



Full wwPDB EM Validation Report ⓘ

Mar 20, 2024 – 01:05 PM JST

PDB ID : 7CHW
EMDB ID : EMD-30376
Title : Cryo-EM structure of an Escherichia coli RNAP-promoter open complex (RPO)
Authors : Lin, W.; Feng, Y.
Deposited on : 2020-07-06
Resolution : 3.58 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.dev70
MolProbity : 4.02b-467
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36

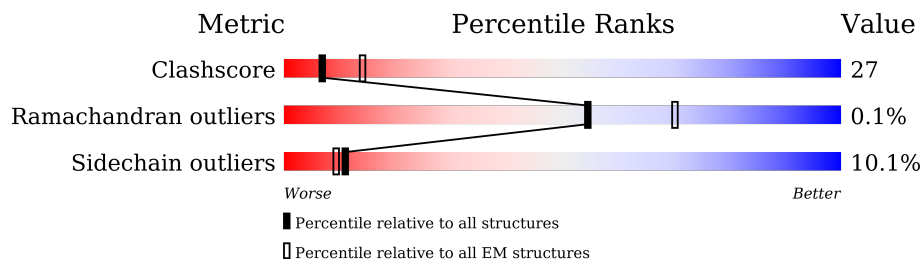
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.58 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

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	H	63	
2	A	329	
2	B	329	
2	K	329	
3	C	1342	
4	D	1407	
5	E	91	
6	F	613	

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Mol	Chain	Length	Quality of chain
7	G	63	 <p>A horizontal bar chart representing the quality of chain. The bar is divided into four segments: a green segment (17%), a red segment (30%), a yellow segment (60%), and a grey segment (22%). The percentages are labeled below the bar. The red segment is positioned above the green segment, and the yellow segment is positioned above the red segment.</p>

2 Entry composition [i](#)

There are 9 unique types of molecules in this entry. The entry contains 32282 atoms, of which 529 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a DNA chain called DNA (63-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
1	H	63	1312	623	256	370	63	0	0

- Molecule 2 is a protein called DNA-directed RNA polymerase subunit alpha.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
2	K	67	1046	328	529	88	99	2	0	0
2	A	230	1787	1112	317	352	6	0	0	
2	B	228	1767	1100	312	349	6	0	0	

- Molecule 3 is a protein called DNA-directed RNA polymerase subunit beta.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	C	1339	10561	6626	1840	2052	43	0	0

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C	516	VAL	ASP	engineered mutation	UNP P0A8V2

- Molecule 4 is a protein called DNA-directed RNA polymerase subunit beta'.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	D	1343	10363	6509	1846	1958	50	0	0

- Molecule 5 is a protein called DNA-directed RNA polymerase subunit omega.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	E	76	Total	C	N	O	S	0	0
			606	367	115	123	1		

- Molecule 6 is a protein called RNA polymerase sigma factor RpoD.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	F	472	Total	C	N	O	S	0	0
			3845	2408	685	729	23		

- Molecule 7 is a DNA chain called DNA (63-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
7	G	49	Total	C	N	O	P	0	0
			992	478	164	301	49		

- Molecule 8 is MAGNESIUM ION (three-letter code: MG) (formula: Mg) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		AltConf
8	D	1	Total	Mg	0
			1	1	

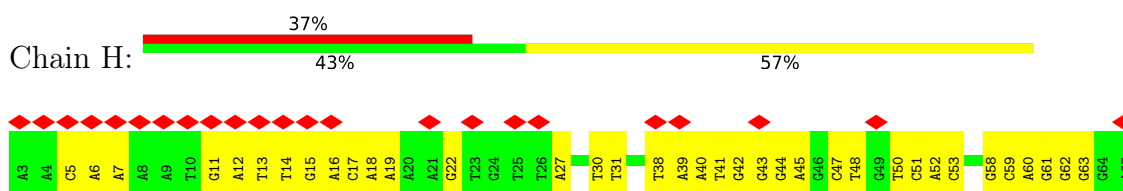
- Molecule 9 is ZINC ION (three-letter code: ZN) (formula: Zn) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		AltConf
9	D	2	Total	Zn	0
			2	2	

