57:DC:C2'	6:I:-56:DC:C5	2.94	0.47
6:I:-33:DA:H2''	6:I:-32:DC:H5'	1.97	0.47
6:I:23:DA:C4	6:I:24:DA:C6	3.03	0.47
7:J:-44:DG:N2	7:J:-43:DA:C2	2.83	0.47
8:M:506:LYS:HG2	8:M:533:LYS:HE2	1.94	0.47
8:W:469:TYR:O	8:W:469:TYR:CD2	2.68	0.47
8:W:723:MET:O	8:W:726:ILE:HB	2.15	0.47
8:W:1073:ILE:CG2	8:W:1110:LYS:HE2	2.36	0.47
8:W:1150:TYR:HD1	8:W:1156:LYS:CE	1.98	0.47
1:A:65:LEU:HD21	1:A:69:ARG:CZ	2.45	0.47
3:C:63:LEU:HD13	4:D:42:LEU:HA	1.96	0.47
3:C:91:GLU:C	3:C:91:GLU:CD	2.82	0.47
4:D:77:LEU:HD11	4:D:90:GLU:HB3	1.96	0.47
2:F:75:HIS:CE1	4:H:93:THR:CG2	2.98	0.47
5:G:29:ARG:HA	7:J:-44:DG:C5'	2.44	0.47
5:G:42:ARG:CG	6:I:38:DT:H4'	2.44	0.47
5:G:47:ALA:O	5:G:51:LEU:HG	2.14	0.47
6:I:23:DA:C8	6:I:24:DA:N7	2.83	0.47
6:I:77:DG:H2''	6:I:78:DA:H5'	1.97	0.47
7:J:-76:DG:C8	7:J:-75:DT:H72	2.49	0.47
7:J:-44:DG:H2''	7:J:-43:DA:H5'	1.95	0.47
7:J:-18:DG:C4'	8:W:493:GLU:OE2	2.62	0.47
7:J:-16:DT:OP2	8:W:497:LYS:CE	2.63	0.47
7:J:78:DG:H2''	7:J:79:DG:H8	1.79	0.47
8:M:486:ASN:OD1	8:M:487:VAL:N	2.46	0.47
8:M:656:LYS:HG2	8:M:825:VAL:HG11	1.97	0.47
8:W:377:ARG:CD	8:W:602:VAL:HG23	2.44	0.47
8:W:488:LEU:HD22	8:W:490:THR:HG22	1.97	0.47
8:W:525:LEU:HD12	8:W:525:LEU:O	2.14	0.47
8:W:606:LEU:HA	8:W:607:PRO:HD2	1.78	0.47
8:W:775:GLY:O	8:W:804:ARG:NH2	2.48	0.47
8:W:793:TRP:CZ3	8:W:829:VAL:HG21	2.50	0.47
8:W:1055:MET:HB2	8:W:1121:PHE:CZ	2.50	0.47
8:W:1067:GLU:C	8:W:1067:GLU:CD	2.83	0.47
8:W:1179:ASP:HA	8:W:1182:LEU:HD12	1.97	0.47
8:W:1197:ILE:O	8:W:1203:LEU:HD12	2.15	0.47
1:A:109:LEU:HD21	1:E:129:ARG:CZ	2.45	0.47
3:C:60:ALA:HA	4:D:41:VAL:CG1	2.45	0.47
1:E:75:ALA:CB	1:E:82:LEU:CD2	2.88	0.47
6:I:-27:DC:H2''	6:I:-26:DT:H72	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:I:1:DT:H2''	6:I:2:DG:C8	2.49	0.47
6:I:54:DG:H2''	6:I:55:DT:C5	2.50	0.47
7:J:-50:DT:O4	7:J:-49:DG:O6	2.31	0.47
7:J:33:DT:C2	7:J:34:DC:C4	3.02	0.47
8:W:214:LEU:CD2	8:W:225:ASN:HB2	2.44	0.47
8:W:410:GLN:O	8:W:414:PHE:HB2	2.15	0.47
8:W:786:VAL:HG23	8:W:816:VAL:HG22	1.94	0.47
1:A:83:ARG:CZ	7:J:26:DA:H4'	2.44	0.47
1:A:119:ILE:HG12	2:B:43:VAL:HG11	1.96	0.47
3:C:97:LEU:HD22	3:C:100:VAL:HG21	1.97	0.47
1:E:64:LYS:O	1:E:64:LYS:HG2	2.14	0.47
1:E:75:ALA:CB	1:E:82:LEU:HD23	2.45	0.47
2:F:30:THR:HG22	7:J:-13:DA:C4'	2.28	0.47
5:G:17:ARG:CD	5:G:27:VAL:HG11	2.45	0.47
6:I:-73:DC:C2	7:J:74:DG:N2	2.82	0.47
6:I:-66:DA:H2''	6:I:-65:DT:C5	2.50	0.47
6:I:-30:DG:H1'	6:I:-29:DC:O5'	2.14	0.47
6:I:30:DT:C2'	6:I:31:DT:C7	2.93	0.47
7:J:13:DT:P	8:M:241:ARG:CG	2.91	0.47
7:J:76:DG:C5	7:J:77:DC:N4	2.83	0.47
8:W:458:GLY:HA3	8:W:462:SER:HB2	1.97	0.47
8:W:602:VAL:HG11	8:W:808:ILE:CG2	2.45	0.47
8:W:626:TYR:OH	8:W:824:THR:HA	2.15	0.47
3:C:116:LEU:HD12	3:C:116:LEU:O	2.15	0.47
5:G:25:PHE:HE2	5:G:55:LEU:HB2	1.80	0.47
6:I:-43:DT:N3	6:I:-42:DT:C4	2.83	0.47
7:J:-18:DG:H4'	8:W:493:GLU:HG2	1.74	0.47
7:J:52:DC:H2''	7:J:53:DC:C6	2.50	0.47
8:W:177:HIS:NE2	8:W:217:TRP:CD1	2.82	0.47
8:W:455:CYS:SG	8:W:489:LEU:HB2	2.55	0.47
2:B:68:ASP:OD1	4:D:97:LEU:HD22	2.14	0.46
5:G:25:PHE:HA	4:H:37:TYR:HD2	1.79	0.46
6:I:-30:DG:N9	6:I:-29:DC:C5	2.80	0.46
8:W:371:ILE:HD12	8:W:374:GLY:O	2.16	0.46
8:W:508:GLN:HA	8:W:535:ALA:H	1.80	0.46
2:B:68:ASP:O	2:B:72:TYR:CD1	2.69	0.46
6:I:-77:DC:OP2	8:W:1254[A]:ARG:NE	2.48	0.46
6:I:-40:DG:H1	7:J:40:DC:H42	1.63	0.46
8:W:390:LEU:HD12	8:W:393:LYS:CG	2.44	0.46
8:W:408:THR:CG2	8:W:443:THR:HG21	2.45	0.46
8:W:523:SER:CB	8:W:526:TYR:CB	2.72	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:W:602:VAL:CG1	8:W:808:ILE:CG2	2.91	0.46
8:W:1245:LYS:HA	8:W:1245:LYS:HD2	1.72	0.46
4:D:43:LYS:HD2	4:D:47:PRO:HA	1.97	0.46
1:E:61:LEU:HD13	2:F:37:LEU:N	2.22	0.46
5:G:101:THR:C	5:G:102:ILE:HD13	2.41	0.46
7:J:-1:DA:H2''	7:J:0:DG:H5'	1.96	0.46
7:J:32:DG:C4	7:J:33:DT:C4	3.03	0.46
8:W:293:SER:HB3	8:W:307:TYR:CE1	2.50	0.46
8:W:380:GLN:HG3	9:W:1502:ADP:HN62	1.80	0.46
8:W:509:PHE:CZ	8:W:538:MET:HE3	2.51	0.46
8:W:696:LYS:HB3	8:W:819:LEU:HD23	1.97	0.46
8:W:720:MET:SD	8:W:721:VAL:HG13	2.56	0.46
1:A:76:GLN:OE1	2:B:21:VAL:HG23	2.15	0.46
1:A:105:GLU:C	1:A:105:GLU:CD	2.84	0.46
1:E:65:LEU:HD13	6:I:17:DA:O5'	2.15	0.46
2:F:35:ARG:NH2	2:F:39:ARG:HH22	2.10	0.46
2:F:75:HIS:O	2:F:75:HIS:CD2	2.69	0.46
6:I:-28:DT:N1	6:I:-27:DC:C4	2.83	0.46
7:J:78:DG:C8	7:J:79:DG:N7	2.83	0.46
8:W:221:SER:CB	8:W:311:TRP:CZ2	2.98	0.46
8:W:284:PHE:CE1	8:W:314:LEU:HD13	2.50	0.46
8:W:681:MET:SD	8:W:681:MET:C	2.95	0.46
8:W:1114:LYS:O	8:W:1115:LYS:CG	2.63	0.46
1:A:125:GLN:HG2	1:A:128:ARG:HH22	1.81	0.46
3:C:17:ARG:NE	6:I:-43:DT:OP1	2.43	0.46
6:I:21:DC:OP1	8:W:525:LEU:N	2.48	0.46
7:J:-57:DT:H4'	7:J:-56:DG:OP1	2.15	0.46
7:J:31:DT:H2''	7:J:32:DG:C8	2.50	0.46
8:M:403:MET:CB	10:M:1502:BEF:F2	2.53	0.46
8:W:330:LEU:HD12	8:W:331:ALA:CB	2.45	0.46
8:W:432:VAL:CG1	8:W:440:TRP:NE1	2.79	0.46
8:W:1070:ARG:O	8:W:1073:ILE:HG22	2.15	0.46
3:C:116:LEU:HD11	3:C:118:LYS:HB2	1.97	0.46
4:D:70:ILE:CD1	4:D:98:LEU:HD12	2.44	0.46
5:G:24:GLN:NE2	4:H:41:VAL:HG12	2.30	0.46
5:G:25:PHE:CE1	5:G:56:GLU:CB	2.99	0.46
6:I:-50:DC:H2''	6:I:-49:DG:C8	2.50	0.46
7:J:-21:DG:OP1	8:W:649:LEU:HD22	2.15	0.46
7:J:23:DG:H5''	8:M:772:ARG:NH2	2.30	0.46
8:W:555:LEU:CD1	8:W:555:LEU:N	2.78	0.46
1:A:97:GLU:O	1:A:101:VAL:HG23	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:32:PRO:HD3	6:I:-12:DC:OP2	2.16	0.46
2:B:67:ARG:NH2	4:D:96:ARG:O	2.49	0.46
3:C:102:ILE:HD11	4:D:58:ILE:HG23	1.98	0.46
1:E:85:GLN:O	1:E:86:SER:C	2.58	0.46
1:E:121:PRO:HA	2:F:53:GLU:OE1	2.16	0.46
6:I:-35:DA:N6	6:I:-34:DG:C6	2.84	0.46
7:J:-38:DA:H2''	7:J:-37:DG:OP2	2.11	0.46
7:J:-33:DG:C5	7:J:-32:DT:O4	2.69	0.46
7:J:-7:DG:H2''	7:J:-6:DG:C8	2.50	0.46
8:W:183:ILE:HD11	8:W:216:LYS:HE2	1.97	0.46
8:W:361:PHE:CG	8:W:362:GLU:N	2.84	0.46
8:W:417:TRP:O	8:W:421:ALA:CB	2.64	0.46
8:W:419:ILE:CD1	8:W:451:LEU:CD1	2.91	0.46
8:W:1117:VAL:HG12	8:W:1129:ALA:HB3	1.98	0.46
1:A:81:ASP:OD2	8:M:651:ILE:HG23	2.15	0.46
1:A:101:VAL:HG11	2:B:40:ARG:HB3	1.98	0.46
3:C:16:THR:N	3:C:19:SER:HB2	2.30	0.46
1:E:88:ALA:O	1:E:92:LEU:HG	2.16	0.46
5:G:24:GLN:NE2	4:H:44:GLN:CD	2.74	0.46
4:H:104:ALA:O	4:H:108:VAL:HG23	2.16	0.46
6:I:23:DA:C2'	6:I:24:DA:OP2	2.62	0.46
7:J:86:DA:C2'	7:J:87:DT:H71	2.45	0.46
8:W:202:PRO:HA	8:W:206:ASN:HD22	1.81	0.46
1:E:66:PRO:CG	1:E:67:PHE:H	2.29	0.46
1:E:124:ILE:HD11	2:F:50:ILE:HG12	1.98	0.46
6:I:-59:DT:C2	6:I:-58:DG:N1	2.84	0.46
7:J:-44:DG:C6	7:J:-43:DA:N6	2.84	0.46
7:J:51:DG:C4	7:J:52:DC:C4	3.03	0.46
8:W:385:ASN:O	8:W:389:PHE:CB	2.60	0.46
8:W:643:GLY:HA2	8:W:646:PHE:CE1	2.48	0.46
8:W:1164:PRO:HB2	8:W:1259:LEU:HD21	1.98	0.46
8:W:1262:PHE:HD2	8:W:1263:LEU:HD12	1.80	0.46
1:A:95:ALA:CB	2:B:90:LEU:HD13	2.46	0.46
1:E:61:LEU:HD22	2:F:36:ARG:CB	2.46	0.46
1:E:84:PHE:CA	7:J:-23:DT:OP1	2.64	0.46
1:E:128:ARG:NH1	1:E:134:ARG:HB2	2.30	0.46
5:G:28:GLY:HA3	7:J:-43:DA:OP2	2.16	0.46
5:G:42:ARG:HA	6:I:39:DA:H5''	1.97	0.46
5:G:99:ARG:HD3	5:G:99:ARG:HA	1.76	0.46
6:I:-38:DC:C2'	6:I:-37:DG:OP2	2.60	0.46
7:J:-55:DA:H2'	7:J:-54:DC:C4	2.52	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:J:34:DC:C2'	7:J:35:DT:H6	2.16	0.46
8:W:347:LEU:O	8:W:425:ASN:ND2	2.48	0.46
8:W:714:VAL:C	8:W:715:LEU:HD12	2.40	0.46
2:B:50:ILE:O	2:B:50:ILE:HG22	2.14	0.45
3:C:51:LEU:O	3:C:55:LEU:HG	2.16	0.45
3:C:88:ARG:HG3	3:C:108:LEU:HD23	1.98	0.45
3:C:100:VAL:HG23	3:C:100:VAL:O	2.16	0.45
1:E:43:PRO:O	1:E:44:GLY:C	2.58	0.45
6:I:23:DA:H1'	6:I:24:DA:C8	2.51	0.45
6:I:26:DG:N7	6:I:27:DG:C6	2.83	0.45
7:J:19:DC:C4	7:J:20:DG:C6	3.04	0.45
7:J:24:DC:C2'	7:J:25:DT:C6	2.86	0.45
8:W:601:ASP:C	8:W:603:GLU:N	2.74	0.45
8:W:607:PRO:HB2	8:W:813:HIS:HA	1.95	0.45
8:W:770:SER:HB2	8:W:774:GLY:N	2.32	0.45
8:W:1114:LYS:C	8:W:1115:LYS:HG2	2.41	0.45
1:A:43:PRO:HG2	6:I:-5:DA:C5'	2.39	0.45
7:J:-44:DG:N1	7:J:-43:DA:C6	2.85	0.45
7:J:-11:DC:H2'	7:J:-10:DG:C8	2.52	0.45
8:W:1039:THR:O	8:W:1040:LEU:HD12	2.15	0.45
2:B:32:PRO:HA	2:B:35:ARG:HH12	1.80	0.45
1:E:66:PRO:CA	2:F:23:ARG:O	2.64	0.45
2:F:39:ARG:O	2:F:40:ARG:C	2.59	0.45
2:F:62:LEU:O	2:F:66:ILE:HG12	2.16	0.45
6:I:26:DG:C5	6:I:27:DG:C6	3.03	0.45
7:J:64:DG:N2	7:J:65:DG:C2	2.85	0.45
8:M:295:ARG:NH2	8:M:1199:ARG:O	2.50	0.45
8:M:585:ASP:O	8:M:589:ARG:HB2	2.16	0.45
8:W:1018:TYR:OH	8:W:1128:ASN:HB2	2.16	0.45
3:C:79:ILE:CG2	3:C:80:PRO:N	2.79	0.45
4:D:81:ASN:O	4:D:82:LYS:CB	2.65	0.45
6:I:-58:DG:C2	7:J:58:DG:C6	3.04	0.45
6:I:9:DG:N7	6:I:10:DC:C4	2.84	0.45
6:I:24:DA:C1'	6:I:25:DG:C8	2.99	0.45
7:J:-46:DT:O2	7:J:-45:DG:C2	2.69	0.45
8:W:437:MET:HG3	8:W:438:PRO:HD3	1.97	0.45
8:W:512:VAL:CG1	8:W:539:LEU:HA	2.47	0.45
8:W:1043:LYS:HD2	8:W:1048:TYR:CZ	2.50	0.45
8:W:1262:PHE:CD2	8:W:1263:LEU:HD12	2.52	0.45
3:C:44:GLY:CA	4:D:87:THR:HA	2.41	0.45
2:F:66:ILE:HG22	2:F:70:VAL:HG23	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:G:47:ALA:O	5:G:48:PRO:C	2.56	0.45
6:I:-58:DG:N1	7:J:58:DG:O6	2.50	0.45
7:J:-87:DT:H2''	7:J:-86:DG:C8	2.51	0.45
7:J:34:DC:H1'	7:J:35:DT:C6	2.51	0.45
7:J:78:DG:H2'	7:J:79:DG:H8	1.81	0.45
8:W:272:MET:O	8:W:275:GLU:HB3	2.17	0.45
8:W:810:GLN:OE1	8:W:812:ASN:HB2	2.16	0.45
8:W:827:GLU:HG3	8:W:828:GLU:OE2	2.16	0.45
8:W:1171:SER:HB3	8:W:1245:LYS:CE	2.45	0.45
3:C:25:PHE:HD2	3:C:52:ALA:CB	2.29	0.45
5:G:42:ARG:CA	6:I:38:DT:O3'	2.65	0.45
8:W:368:PRO:C	8:W:370:PHE:N	2.74	0.45
8:W:443:THR:HG22	8:W:443:THR:O	2.16	0.45
8:W:722:ARG:O	8:W:726:ILE:HG13	2.17	0.45
8:W:1026:ASN:HA	8:W:1052:TYR:CZ	2.50	0.45
8:W:1146:ILE:HG21	8:W:1187:PHE:CE1	2.52	0.45
1:A:92:LEU:HD13	2:B:86:VAL:HG13	1.99	0.45
2:B:28:GLY:O	2:B:30:THR:HG23	2.16	0.45
1:E:62:ILE:CD1	2:F:33:ALA:O	2.62	0.45
1:E:120:MET:N	2:F:50:ILE:HD12	2.32	0.45
5:G:29:ARG:NH2	4:H:32:GLU:HB3	2.31	0.45
6:I:-19:DG:H1'	6:I:-18:DC:C5	2.52	0.45
8:W:326:ASP:HA	8:W:329:LYS:HB2	1.99	0.45
8:W:351:SER:HB2	8:W:425:ASN:H	1.80	0.45
8:W:470:GLU:HA	8:W:485:PHE:CE2	2.49	0.45
8:W:1155:LEU:C	8:W:1157:PHE:H	2.24	0.45
1:E:120:MET:CA	2:F:50:ILE:HD12	2.47	0.45
5:G:36:LYS:O	5:G:36:LYS:HG2	2.16	0.45
8:M:708:LYS:HE2	8:M:708:LYS:HA	1.97	0.45
8:W:312:ARG:O	8:W:313:ARG:C	2.59	0.45
8:W:418:LEU:HD11	8:W:428:HIS:NE2	2.32	0.45
1:A:88:ALA:HA	2:B:83:ALA:HA	1.98	0.45
3:C:43:VAL:HG12	7:J:38:DG:O3'	2.16	0.45
1:E:50:GLU:O	1:E:54:TYR:CD2	2.69	0.45
6:I:-30:DG:C5	6:I:-29:DC:N3	2.85	0.45
7:J:72:DA:N9	7:J:73:DT:H72	2.28	0.45
8:M:431:VAL:HG11	8:M:495:ILE:HD11	1.99	0.45
8:W:696:LYS:CB	8:W:819:LEU:HD23	2.46	0.45
8:W:738:PHE:HB3	8:W:766:VAL:HG13	1.98	0.45
1:E:116:ARG:HA	7:J:-3:DA:P	2.57	0.45