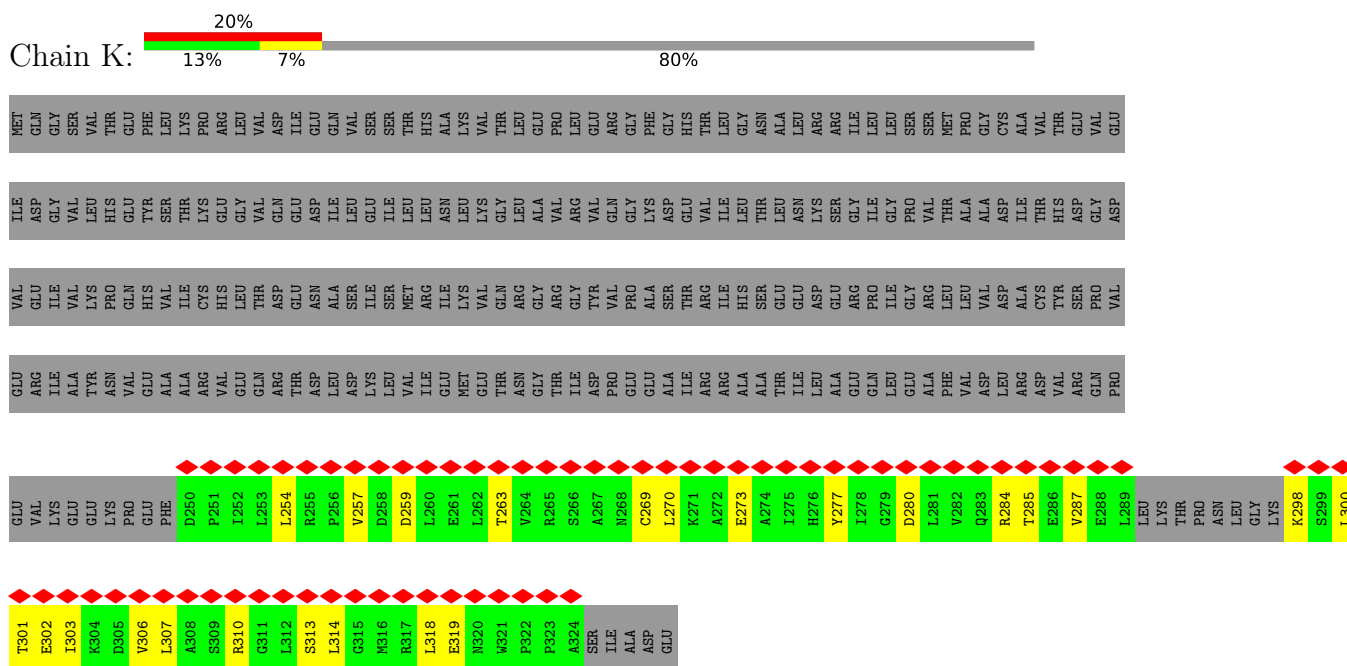
3 Residue-property plots i

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

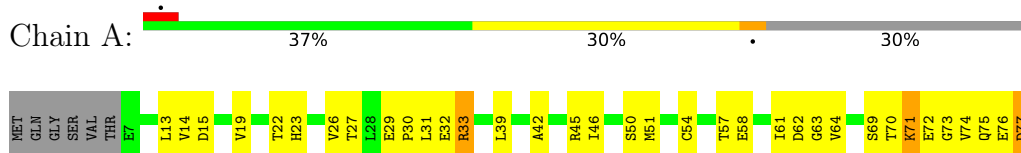
- Molecule 1: DNA (63-MER)

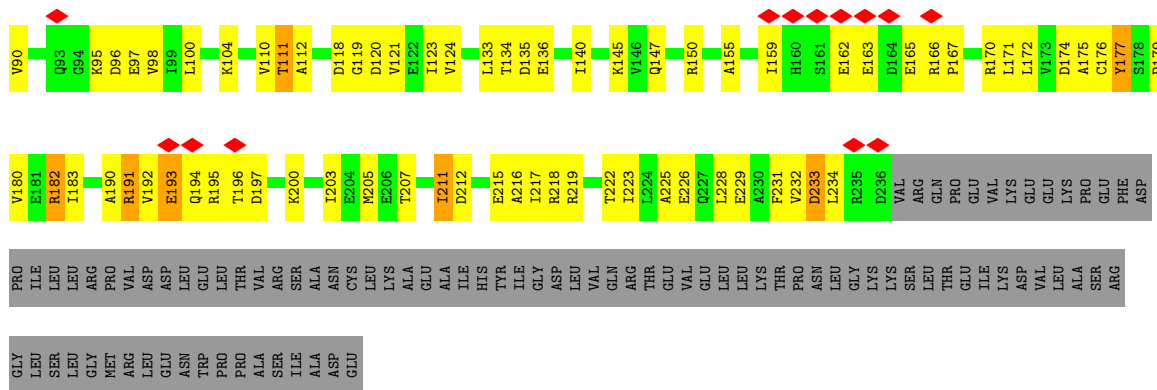


- Molecule 2: DNA-directed RNA polymerase subunit alpha

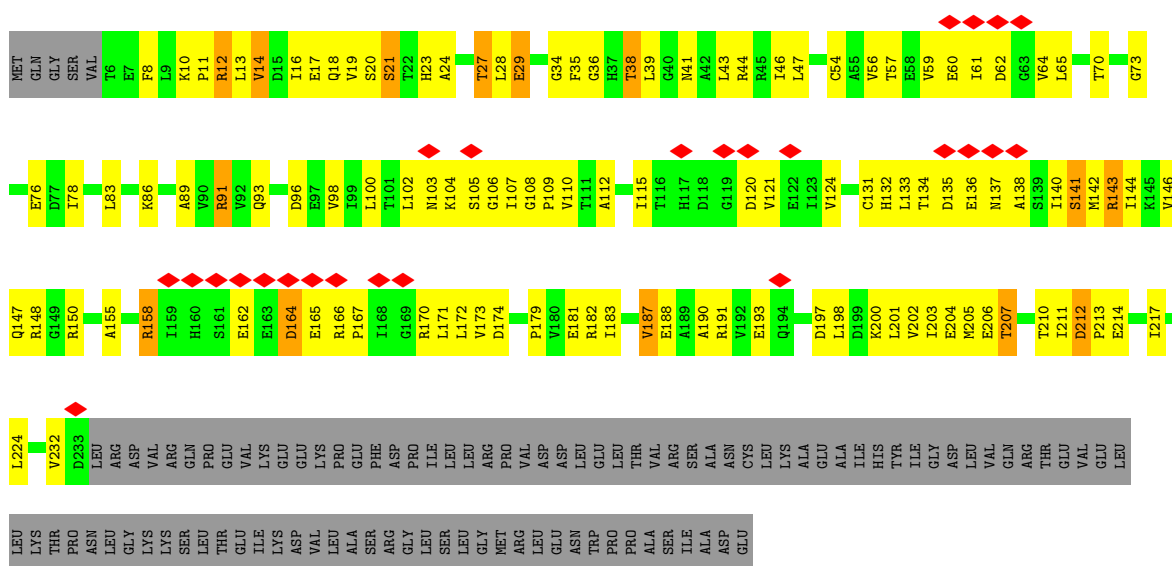