5:G:62:ILE:O	5:G:62:ILE:HG22	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:I:-73:DC:N1	6:I:-72:DA:N7	2.65	0.45
6:I:-17:DT:H5'	8:M:493:GLU:OE1	2.17	0.45
7:J:-77:DC:H2'	7:J:-76:DG:H8	1.82	0.45
7:J:-35:DG:C5	7:J:-34:DA:C5	3.04	0.45
8:M:379:PHE:O	8:M:597:ARG:NH1	2.38	0.45
8:W:214:LEU:HD21	8:W:225:ASN:CB	2.43	0.45
8:W:265:GLU:O	8:W:268:GLU:HB3	2.17	0.45
8:W:509:PHE:HZ	8:W:538:MET:HE3	1.82	0.45
8:W:580:GLU:HG3	8:W:581:GLU:N	2.32	0.45
2:B:60:VAL:O	2:B:64:ASN:ND2	2.49	0.44
6:I:-28:DT:C6	6:I:-28:DT:OP2	2.70	0.44
6:I:4:DC:H2''	6:I:5:DC:C6	2.52	0.44
7:J:30:DC:H2'	7:J:31:DT:H71	1.98	0.44
7:J:81:DC:OP2	7:J:81:DC:C6	2.70	0.44
8:M:614:LEU:HD21	8:M:699:LEU:HD13	1.98	0.44
8:W:312:ARG:HD3	8:W:313:ARG:H	1.82	0.44
8:W:560:MET:HE2	8:W:560:MET:HB3	1.71	0.44
8:W:617:GLU:CD	8:W:618:LEU:H	2.24	0.44
8:W:1256:VAL:HG13	8:W:1257:ASP:N	2.32	0.44
4:D:40:LYS:O	4:D:43:LYS:HB3	2.17	0.44
2:F:25:ASN:OD1	2:F:26:ILE:N	2.51	0.44
2:F:80:THR:HG1	6:I:28:DG:C5'	2.30	0.44
6:I:0:DC:C2'	6:I:1:DT:C7	2.96	0.44
7:J:-27:DC:H2''	7:J:-26:DC:C5	2.52	0.44
7:J:-11:DC:C2	7:J:-10:DG:C5	3.05	0.44
7:J:51:DG:C6	7:J:52:DC:N3	2.85	0.44
8:W:284:PHE:CD1	8:W:314:LEU:HD22	2.52	0.44
8:W:656:LYS:HE2	8:W:826:GLU:C	2.42	0.44
8:W:674:GLN:H	8:W:674:GLN:CD	2.25	0.44
8:W:716:ILE:HD13	8:W:787:VAL:HB	1.98	0.44
8:W:770:SER:O	8:W:774:GLY:HA3	2.18	0.44
2:B:33:ALA:HA	2:B:36:ARG:HG2	1.99	0.44
3:C:26:PRO:HD3	4:D:37:TYR:CD1	2.53	0.44
3:C:34:LEU:HD22	4:D:71:ALA:HB1	1.97	0.44
3:C:93:LEU:HA	3:C:93:LEU:HD23	1.85	0.44
5:G:80:PRO:CG	4:H:55:ALA:HB2	2.42	0.44
6:I:-59:DT:N3	6:I:-58:DG:N1	2.65	0.44
6:I:27:DG:N2	6:I:28:DG:C2	2.86	0.44
8:M:622:GLN:O	8:M:626:TYR:CB	2.65	0.44
8:W:290:ILE:HB	8:W:338:PHE:CD1	2.52	0.44
8:W:432:VAL:HG11	8:W:440:TRP:NE1	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:W:722:ARG:HD2	8:W:722:ARG:HA	1.83	0.44
8:W:1252:LEU:HA	8:W:1255:ARG:HB2	1.98	0.44
5:G:17:ARG:O	5:G:20:ARG:N	2.50	0.44
5:G:24:GLN:HE22	4:H:44:GLN:CD	2.24	0.44
7:J:-5:DG:H1'	7:J:-4:DG:C8	2.53	0.44
7:J:20:DG:N3	7:J:21:DG:N7	2.65	0.44
8:W:470:GLU:CG	8:W:485:PHE:HE2	2.25	0.44
8:W:1164:PRO:CB	8:W:1259:LEU:HD21	2.47	0.44
1:A:62:ILE:CG2	1:A:63:ARG:N	2.80	0.44
1:A:117:VAL:HG11	6:I:-4:DC:C4'	2.48	0.44
6:I:61:DA:H2'	6:I:62:DT:H71	2.00	0.44
7:J:57:DG:H2''	7:J:58:DG:C8	2.52	0.44
8:W:377:ARG:NE	8:W:602:VAL:CG2	2.75	0.44
1:A:76:GLN:HA	1:A:79:LYS:O	2.18	0.44
2:B:20:LYS:O	2:B:22:LEU:HD12	2.18	0.44
2:B:31:LYS:CB	2:B:32:PRO:HD3	2.47	0.44
4:D:83:ARG:HD3	6:I:-34:DG:H3'	1.99	0.44
6:I:-41:DG:O6	6:I:-40:DG:O6	2.36	0.44
6:I:-28:DT:H1'	6:I:-27:DC:C6	2.53	0.44
6:I:13:DT:H2'	6:I:14:DT:H71	1.99	0.44
8:W:417:TRP:CE2	8:W:421:ALA:HB2	2.52	0.44
8:W:418:LEU:HD12	8:W:418:LEU:O	2.18	0.44
8:W:456:TYR:CD1	8:W:466:ILE:HG13	2.52	0.44
8:W:656:LYS:NZ	8:W:829:VAL:HB	2.32	0.44
8:W:706:ARG:HH11	8:W:706:ARG:HG2	1.83	0.44
3:C:108:LEU:CD1	3:C:110:ASN:HB2	2.48	0.44
5:G:24:GLN:O	4:H:37:TYR:CE2	2.70	0.44
5:G:25:PHE:CD1	5:G:56:GLU:HB2	2.53	0.44
7:J:35:DT:O3'	7:J:36:DA:C8	2.71	0.44
1:A:73:GLU:CG	2:B:25:ASN:ND2	2.77	0.44
6:I:21:DC:N4	6:I:22:DC:H42	2.15	0.44
7:J:-47:DC:C6	7:J:-47:DC:H5'	2.52	0.44
7:J:84:DG:H2''	7:J:85:DT:C7	2.48	0.44
8:M:385:ASN:O	8:M:389:PHE:CB	2.62	0.44
8:M:778:ILE:CG2	8:M:779:ASN:N	2.53	0.44
8:W:379:PHE:O	8:W:379:PHE:CG	2.70	0.44
8:W:607:PRO:CB	8:W:813:HIS:N	2.35	0.44
8:W:1017:LEU:CD1	8:W:1027:LEU:HD21	2.48	0.44
8:W:1114:LYS:O	8:W:1115:LYS:CD	2.66	0.44
1:A:124:ILE:HD12	2:B:50:ILE:CG2	2.46	0.44
3:C:25:PHE:CE1	3:C:26:PRO:HD2	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:74:ILE:HD13	2:F:59:LYS:HE3	2.00	0.44
1:E:122:LYS:O	1:E:124:ILE:N	2.51	0.44
6:I:-30:DG:C4	6:I:-29:DC:C6	3.06	0.44
7:J:0:DG:C2	7:J:1:DC:C2	3.06	0.44
8:M:713:ARG:HB2	8:M:783:ALA:HA	2.00	0.44
8:M:715:LEU:HD22	8:M:767:PHE:HB3	2.00	0.44
8:M:747:SER:HA	8:M:750:ARG:HG2	2.00	0.44
8:W:457:MET:O	8:W:457:MET:CG	2.52	0.44
8:W:502:LEU:HA	8:W:507:TRP:CH2	2.52	0.44
8:W:591:GLN:O	8:W:594:ILE:HB	2.18	0.44
2:B:90:LEU:HD23	2:B:90:LEU:HA	1.82	0.43
1:E:42:ARG:N	1:E:43:PRO:HD2	2.24	0.43
1:E:100:LEU:O	1:E:103:LEU:HB3	2.18	0.43
5:G:26:PRO:O	5:G:30:VAL:CG2	2.56	0.43
7:J:-25:DC:C2	7:J:-24:DT:C5	3.05	0.43
7:J:26:DA:C6	7:J:27:DG:C6	3.00	0.43
8:M:1179:GLU:O	8:M:1183:LEU:HB2	2.18	0.43
9:W:1502:ADP:H8	9:W:1502:ADP:O5'	2.01	0.43
6:I:-19:DG:C1'	6:I:-18:DC:C5	3.01	0.43
6:I:36:DC:OP2	6:I:36:DC:C6	2.70	0.43
7:J:59:DC:C4	7:J:60:DA:N1	2.86	0.43
8:W:436:THR:O	8:W:436:THR:HG22	2.18	0.43
8:W:1010:GLY:O	8:W:1014:VAL:HG23	2.18	0.43
2:B:98:TYR:OH	4:H:65:ASP:OD2	2.34	0.43
3:C:25:PHE:HB3	3:C:52:ALA:HB1	2.01	0.43
4:D:87:THR:HG23	4:D:89:ARG:N	2.33	0.43
1:E:73:GLU:C	1:E:73:GLU:CD	2.86	0.43
1:E:124:ILE:HD11	2:F:50:ILE:CG1	2.48	0.43
2:F:43:VAL:HG12	2:F:45:ARG:H	1.83	0.43
6:I:-25:DA:H4'	6:I:-24:DG:OP1	2.17	0.43
7:J:20:DG:C2	7:J:21:DG:C6	3.03	0.43
1:A:54:TYR:HB3	2:B:40:ARG:HD3	2.00	0.43
2:B:37:LEU:O	2:B:40:ARG:HB2	2.18	0.43
3:C:32:ARG:HD2	6:I:-44:DA:OP1	2.19	0.43
4:D:83:ARG:NE	6:I:-34:DG:H2''	2.28	0.43
1:E:108:ASN:O	1:E:112:ILE:HG13	2.18	0.43
2:F:32:PRO:O	2:F:36:ARG:CG	2.54	0.43
5:G:57:TYR:CE2	4:H:103:LEU:HD12	2.53	0.43
8:M:316:TYR:OH	8:M:455:CYS:SG	2.65	0.43
8:W:505:ILE:HB	8:W:507:TRP:CZ3	2.53	0.43
8:W:577:GLU:OE1	8:W:577:GLU:N	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:W:630:LEU:C	8:W:630:LEU:HD12	2.44	0.43
8:W:656:LYS:HD3	8:W:825:VAL:HG13	2.00	0.43
8:W:777:GLY:O	8:W:778:ILE:CB	2.66	0.43
8:W:800:GLN:C	8:W:803:ALA:H	2.25	0.43
1:A:99:TYR:CD1	1:A:99:TYR:C	2.96	0.43
2:B:99:GLY:O	2:B:100:PHE:CD1	2.72	0.43
4:D:99:LEU:HD13	4:D:103:LEU:HD22	2.00	0.43
5:G:111:ILE:HG23	5:G:115:LEU:HD11	1.99	0.43
6:I:-80:DG:H2''	6:I:-79:DG:C8	2.54	0.43
6:I:-65:DT:C2	6:I:-64:DC:N3	2.85	0.43
7:J:38:DG:C2	7:J:39:DA:C2	3.07	0.43
8:W:297:SER:HA	8:W:303:SER:HA	2.01	0.43
8:W:333:GLU:OE1	8:W:333:GLU:HA	2.19	0.43
8:W:348:PRO:O	8:W:483:MET:HG3	2.19	0.43
8:W:655:LEU:HG	8:W:825:VAL:CG1	2.48	0.43
8:W:696:LYS:NZ	8:W:789:PHE:O	2.50	0.43
8:W:1138:ASP:HB3	8:W:1260:LEU:CD2	2.27	0.43
8:W:1246:VAL:HG12	8:W:1247:PRO:CA	2.49	0.43
8:W:1259:LEU:HD23	8:W:1259:LEU:HA	1.84	0.43
1:A:85:GLN:HB3	6:I:-24:DG:P	2.52	0.43
1:A:126:LEU:O	1:A:130:ILE:HG23	2.19	0.43
2:B:51:TYR:O	2:B:55:ARG:HG3	2.18	0.43
3:C:81:ARG:O	3:C:85:LEU:CD1	2.67	0.43
6:I:-34:DG:H1'	6:I:-33:DA:C8	2.54	0.43
6:I:38:DT:H2''	6:I:39:DA:C8	2.54	0.43
7:J:41:DC:C2	7:J:42:DA:C8	3.07	0.43
8:W:361:PHE:CD2	8:W:422:ARG:NH2	2.78	0.43
8:W:724:LEU:HD22	8:W:768:LEU:HD13	2.00	0.43
8:W:1198:ARG:HB2	8:W:1209:ILE:CD1	2.48	0.43
1:A:59:GLU:CD	1:A:60:LEU:O	2.58	0.43
1:A:60:LEU:HD13	1:A:93:GLN:CG	2.45	0.43
1:A:88:ALA:HB1	2:B:83:ALA:HA	1.99	0.43
2:B:30:THR:HB	6:I:-12:DC:OP2	2.18	0.43
2:B:61:PHE:O	2:B:65:VAL:HG22	2.19	0.43
3:C:75:LYS:HG3	3:C:77:ARG:O	2.17	0.43
1:E:46:VAL:CG1	1:E:50:GLU:HG3	2.47	0.43
2:F:30:THR:OG1	2:F:33:ALA:CB	2.65	0.43
5:G:29:ARG:HA	7:J:-44:DG:H5''	2.00	0.43
5:G:47:ALA:CB	5:G:48:PRO:CD	2.95	0.43
5:G:97:LEU:HD11	4:H:62:PHE:CE2	2.52	0.43
6:I:-16:DT:P	8:M:459:ASN:HB3	2.57	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:J:-38:DA:C2'	7:J:-37:DG:O5'	2.64	0.43
7:J:37:DC:C2	7:J:38:DG:C8	3.06	0.43
7:J:73:DT:OP1	8:W:1019:LYS:NZ	2.52	0.43
8:W:311:TRP:CZ3	8:W:319:ALA:HA	2.53	0.43
8:W:348:PRO:HA	8:W:425:ASN:CB	2.48	0.43
1:E:63:ARG:CD	2:F:30:THR:CG2	2.97	0.43
2:F:48:GLY:CA	2:F:51:TYR:CE2	3.00	0.43
6:I:-19:DG:H1'	6:I:-18:DC:C6	2.53	0.43
7:J:-67:DT:C2	7:J:-66:DG:C8	3.06	0.43
8:W:405:LEU:O	8:W:406:GLY:C	2.62	0.43
8:W:738:PHE:HB3	8:W:766:VAL:CG1	2.49	0.43
8:W:1150:TYR:CD1	8:W:1156:LYS:HG3	2.54	0.43
1:A:120:MET:CB	1:A:121:PRO:CD	2.83	0.43
7:J:-63:DT:H2''	7:J:-62:DA:C8	2.53	0.43
7:J:-38:DA:N9	7:J:-37:DG:C5	2.87	0.43
7:J:-35:DG:C2'	7:J:-34:DA:N7	2.81	0.43
7:J:-13:DA:H1'	7:J:-12:DA:H5'	2.00	0.43
7:J:15:DT:N3	7:J:16:DA:C6	2.87	0.43
8:M:438:PRO:HD2	8:M:751:ARG:HH21	1.84	0.43
8:M:554:ALA:O	8:M:558:PHE:HB2	2.19	0.43
8:M:807:ARG:NH1	9:M:1501:ADP:O5'	2.51	0.43
8:W:207:CYS:SG	8:W:211:TYR:HD2	2.42	0.43
8:W:649:LEU:O	8:W:654:GLU:HB3	2.18	0.43
6:I:-63:DC:O2	7:J:64:DG:N2	2.52	0.43
6:I:7:DC:C2'	6:I:8:DC:C5	3.01	0.43
6:I:43:DT:O4	7:J:-44:DG:O6	2.37	0.43
8:M:1132:SER:O	8:M:1136:ARG:CB	2.63	0.43
8:W:305:LEU:HB2	8:W:1199:ASP:CG	2.43	0.43
8:W:370:PHE:HE1	8:W:417:TRP:HZ3	1.67	0.43
8:W:613:ILE:C	8:W:614:LEU:HD12	2.42	0.43
8:W:828:GLU:OE1	8:W:828:GLU:N	2.41	0.43
2:B:30:THR:OG1	2:B:32:PRO:HD2	2.19	0.42
2:B:73:THR:HG22	2:B:78:ARG:O	2.19	0.42
1:E:61:LEU:O	2:F:36:ARG:HG3	2.19	0.42
1:E:100:LEU:HB2	2:F:37:LEU:HD21	2.00	0.42
8:M:770:SER:HB2	8:M:773:ALA:HB3	2.01	0.42
8:W:180:ASP:HB2	8:W:218:THR:CA	2.44	0.42
8:W:1264:ARG:HH11	8:W:1264:ARG:CG	2.31	0.42
3:C:77:ARG:HD3	6:I:-55:DG:OP2	2.19	0.42
7:J:-21:DG:H2'	7:J:-20:DC:C6	2.54	0.42
7:J:59:DC:C4	7:J:60:DA:C6	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:J:64:DG:C2	7:J:65:DG:N1	2.87	0.42
8:W:328:VAL:CG1	8:W:335:VAL:HG21	2.49	0.42
8:W:512:VAL:HG13	8:W:539:LEU:HA	2.00	0.42
8:W:1104:LEU:HD12	8:W:1104:LEU:C	2.43	0.42
8:W:1251:HIS:O	8:W:1255:ARG:HG2	2.19	0.42
1:A:95:ALA:HB1	2:B:90:LEU:HD13	2.02	0.42
2:B:90:LEU:CD1	2:B:97:LEU:CD1	2.88	0.42
3:C:100:VAL:CG2	2:F:98:TYR:CE2	3.00	0.42
1:E:65:LEU:N	1:E:66:PRO:HD2	2.12	0.42
5:G:57:TYR:HE2	4:H:103:LEU:HD12	1.84	0.42
5:G:63:LEU:HD23	5:G:63:LEU:HA	1.69	0.42
5:G:104:GLN:N	5:G:104:GLN:CD	2.77	0.42
7:J:-17:DT:C6	7:J:-16:DT:C5	3.07	0.42
7:J:30:DC:C5	7:J:31:DT:O4	2.72	0.42
7:J:64:DG:C2	7:J:65:DG:C2	3.07	0.42
8:W:448:ALA:HA	8:W:449:PRO:HD2	1.83	0.42
8:W:484:LYS:HA	8:W:484:LYS:HD2	1.55	0.42
8:W:609:LYS:HD3	8:W:806:HIS:CD2	2.53	0.42
2:B:30:THR:CG2	6:I:-12:DC:OP1	2.67	0.42
2:B:84:MET:HB3	2:B:84:MET:HE3	1.53	0.42
1:E:63:ARG:HE	7:J:-13:DA:H5''	1.66	0.42
2:F:47:SER:C	2:F:50:ILE:HG22	2.45	0.42
2:F:47:SER:OG	6:I:7:DC:OP1	2.36	0.42
5:G:34:LEU:CD2	4:H:67:PHE:CE1	3.02	0.42
6:I:-22:DA:N9	6:I:-21:DC:C5	2.87	0.42
7:J:24:DC:H2'	7:J:25:DT:H73	1.97	0.42
7:J:43:DA:C2'	7:J:44:DT:OP2	2.66	0.42
8:M:268:GLU:O	8:M:272:MET:CB	2.62	0.42
8:M:290:ILE:HG23	8:M:307:TYR:HB3	2.02	0.42
8:M:1083:THR:HA	8:M:1086:ARG:HE	1.84	0.42
8:W:656:LYS:HE3	8:W:829:VAL:CB	2.47	0.42
8:W:656:LYS:CE	8:W:829:VAL:HB	2.49	0.42
1:A:113:HIS:CG	1:E:126:LEU:HD21	2.53	0.42
1:A:127:ALA:O	1:A:130:ILE:HG13	2.19	0.42
4:D:65:ASP:OD1	4:D:69:ARG:NH2	2.52	0.42
6:I:21:DC:H2''	6:I:22:DC:C5'	2.50	0.42
7:J:20:DG:C5'	8:M:496:LEU:HD22	2.42	0.42
8:W:255:GLN:O	8:W:255:GLN:HG3	2.19	0.42
8:W:345:LYS:HG3	8:W:1033:GLU:O	2.19	0.42
8:W:1119:PHE:CE2	8:W:1129:ALA:HA	2.55	0.42