- Molecule 2: DNA-directed RNA polymerase subunit alpha

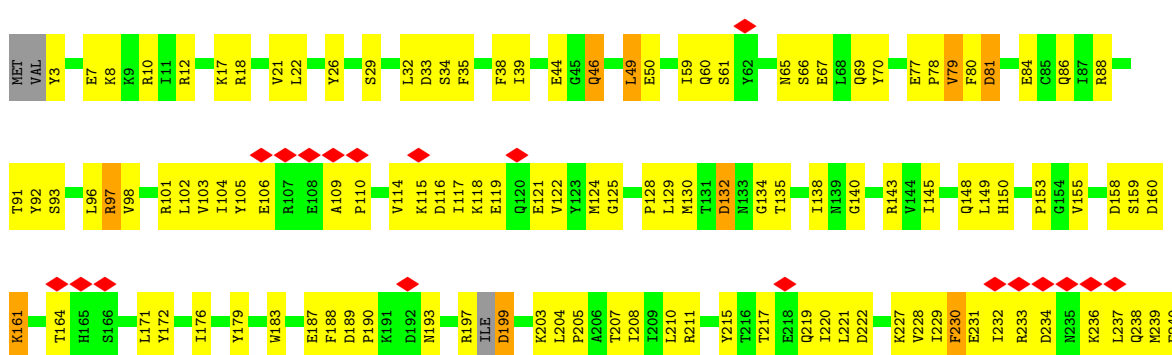


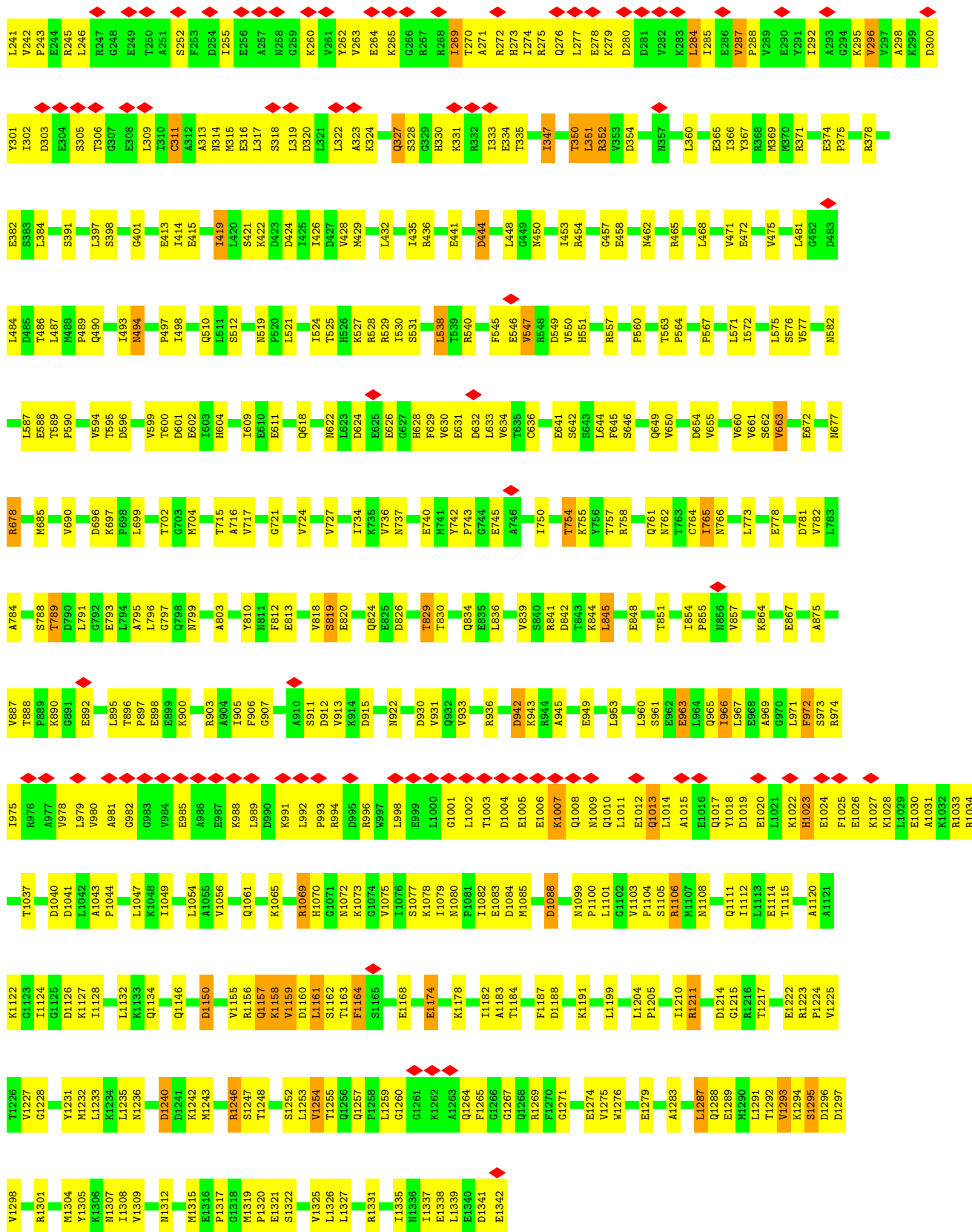


• Molecule 2: DNA-directed RNA polymerase subunit alpha

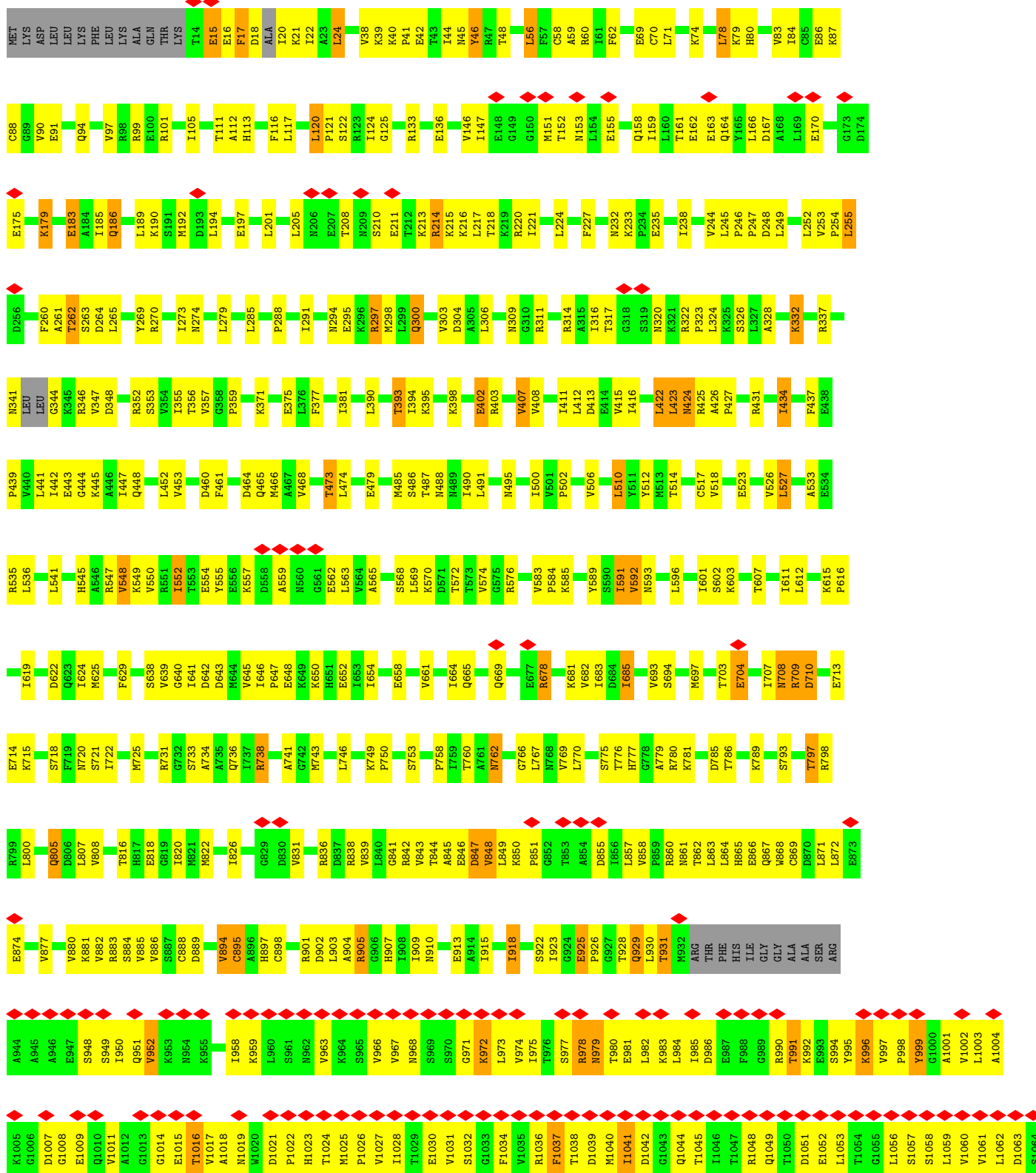


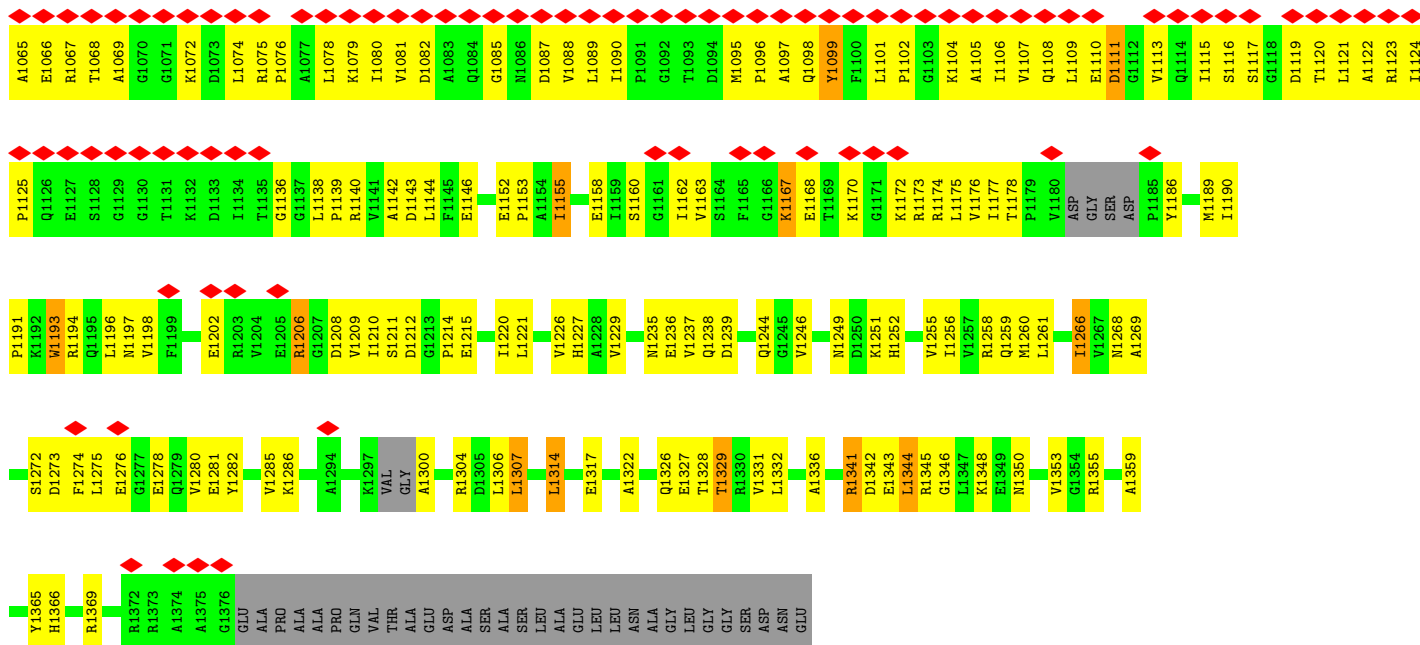
• Molecule 3: DNA-directed RNA polymerase subunit beta



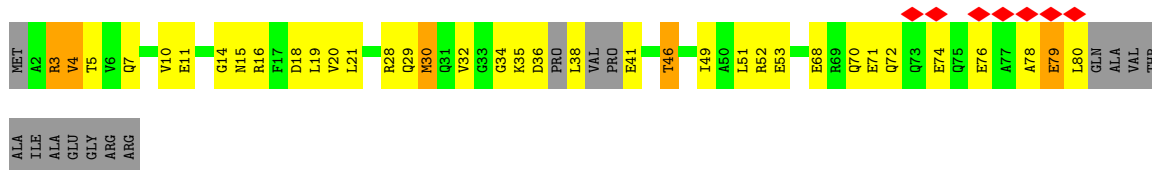
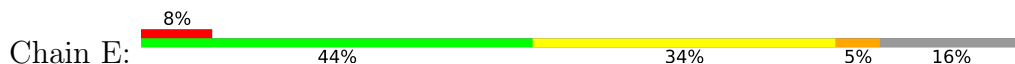


• Molecule 4: DNA-directed RNA polymerase subunit beta'