8:W:1121:PHE:CD2	8:W:1121:PHE:O	2.73	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:W:1146:ILE:HG23	8:W:1147:ASN:N	2.33	0.42
2:B:68:ASP:O	2:B:71:THR:HG22	2.19	0.42
3:C:102:ILE:HG13	3:C:103:ALA:N	2.33	0.42
1:E:84:PHE:C	7:J:-23:DT:OP1	2.62	0.42
1:E:108:ASN:C	1:E:108:ASN:OD1	2.62	0.42
4:H:109:SER:O	4:H:113:LYS:HG2	2.20	0.42
6:I:-73:DC:N3	6:I:-72:DA:C6	2.87	0.42
6:I:-67:DA:C5	6:I:-66:DA:C6	3.07	0.42
6:I:-35:DA:H1'	6:I:-34:DG:H5'	2.02	0.42
7:J:50:DG:C2'	7:J:51:DG:OP2	2.62	0.42
8:M:519:LYS:HG3	8:M:551:GLU:HG2	2.01	0.42
8:W:399:LEU:HD22	8:W:407:LYS:HD2	2.01	0.42
8:W:414:PHE:CD2	8:W:538:MET:CE	2.71	0.42
8:W:450:ASP:N	8:W:450:ASP:OD1	2.50	0.42
8:W:688:ARG:O	8:W:692:MET:HG2	2.19	0.42
8:W:766:VAL:O	8:W:766:VAL:CG1	2.68	0.42
1:A:72:ARG:HB2	2:B:22:LEU:HD22	2.02	0.42
5:G:31:HIS:HD2	5:G:31:HIS:O	2.03	0.42
6:I:-28:DT:C1'	6:I:-27:DC:C5	3.02	0.42
6:I:45:DC:C3'	6:I:46:DA:P	3.08	0.42
8:W:481:LYS:HD3	8:W:483:MET:CE	2.34	0.42
8:W:754:ILE:HG12	8:W:778:ILE:HG12	2.01	0.42
8:W:1074:LEU:HD21	8:W:1110:LYS:HG3	2.00	0.42
8:W:1145:LEU:CD2	8:W:1149:ASN:HD21	2.32	0.42
8:W:1157:PHE:CE2	8:W:1183:LEU:CD2	3.03	0.42
8:W:1256:VAL:CG2	8:W:1260:LEU:HD13	2.50	0.42
1:A:81:ASP:O	1:A:81:ASP:CG	2.62	0.42
2:B:32:PRO:HB3	2:B:35:ARG:HH22	1.85	0.42
7:J:-89:DT:H2''	7:J:-88:DA:C8	2.55	0.42
7:J:-81:DG:H2''	7:J:-80:DC:C5	2.55	0.42
8:M:1145:ASN:O	8:M:1149:SER:HB2	2.18	0.42
8:W:207:CYS:HA	8:W:211:TYR:CG	2.54	0.42
8:W:207:CYS:CA	8:W:211:TYR:HD2	2.29	0.42
8:W:328:VAL:HG21	8:W:1201:PRO:CB	2.45	0.42
8:W:399:LEU:HB3	8:W:540:ILE:HG22	2.01	0.42
8:W:618:LEU:HD11	8:W:824:THR:HG23	2.02	0.42
8:W:1132:LEU:CD1	8:W:1133:LEU:HG	2.50	0.42
1:A:95:ALA:HB3	2:B:90:LEU:HD11	1.97	0.42
4:H:93:THR:HG23	4:H:94:ALA:N	2.34	0.42
6:I:-37:DG:H2''	6:I:-36:DT:C6	2.51	0.42
6:I:9:DG:C5	6:I:10:DC:N3	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:I:22:DC:O5'	8:W:520:ASN:HB2	2.20	0.42
6:I:52:DG:H2'	6:I:53:DT:H71	2.01	0.42
7:J:-3:DA:H2''	7:J:-2:DC:H6	1.84	0.42
8:M:377:ARG:HB3	8:M:378:ASP:H	1.59	0.42
1:E:134:ARG:HH11	1:E:135:ALA:HB3	1.80	0.42
6:I:-5:DA:H8	6:I:-5:DA:OP2	2.03	0.42
7:J:78:DG:C5	7:J:79:DG:O6	2.71	0.42
8:W:654:GLU:HG3	8:W:658:ALA:HB3	2.00	0.42
8:W:824:THR:O	8:W:827:GLU:HG2	2.20	0.42
8:W:1155:LEU:C	8:W:1157:PHE:N	2.77	0.42
1:A:117:VAL:HB	6:I:-3:DG:OP2	2.12	0.41
3:C:43:VAL:HB	7:J:39:DA:OP1	2.18	0.41
6:I:-77:DC:N3	7:J:78:DG:C2	2.88	0.41
7:J:-46:DT:C2	7:J:-45:DG:N1	2.88	0.41
7:J:-19:DG:OP1	8:W:772:ARG:HD3	2.20	0.41
7:J:23:DG:C5	7:J:24:DC:N4	2.88	0.41
7:J:34:DC:C2	7:J:35:DT:C5	3.08	0.41
8:M:437:MET:HB3	8:M:438:PRO:HD3	2.02	0.41
8:W:298:LEU:N	8:W:302:THR:O	2.48	0.41
8:W:523:SER:O	8:W:526:TYR:HB3	2.20	0.41
8:W:621:VAL:HG11	8:W:672:VAL:HB	2.02	0.41
2:B:78:ARG:HG2	7:J:28:DA:OP2	2.20	0.41
1:E:63:ARG:CD	2:F:30:THR:HG21	2.47	0.41
2:F:27:GLN:HG3	2:F:28:GLY:N	2.35	0.41
5:G:85:LEU:N	5:G:85:LEU:HD12	2.35	0.41
6:I:28:DG:H2''	6:I:29:DA:H8	1.84	0.41
6:I:69:DC:H2''	6:I:70:DG:C8	2.55	0.41
7:J:-21:DG:N7	7:J:-20:DC:N4	2.67	0.41
7:J:-3:DA:C2'	7:J:-2:DC:C6	3.00	0.41
8:M:252:GLU:O	8:M:256:VAL:HG23	2.20	0.41
8:M:765:PHE:CD2	8:M:766:VAL:HG23	2.55	0.41
8:W:183:ILE:HG23	8:W:281:PHE:HD2	1.83	0.41
8:W:284:PHE:O	8:W:311:TRP:HD1	2.00	0.41
8:W:514:GLU:HA	8:W:541:THR:OG1	2.19	0.41
8:W:545:LEU:HB2	8:W:552:LEU:HD13	2.02	0.41
8:W:626:TYR:O	8:W:630:LEU:HD23	2.21	0.41
8:W:740:ARG:CB	8:W:768:LEU:HD11	2.44	0.41
8:W:1157:PHE:CB	8:W:1184:ILE:HD11	2.50	0.41
1:A:48:LEU:HD12	1:A:48:LEU:N	2.35	0.41
1:E:101:VAL:O	1:E:102:GLY:C	2.61	0.41
5:G:43:VAL:HG23	6:I:39:DA:OP1	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:G:88:ARG:HA	5:G:94:ASN:HB3	2.02	0.41
5:G:92:GLU:HA	5:G:95:LYS:HD2	2.02	0.41
5:G:101:THR:O	5:G:102:ILE:HD13	2.21	0.41
6:I:-30:DG:C6	6:I:-29:DC:N3	2.88	0.41
6:I:-23:DC:C4	6:I:-22:DA:C6	3.08	0.41
7:J:63:DG:H2''	7:J:64:DG:C8	2.55	0.41
8:M:214:LEU:HD13	8:M:227:TRP:CE2	2.55	0.41
8:W:305:LEU:CD2	8:W:307:TYR:OH	2.67	0.41
8:W:589:ARG:O	8:W:593:PHE:CE1	2.71	0.41
8:W:611:GLU:HG2	8:W:816:VAL:HB	2.02	0.41
8:W:720:MET:SD	8:W:721:VAL:HG12	2.61	0.41
8:W:1066:GLU:C	8:W:1066:GLU:CD	2.88	0.41
1:A:40:ARG:CG	7:J:10:DG:H5'	2.50	0.41
4:D:99:LEU:HD23	4:D:99:LEU:HA	1.82	0.41
1:E:60:LEU:CD1	1:E:93:GLN:CD	2.75	0.41
5:G:79:ILE:O	5:G:82:HIS:HB2	2.20	0.41
6:I:-15:DA:H2''	6:I:-14:DA:H8	1.84	0.41
7:J:-21:DG:C8	7:J:-20:DC:C5	3.08	0.41
7:J:23:DG:N7	7:J:24:DC:C5	2.87	0.41
8:W:255:GLN:O	8:W:255:GLN:HG2	2.20	0.41
8:W:656:LYS:HE2	8:W:826:GLU:O	2.21	0.41
8:W:833:ALA:O	8:W:836:LYS:HB2	2.19	0.41
8:W:1043:LYS:HB2	8:W:1048:TYR:CZ	2.56	0.41
2:B:26:ILE:HD12	2:B:26:ILE:HA	1.81	0.41
2:B:80:THR:OG1	7:J:27:DG:H4'	2.20	0.41
3:C:75:LYS:HG2	3:C:82:HIS:HE1	1.85	0.41
3:C:112:GLN:CB	3:C:115:LEU:HD12	2.28	0.41
1:E:63:ARG:CZ	7:J:-13:DA:C5'	2.85	0.41
5:G:42:ARG:HA	6:I:38:DT:O3'	2.20	0.41
5:G:70:ALA:HB2	5:G:78:ILE:HG13	2.02	0.41
6:I:-76:DG:N1	7:J:76:DG:C2	2.69	0.41
6:I:-19:DG:P	8:M:743:GLY:N	2.94	0.41
7:J:-18:DG:C1'	8:W:493:GLU:CD	2.93	0.41
8:M:459:ASN:OD1	8:M:460:GLN:N	2.52	0.41
8:W:179:ILE:CD1	8:W:215:ILE:HG21	2.50	0.41
8:W:391:TRP:HD1	8:W:414:PHE:HZ	1.63	0.41
1:E:87:SER:O	1:E:88:ALA:C	2.64	0.41
5:G:15:LYS:HZ3	6:I:46:DA:C4'	1.98	0.41
5:G:97:LEU:C	5:G:99:ARG:N	2.78	0.41
6:I:37:DC:H42	7:J:-38:DA:H61	1.65	0.41
8:M:1117:ALA:HB1	8:M:1129:ASN:ND2	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:60:LEU:HD13	1:A:93:GLN:NE2	2.36	0.41
1:A:83:ARG:HB3	2:B:80:THR:HG23	2.02	0.41
5:G:38:ASN:O	5:G:39:TYR:C	2.62	0.41
6:I:-13:DA:H2''	6:I:-12:DC:O5'	2.20	0.41
6:I:-5:DA:OP2	6:I:-5:DA:H2'	2.20	0.41
7:J:-18:DG:C1'	8:W:493:GLU:OE2	2.67	0.41
7:J:83:DC:H1'	7:J:84:DG:H5'	2.03	0.41
8:W:488:LEU:HD23	8:W:489:LEU:C	2.45	0.41
8:W:589:ARG:O	8:W:592:PRO:HD2	2.21	0.41
8:W:798:ASP:HA	8:W:801:ALA:HB3	2.02	0.41
8:W:1094:LYS:HE2	8:W:1097:ASN:CB	2.50	0.41
1:A:88:ALA:CB	2:B:83:ALA:HB2	2.50	0.41
3:C:112:GLN:CD	1:E:108:ASN:ND2	2.79	0.41
1:E:65:LEU:HB2	6:I:17:DA:C3'	2.36	0.41
2:F:46:ILE:HB	6:I:8:DC:OP2	2.20	0.41
2:F:100:PHE:HD1	2:F:100:PHE:HA	1.61	0.41
6:I:-76:DG:H1'	6:I:-75:DC:H5'	2.03	0.41
6:I:-40:DG:N2	7:J:40:DC:N3	2.68	0.41
6:I:23:DA:P	8:W:519:LYS:HE3	2.54	0.41
6:I:34:DT:H2'	6:I:35:DC:C5	2.44	0.41
7:J:-52:DC:H2''	7:J:-51:DG:C8	2.56	0.41
7:J:69:DC:C2'	7:J:70:DT:C5	3.01	0.41
8:M:615:ARG:HD3	8:M:822:LYS:HD3	2.02	0.41
8:M:728:GLY:HA2	8:M:738:PHE:CZ	2.56	0.41
8:W:379:PHE:O	8:W:379:PHE:CD2	2.73	0.41
8:W:1256:VAL:HG23	8:W:1260:LEU:HD13	2.02	0.41
1:A:95:ALA:HB1	2:B:90:LEU:CD1	2.49	0.41
1:A:110:CYS:SG	1:E:130:ILE:CD1	3.09	0.41
2:B:58:LEU:HD23	2:B:62:LEU:HD12	1.93	0.41
2:B:68:ASP:O	2:B:72:TYR:HD1	2.03	0.41
2:B:97:LEU:HD23	5:G:101:THR:HG23	2.00	0.41
1:E:74:ILE:HG21	2:F:59:LYS:NZ	2.36	0.41
1:E:89:VAL:O	1:E:90:MET:C	2.63	0.41
2:F:33:ALA:C	2:F:36:ARG:HG2	2.45	0.41
2:F:40:ARG:HA	2:F:40:ARG:HD3	1.92	0.41
5:G:93:LEU:HD23	5:G:93:LEU:HA	1.91	0.41
4:H:69:ARG:HB2	4:H:70:ILE:HD12	2.03	0.41
8:M:618:LEU:HD11	8:M:824:THR:HG22	2.02	0.41
8:W:214:LEU:HD11	8:W:225:ASN:OD1	2.20	0.41
8:W:347:LEU:HD22	8:W:484:LYS:HA	2.02	0.41
8:W:347:LEU:HD21	8:W:484:LYS:HD2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:W:437:MET:HG3	8:W:438:PRO:CD	2.51	0.41
8:W:476:ARG:HD2	8:W:480:LYS:CB	2.50	0.41
8:W:505:ILE:O	8:W:507:TRP:CZ3	2.74	0.41
8:W:715:LEU:N	8:W:785:THR:O	2.49	0.41
8:W:1170:TRP:HB2	8:W:1174:TRP:CD1	2.54	0.41
3:C:42:ARG:HD3	7:J:38:DG:O4'	2.21	0.41
4:D:37:TYR:O	4:D:41:VAL:HG23	2.20	0.41
4:D:46:HIS:HB2	4:D:49:THR:CB	2.50	0.41
5:G:29:ARG:CA	7:J:-44:DG:H5''	2.51	0.41
5:G:103:ALA:O	5:G:104:GLN:C	2.64	0.41
6:I:27:DG:C2'	6:I:28:DG:C8	2.95	0.41
6:I:73:DT:H2''	6:I:74:DA:H8	1.86	0.41
7:J:38:DG:C4	7:J:39:DA:C5	3.08	0.41
7:J:84:DG:H2''	7:J:85:DT:C6	2.56	0.41
8:M:611:GLU:OE2	8:M:818:ARG:NH1	2.54	0.41
8:W:646:PHE:HA	8:W:649:LEU:CD1	2.37	0.41
8:W:725:ASP:O	8:W:726:ILE:C	2.64	0.41
8:W:1178:GLU:O	8:W:1182:LEU:HG	2.21	0.41
8:W:1255:ARG:HA	8:W:1255:ARG:HD2	1.51	0.41
1:A:116:ARG:NH2	1:E:113:HIS:CE1	2.88	0.40
1:E:116:ARG:CB	7:J:-3:DA:P	3.08	0.40
2:F:75:HIS:CE1	4:H:93:THR:HG21	2.53	0.40
7:J:24:DC:H2''	7:J:25:DT:OP2	2.21	0.40
8:M:655:LEU:O	8:M:659:SER:OG	2.31	0.40
8:W:348:PRO:HA	8:W:425:ASN:HB2	2.02	0.40
1:A:92:LEU:HD12	1:A:92:LEU:HA	1.64	0.40
4:H:36:ILE:CD1	6:I:49:DC:OP1	2.70	0.40
7:J:-18:DG:C4'	8:W:493:GLU:CD	2.93	0.40
7:J:13:DT:P	8:M:241:ARG:HE	2.44	0.40
8:M:295:ARG:HA	8:M:305:LEU:HA	2.03	0.40
8:W:430:ILE:HG22	8:W:432:VAL:HG23	2.02	0.40
8:W:615:ARG:C	8:W:822:LYS:HE2	2.46	0.40
8:W:1009:ILE:CG1	8:W:1013:GLU:HB2	2.50	0.40
1:A:124:ILE:CD1	2:B:50:ILE:HG21	2.47	0.40
1:E:60:LEU:HD22	1:E:93:GLN:HG2	2.03	0.40
1:E:101:VAL:HG23	2:F:37:LEU:HD11	2.03	0.40
1:E:119:ILE:HD13	1:E:119:ILE:HG21	1.76	0.40
6:I:-59:DT:C5	6:I:-58:DG:O6	2.74	0.40
6:I:-29:DC:H2''	6:I:-28:DT:OP2	2.18	0.40
6:I:23:DA:C4	6:I:24:DA:N7	2.90	0.40
7:J:1:DC:H2''	7:J:2:DG:H8	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:W:328:VAL:HG13	8:W:335:VAL:HG21	2.04	0.40
8:W:359:PRO:CG	8:W:422:ARG:HD2	2.51	0.40
8:W:525:LEU:HD12	8:W:525:LEU:C	2.45	0.40
8:W:807:ARG:HA	8:W:807:ARG:HD3	1.90	0.40
8:W:1121:PHE:O	8:W:1121:PHE:CG	2.72	0.40
2:B:36:ARG:NH2	6:I:-13:DA:P	2.94	0.40
4:D:104:ALA:O	4:D:108:VAL:HG23	2.21	0.40
2:F:15:ALA:CB	8:W:690:LEU:HD11	2.41	0.40
7:J:-37:DG:C1'	7:J:-36:DG:N7	2.82	0.40
8:M:304:GLN:OE1	8:M:323:ASN:ND2	2.55	0.40
8:W:330:LEU:HD12	8:W:331:ALA:HB2	2.03	0.40
8:W:1157:PHE:HE2	8:W:1183:LEU:HD21	1.85	0.40
3:C:92:GLU:OE1	3:C:92:GLU:N	2.49	0.40
6:I:-49:DG:H2''	6:I:-48:DC:C4	2.57	0.40
7:J:-12:DA:H1'	7:J:-11:DC:H5'	2.04	0.40
8:M:386:TRP:CD1	8:M:595:LEU:HD21	2.57	0.40
8:M:624:GLU:O	8:M:628:ASN:HB2	2.21	0.40
8:W:178:GLY:C	8:W:218:THR:OG1	2.64	0.40
8:W:401:ASP:OD1	8:W:597:ARG:NH2	2.54	0.40
8:W:601:ASP:O	8:W:603:GLU:N	2.55	0.40
8:W:656:LYS:N	8:W:825:VAL:HG11	2.37	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	
1	A	95/136 (70%)	87 (92%)	7 (7%)	1 (1%)	11	46
1	E	95/136 (70%)	86 (90%)	5 (5%)	4 (4%)	2	17
2	B	81/103 (79%)	69 (85%)	10 (12%)	2 (2%)	4	26
2	F	90/103 (87%)	85 (94%)	5 (6%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	C	101/130 (78%)	83 (82%)	14 (14%)	4 (4%)	2	18
4	D	93/126 (74%)	85 (91%)	7 (8%)	1 (1%)	11	46
4	H	91/126 (72%)	81 (89%)	9 (10%)	1 (1%)	11	46
5	G	103/130 (79%)	93 (90%)	10 (10%)	0	100	100
8	M	839/1468 (57%)	749 (89%)	89 (11%)	1 (0%)	48	83
8	W	868/1468 (59%)	784 (90%)	70 (8%)	14 (2%)	7	38
All	All	2456/3926 (63%)	2202 (90%)	226 (9%)	28 (1%)	14	46

All (28) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	D	82	LYS
1	E	42	ARG
8	M	778	ILE
8	W	474	ASN
8	W	600	LYS
8	W	602	VAL
8	W	778	ILE
8	W	794	ASN
3	C	17	ARG
8	W	221	SER
8	W	518	LEU
2	B	80	THR
1	E	47	ALA
1	E	65	LEU
8	W	459	ASN
8	W	483	MET
1	A	121	PRO
3	C	38	ASN
1	E	63	ARG
4	H	82	LYS
8	W	344	SER
8	W	427	PRO
3	C	46	GLY
3	C	80	PRO
8	W	369	PRO
2	B	81	VAL
8	W	540	ILE
8	W	181	ILE

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	
1	A	85/111 (77%)	82 (96%)	3 (4%)	32	53
1	E	84/111 (76%)	82 (98%)	2 (2%)	43	64
2	B	68/79 (86%)	67 (98%)	1 (2%)	57	72
2	F	63/79 (80%)	63 (100%)	0	100	100
3	C	82/102 (80%)	82 (100%)	0	100	100
4	D	81/105 (77%)	80 (99%)	1 (1%)	63	75
4	H	79/105 (75%)	77 (98%)	2 (2%)	42	63
5	G	83/101 (82%)	81 (98%)	2 (2%)	43	64
8	M	772/1313 (59%)	769 (100%)	3 (0%)	84	84
8	W	787/1313 (60%)	753 (96%)	34 (4%)	26	47
All	All	2184/3419 (64%)	2136 (98%)	48 (2%)	45	64