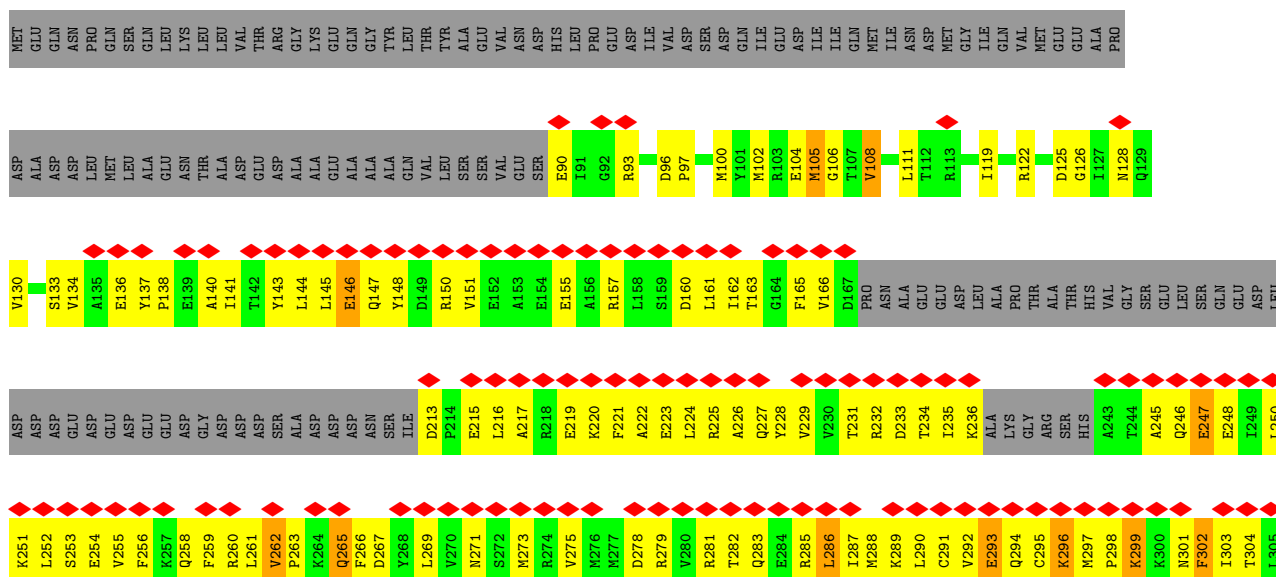


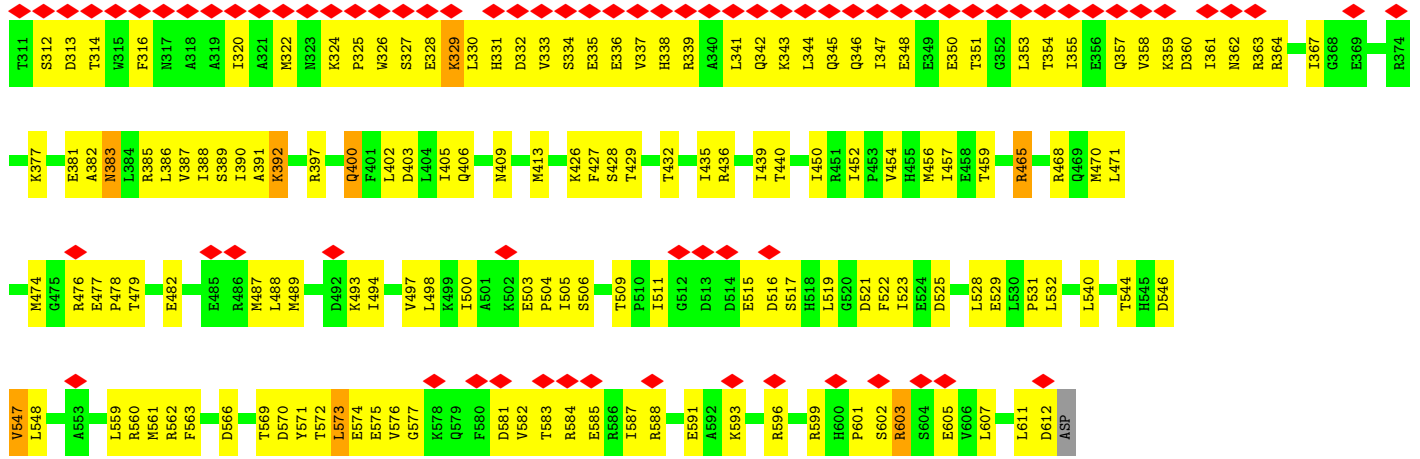


• Molecule 5: DNA-directed RNA polymerase subunit omega

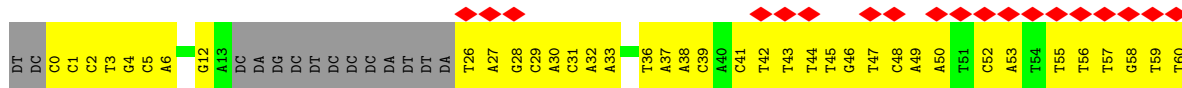


• Molecule 6: RNA polymerase sigma factor RpoD





• Molecule 7: DNA (63-MER)



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	199208	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 ($e^-/\text{\AA}^2$)	59	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.219	Depositor
Minimum map value	-0.168	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.008	Depositor
Recommended contour level	0.0259	Depositor
Map size (Å)	261.4, 261.4, 261.4	wwPDB
Map dimensions	200, 200, 200	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.3069999, 1.3069999, 1.3069999	Depositor

5 Model quality [i](#)

5.1 Standard geometry [i](#)

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

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	H	0.57	0/1478	0.89	0/2283
2	A	0.37	0/1809	0.49	0/2451
2	B	0.33	0/1789	0.48	0/2425
2	K	0.29	0/523	0.65	0/710
3	C	0.41	0/10729	0.49	0/14474
4	D	0.39	0/10515	0.49	0/14198
5	E	0.34	0/604	0.46	0/807
6	F	0.28	0/3896	0.43	0/5236
7	G	0.57	0/1106	1.00	0/1700
All	All	0.40	0/32449	0.54	0/44284

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