All (48) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	53	ARG
1	A	119	ILE
1	A	126	LEU
2	B	84	MET
4	D	37	TYR
1	E	76	GLN
1	E	96	SER
5	G	78	ILE
5	G	92	GLU
4	H	29	THR
4	H	51	ILE
8	M	201	VAL
8	M	491	THR
8	M	1028	LEU
8	W	322	GLU
8	W	346	ILE

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Mol	Chain	Res	Type
8	W	366	VAL
8	W	391	TRP
8	W	478	LYS
8	W	484	LYS
8	W	495	ILE
8	W	540	ILE
8	W	541	THR
8	W	598	LEU
8	W	602	VAL
8	W	606	LEU
8	W	613	ILE
8	W	631	THR
8	W	632	LYS
8	W	633	ASN
8	W	635	SER
8	W	645	HIS
8	W	652	MET
8	W	660	ASN
8	W	681	MET
8	W	703	LEU
8	W	720	MET
8	W	721	VAL
8	W	723	MET
8	W	731	LEU
8	W	739	GLN
8	W	799	LEU
8	W	1006	MET
8	W	1124	VAL
8	W	1132	LEU
8	W	1255	ARG
8	W	1263	LEU
8	W	1268	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (33) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	108	ASN
2	B	75	HIS
3	C	104	GLN
3	C	112	GLN
4	D	60	ASN
1	E	108	ASN

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Mol	Chain	Res	Type
5	G	24	GLN
5	G	31	HIS
5	G	38	ASN
5	G	84	GLN
5	G	112	GLN
8	M	206	ASN
8	M	225	ASN
8	M	349	GLN
8	M	396	ASN
8	M	546	GLN
8	M	548	ASN
8	M	587	HIS
8	M	591	GLN
8	M	622	GLN
8	M	653	ASN
8	M	810	GLN
8	M	813	HIS
8	M	1027	ASN
8	W	304	GLN
8	W	306	GLN
8	W	334	GLN
8	W	343	ASN
8	W	425	ASN
8	W	557	ASN
8	W	645	HIS
8	W	667	ASN
8	W	1147	ASN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

5.6 Ligand geometry

4 ligands are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
10	BEF	M	1502	9	0,3,3	-	-	-		
9	ADP	W	1502	10	28,29,29	2.00	8 (28%)	43,45,45	2.31	16 (37%)
10	BEF	W	1501	9	0,3,3	-	-	-		
9	ADP	M	1501	10	28,29,29	1.43	4 (14%)	43,45,45	1.85	9 (20%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
9	ADP	W	1502	10	-	3/16/32/32	0/3/3/3
9	ADP	M	1501	10	-	5/16/32/32	0/3/3/3

All (12) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	W	1502	ADP	C5-C4	5.60	1.49	1.39
9	W	1502	ADP	PA-O3A	4.98	1.64	1.59
9	M	1501	ADP	C5-C4	4.74	1.47	1.39
9	M	1501	ADP	C5-C6	2.75	1.48	1.41
9	W	1502	ADP	C5-C6	2.68	1.48	1.41
9	W	1502	ADP	C5-N7	-2.49	1.34	1.39
9	W	1502	ADP	PB-O1B	2.46	1.58	1.50
9	W	1502	ADP	C8-N7	2.46	1.36	1.31
9	M	1501	ADP	C8-N7	2.41	1.36	1.31
9	W	1502	ADP	PB-O2B	-2.30	1.46	1.54
9	M	1501	ADP	C5-N7	-2.28	1.34	1.39
9	W	1502	ADP	PB-O3B	-2.01	1.47	1.54

All (25) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	W	1502	ADP	C5-C4-N3	-6.30	118.04	126.72
9	M	1501	ADP	C5-C4-N3	-5.90	118.59	126.72
9	W	1502	ADP	N3-C4-N9	5.30	136.18	127.17
9	M	1501	ADP	N3-C4-N9	4.63	135.05	127.17
9	W	1502	ADP	O3A-PA-O1A	4.09	123.01	110.70
9	W	1502	ADP	C4-C5-N7	-3.95	106.07	110.58
9	W	1502	ADP	C2-N3-C4	3.84	121.22	111.83
9	M	1501	ADP	C2-N3-C4	3.71	120.88	111.83
9	W	1502	ADP	C3'-C2'-C1'	3.69	108.45	101.46
9	W	1502	ADP	N3-C2-N1	-3.54	123.23	128.58
9	W	1502	ADP	C5-N7-C8	3.45	108.88	103.45
9	M	1501	ADP	C4-C5-N7	-3.44	106.64	110.58
9	W	1502	ADP	O2B-PB-O1B	3.27	123.57	110.83
9	M	1501	ADP	N3-C2-N1	-3.21	123.73	128.58
9	W	1502	ADP	O3B-PB-O3A	-2.70	95.58	104.64
9	M	1501	ADP	C4-N9-C8	2.59	108.45	105.74
9	W	1502	ADP	C4-N9-C8	2.59	108.45	105.74
9	M	1501	ADP	C5-N7-C8	2.50	107.38	103.45
9	W	1502	ADP	C6-C5-N7	2.50	136.91	132.09
9	M	1501	ADP	C3'-C2'-C1'	2.49	106.17	101.46
9	W	1502	ADP	O5'-PA-O1A	-2.29	99.85	108.94
9	W	1502	ADP	N9-C8-N7	-2.23	110.77	113.94
9	W	1502	ADP	C4'-O4'-C1'	2.07	114.03	109.47
9	M	1501	ADP	C6-C5-N7	2.04	136.02	132.09
9	W	1502	ADP	C2-N1-C6	2.04	122.07	118.73

There are no chirality outliers.

All (8) torsion outliers are listed below:

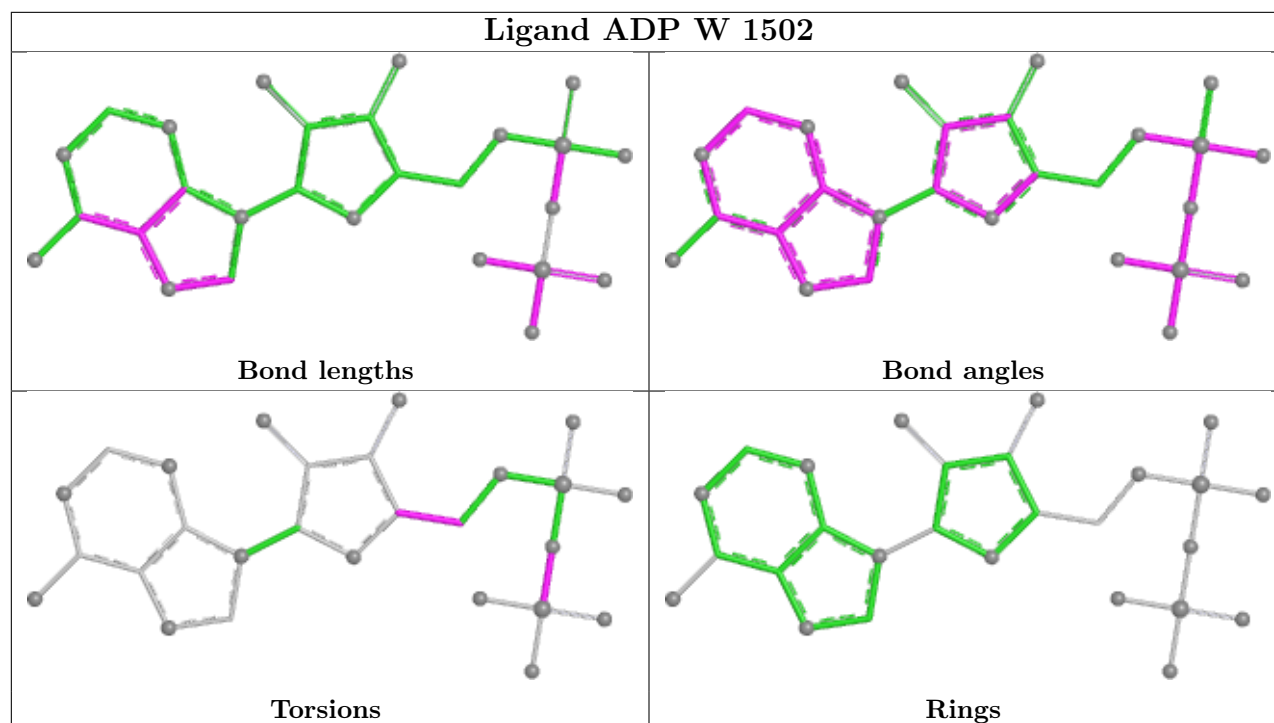
Mol	Chain	Res	Type	Atoms
9	M	1501	ADP	C5'-O5'-PA-O2A
9	M	1501	ADP	C5'-O5'-PA-O3A
9	W	1502	ADP	PA-O3A-PB-O2B
9	M	1501	ADP	PA-O3A-PB-O1B
9	W	1502	ADP	O4'-C4'-C5'-O5'
9	M	1501	ADP	PA-O3A-PB-O2B
9	M	1501	ADP	PA-O3A-PB-O3B
9	W	1502	ADP	C3'-C4'-C5'-O5'

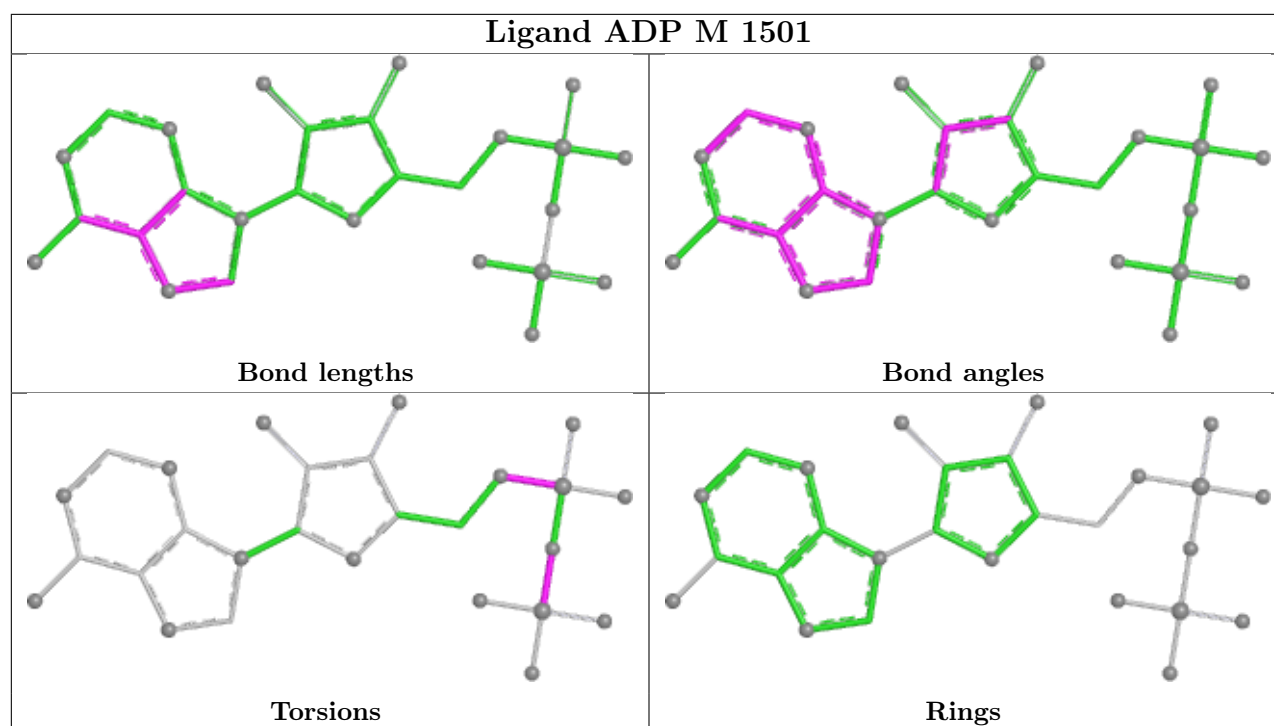
There are no ring outliers.

3 monomers are involved in 14 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
10	M	1502	BEF	1	0
9	W	1502	ADP	12	0
9	M	1501	ADP	1	0

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





5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
7	J	1
6	I	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	J	-46:DT	O3'	-45:DG	P	3.92
1	I	45:DC	O3'	46:DA	P	3.25

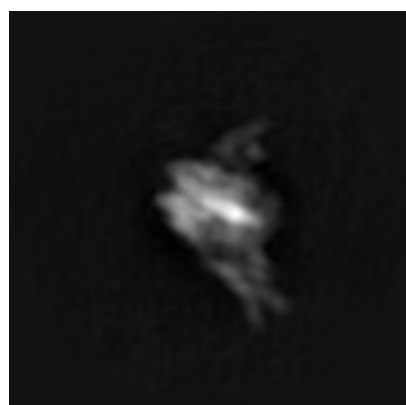
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-4336. These allow visual inspection of the internal detail of the map and identification of artifacts.

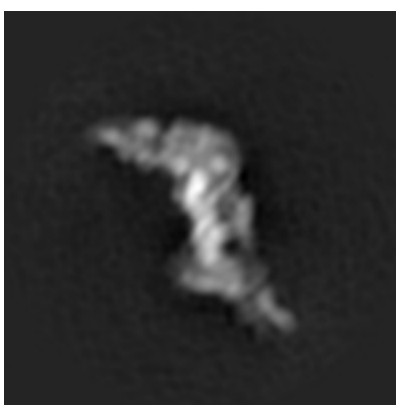
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

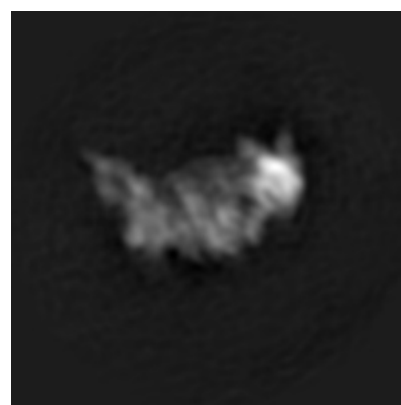
6.1.1 Primary map



X



Y

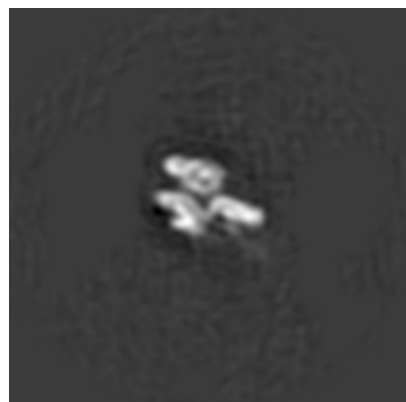


Z

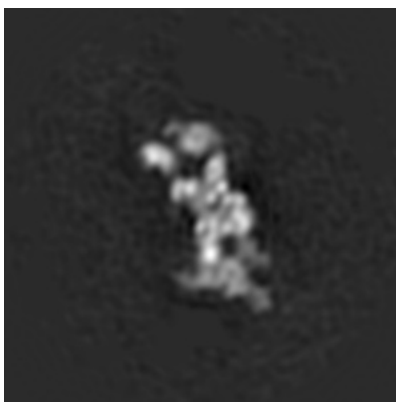
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

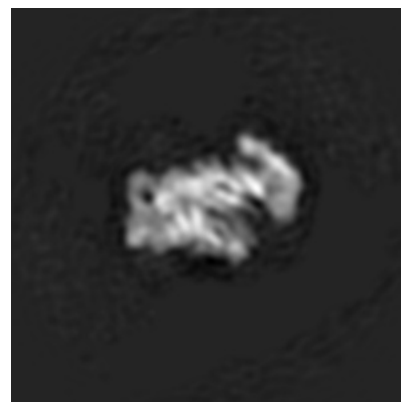
6.2.1 Primary map



X Index: 130



Y Index: 130

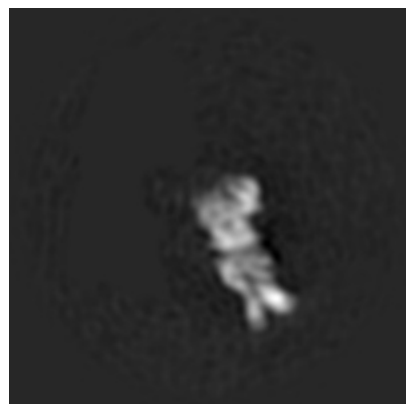


Z Index: 130

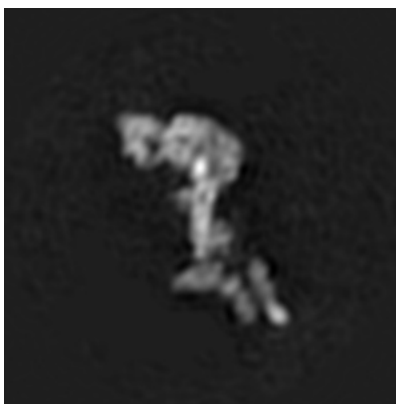
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

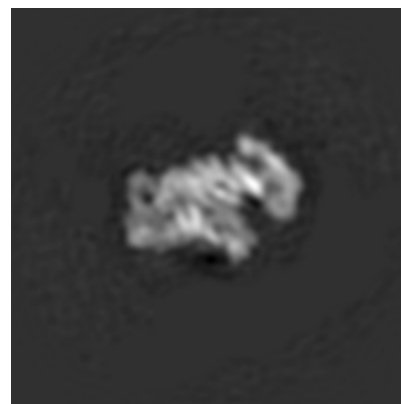
6.3.1 Primary map



X Index: 177



Y Index: 146

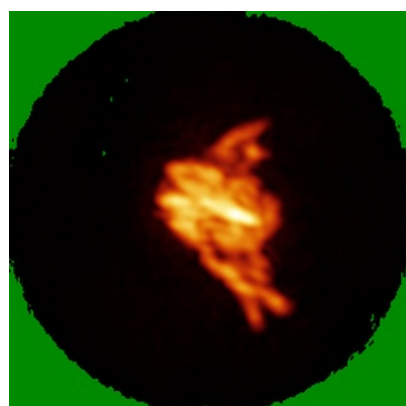


Z Index: 128

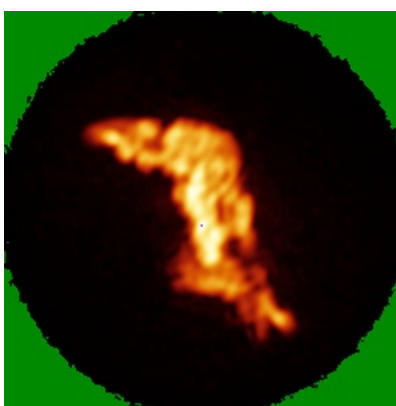
The images above show the largest variance slices of the map in three orthogonal directions.

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

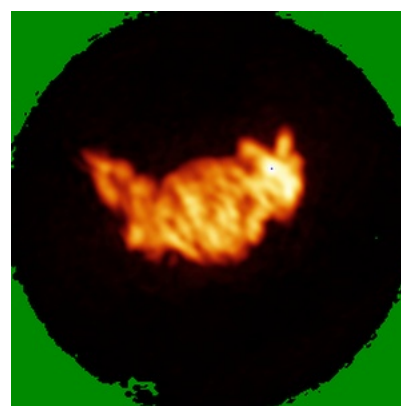
6.4.1 Primary map



X



Y



Z

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

6.5 Orthogonal surface views

This section was not generated.

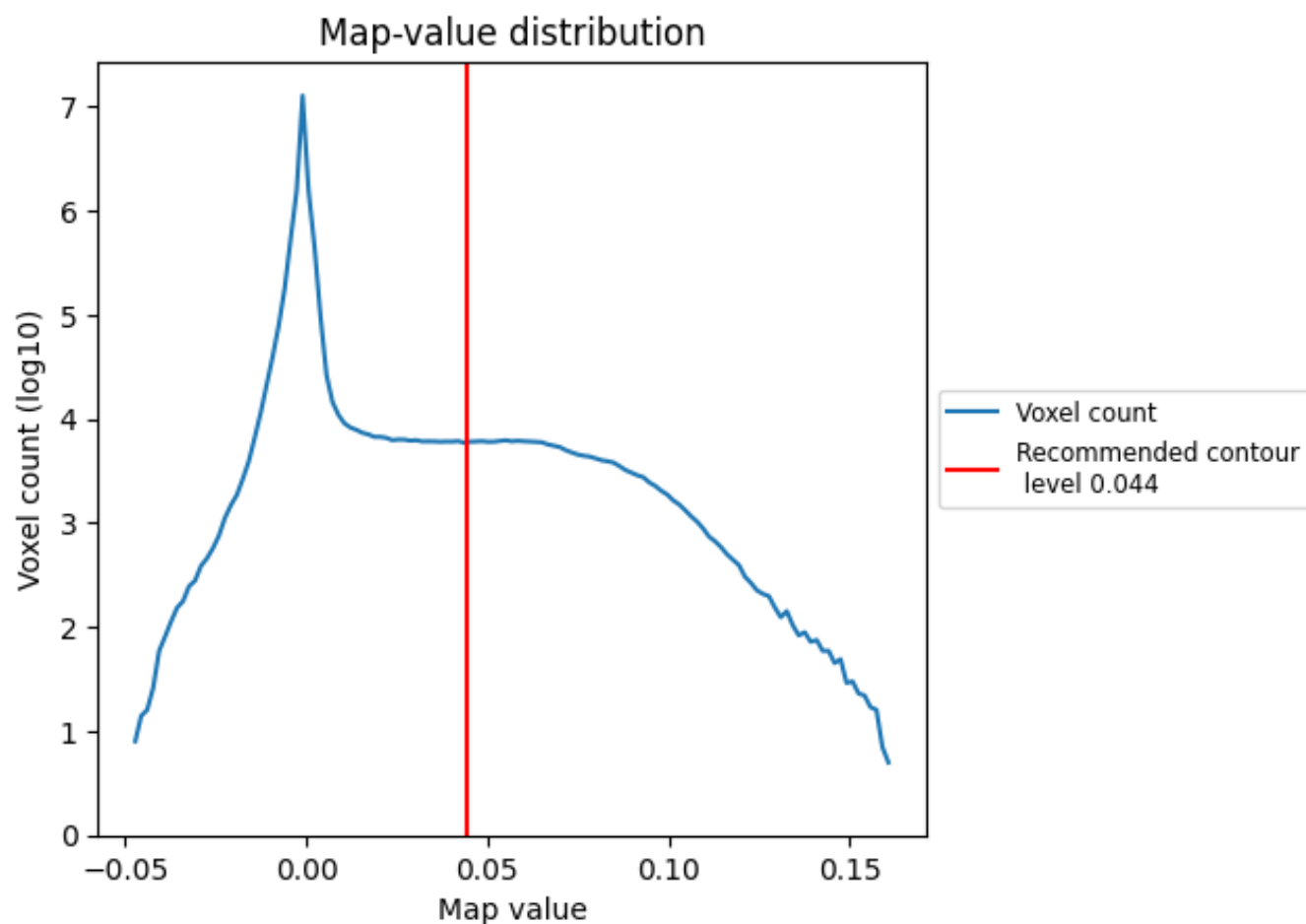
6.6 Mask visualisation

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

7 Map analysis [i](#)

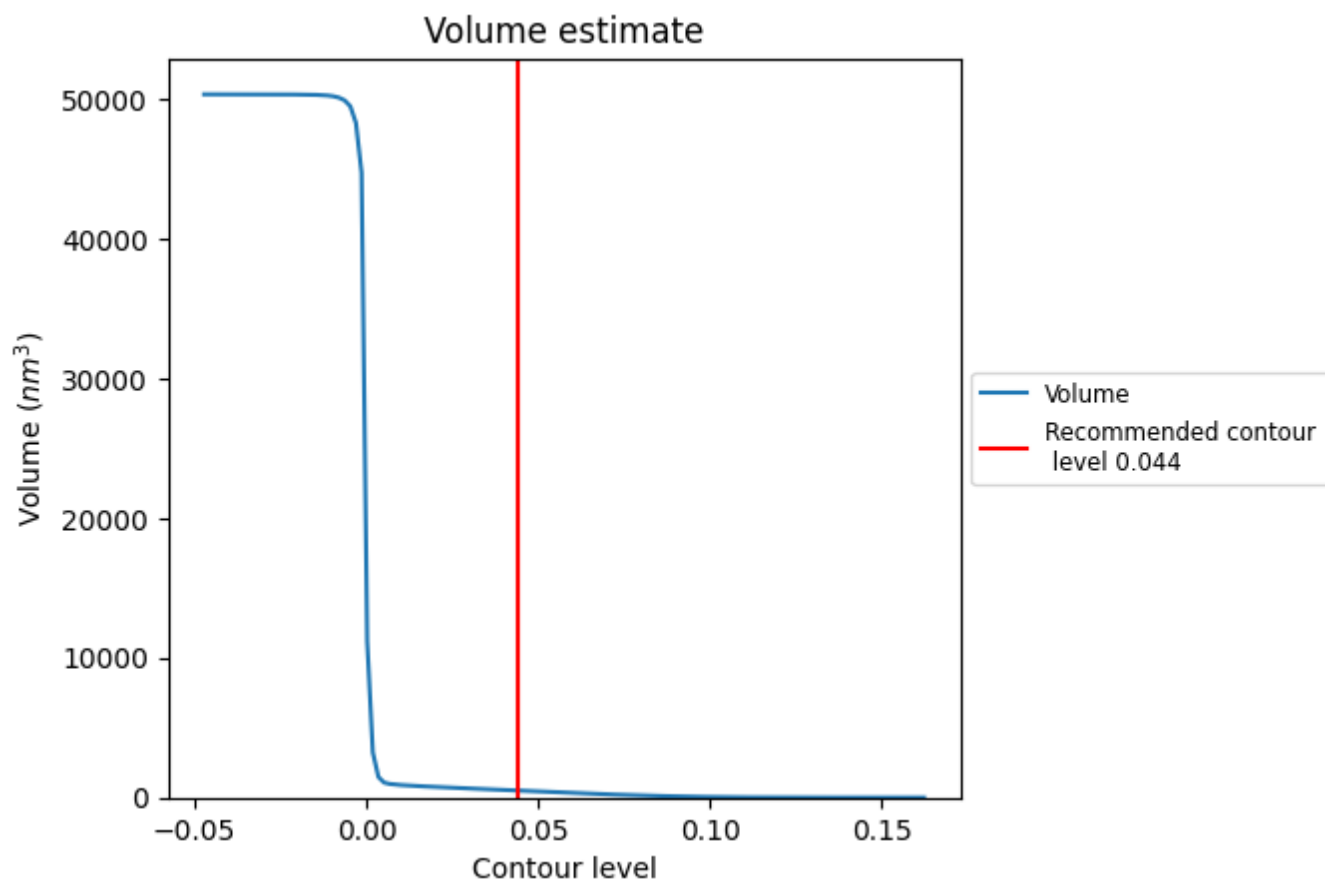
This section contains the results of statistical analysis of the map.

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.

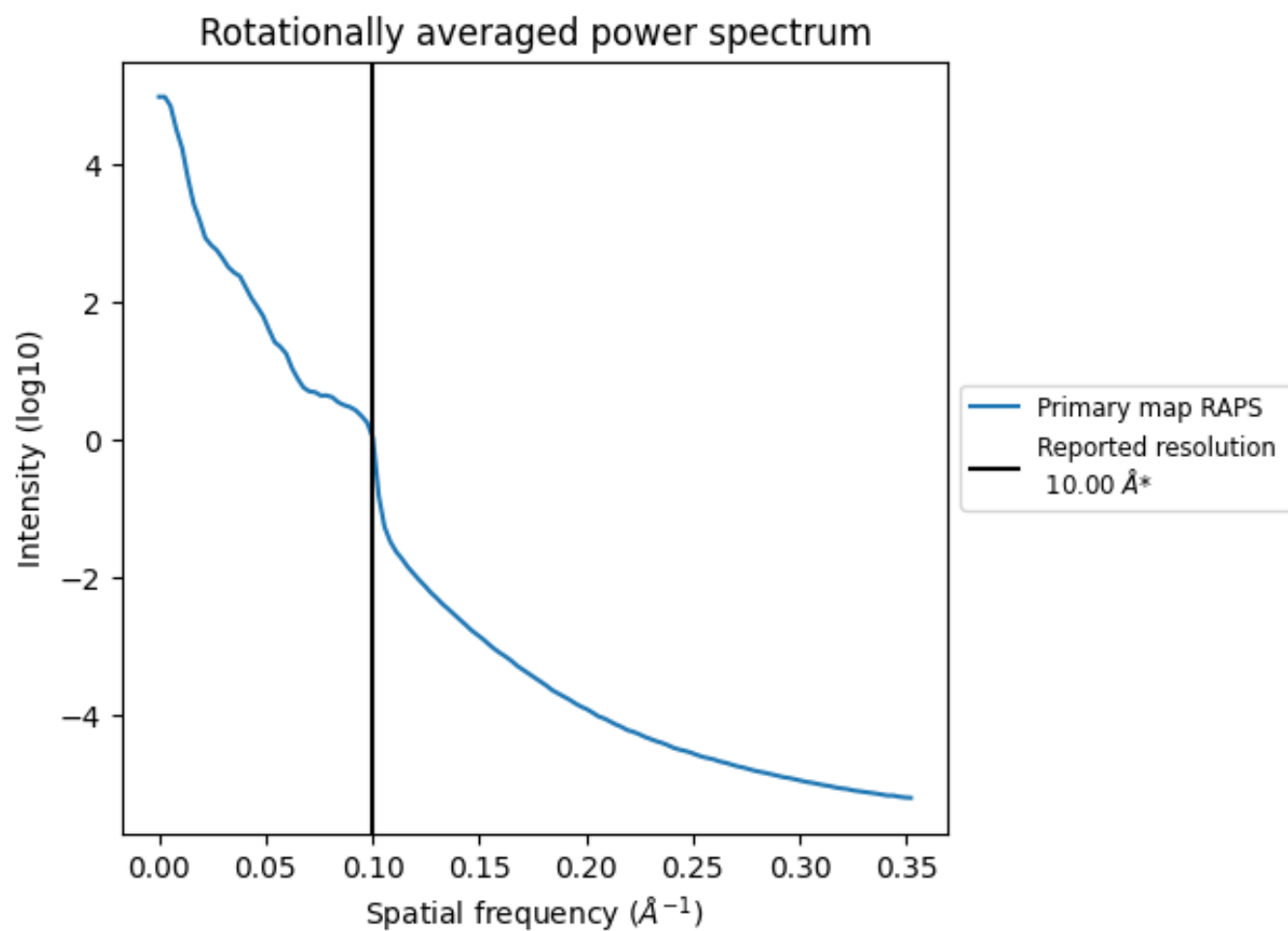
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 503 nm³; this corresponds to an approximate mass of 454 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 ⓘ

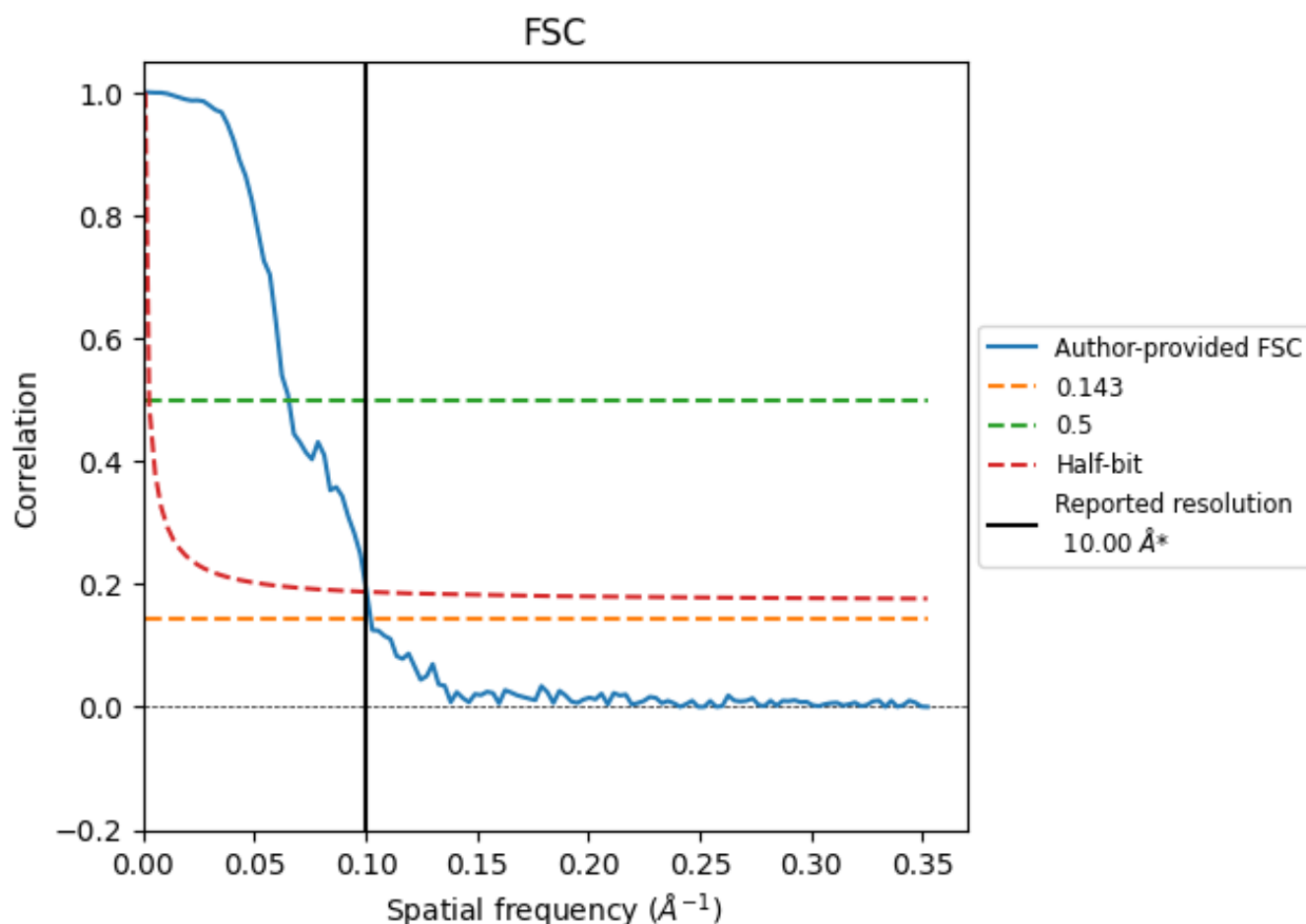


*Reported resolution corresponds to spatial frequency of 0.100 Å⁻¹

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 0.100 Å⁻¹

8.2 Resolution estimates [i](#)

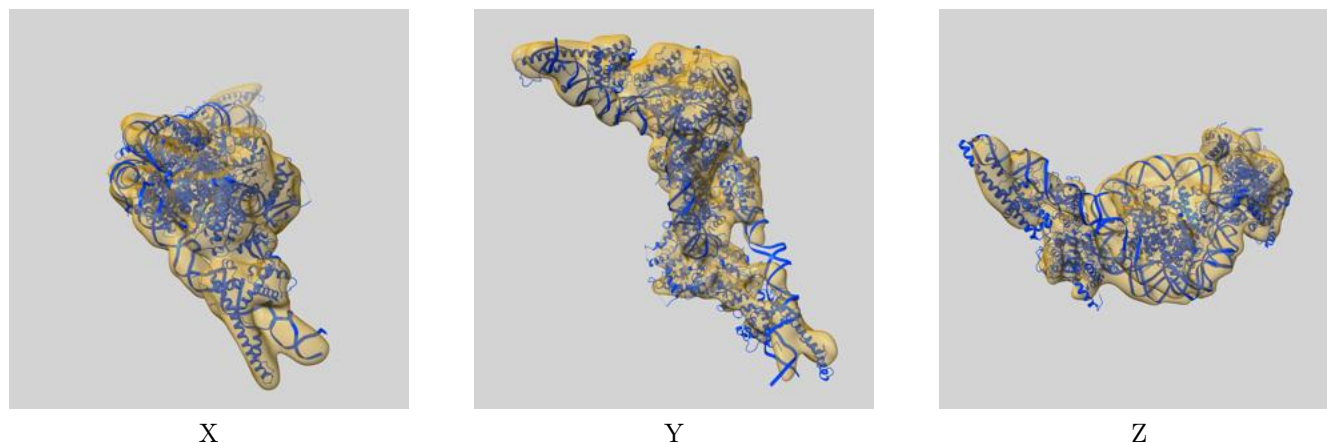
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	10.00	-	-
Author-provided FSC curve	9.78	15.31	9.96
Unmasked-calculated*	-	-	-

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

9 Map-model fit [i](#)

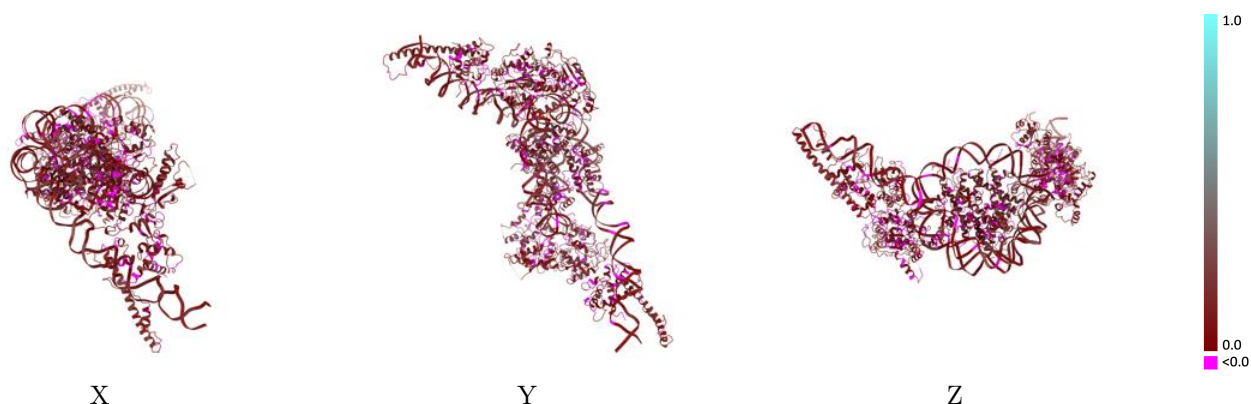
This section contains information regarding the fit between EMDB map EMD-4336 and PDB model 6G0L. Per-residue inclusion information can be found in section [3](#) on page [7](#).

9.1 Map-model overlay [i](#)



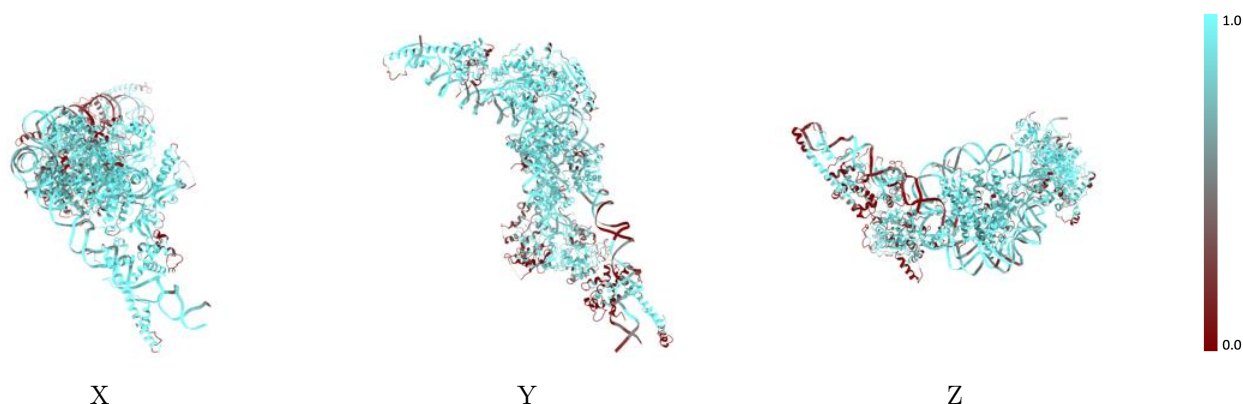
The images above show the 3D surface view of the map at the recommended contour level 0.044 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



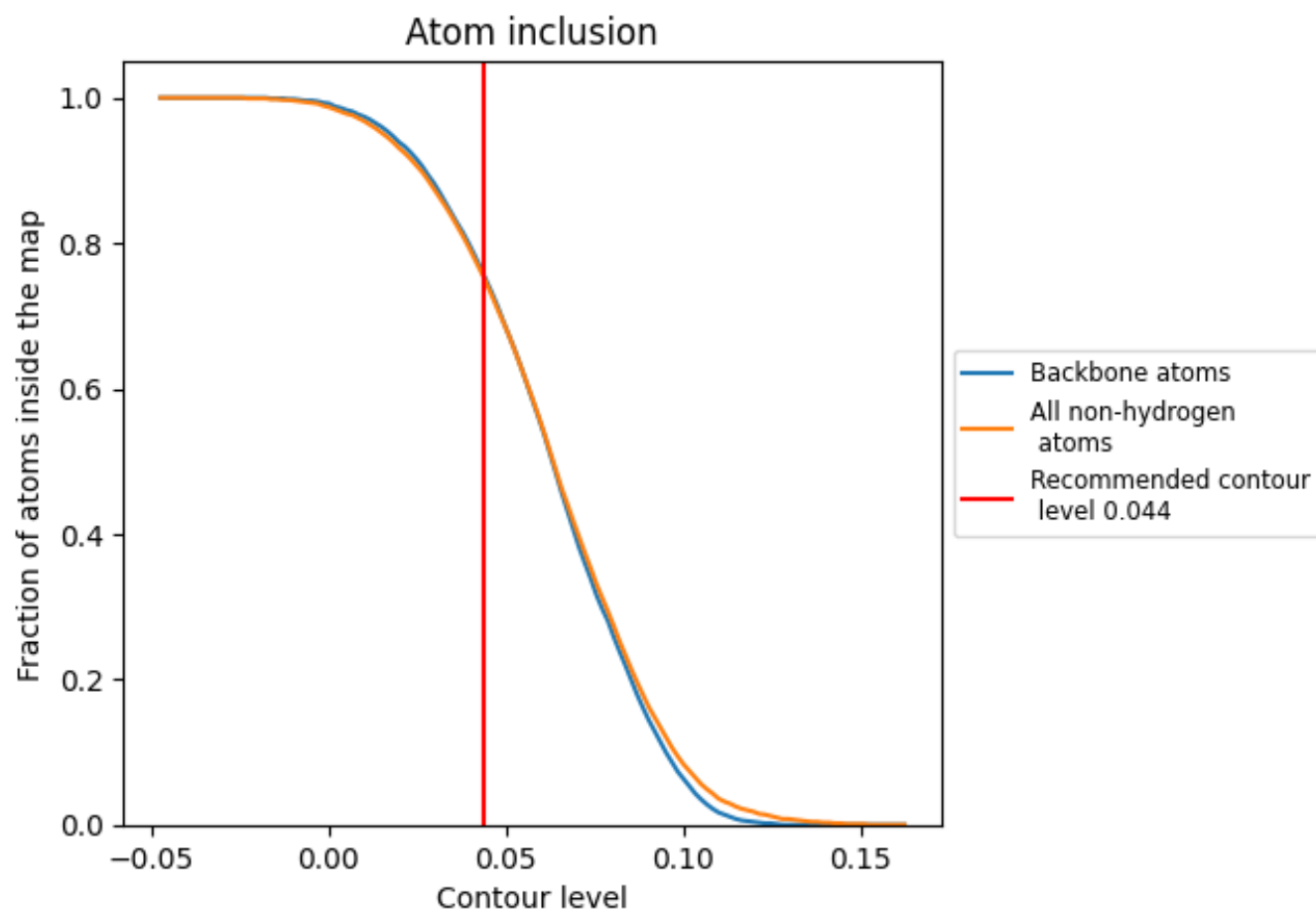
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.044).

9.4 Atom inclusion [i](#)



At the recommended contour level, 75% of all backbone atoms, 75% 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 (0.044) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.7510	0.0950
A	0.8440	0.1140
B	0.9500	0.1000
C	0.8830	0.0650
D	0.8120	0.1020
E	0.9270	0.1220
F	0.8510	0.0640
G	0.7410	0.0690
H	0.8980	0.1310
I	0.7910	0.1190
J	0.7580	0.1190
M	0.8330	0.0930
W	0.5540	0.0730