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	H	1312	0	709	61	0
2	A	1787	0	1810	89	0
2	B	1767	0	1789	106	0
2	K	517	529	528	9	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	C	10561	0	10575	546	0
4	D	10363	0	10510	632	0
5	E	606	0	609	31	0
6	F	3845	0	3913	311	0
7	G	992	0	560	53	0
8	D	1	0	0	0	0
9	D	2	0	0	0	0
All	All	31753	529	31003	1713	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 27.

All (1713) 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)
4:D:17:PHE:CZ	4:D:1353:VAL:HG11	1.59	1.36
4:D:17:PHE:HZ	4:D:1353:VAL:CG1	1.52	1.23
3:C:1342:GLU:HG3	4:D:18:ASP:OD1	1.45	1.15
3:C:1002:LEU:HD23	3:C:1007:LYS:HB2	1.37	1.06
3:C:1146:GLN:OE1	3:C:1160:ASP:HB3	1.57	1.05
6:F:261:LEU:HD11	6:F:265:GLN:HB3	1.40	1.03
4:D:17:PHE:CZ	4:D:1353:VAL:CG1	2.33	1.03
4:D:930:LEU:HD13	4:D:1244:GLN:HB3	1.40	1.02
3:C:1160:ASP:OD1	3:C:1161:LEU:N	1.91	1.02
4:D:252:LEU:HD12	4:D:262:THR:HB	1.39	1.02
4:D:1109:LEU:HD13	4:D:1115:ILE:HG21	1.44	0.99
4:D:17:PHE:HZ	4:D:1353:VAL:HG11	0.85	0.99
6:F:231:THR:HG21	6:F:252:LEU:HB2	1.40	0.99
3:C:232:ILE:HG12	3:C:237:LEU:HD22	1.45	0.99
3:C:1260:GLY:HA3	3:C:1265:PHE:HA	1.42	0.97
6:F:292:VAL:HG21	6:F:299:LYS:HG3	1.46	0.96
4:D:1280:VAL:HG11	4:D:1304:ARG:HH21	1.27	0.95
4:D:1027:VAL:HG22	4:D:1102:PRO:HD2	1.49	0.95
2:B:86:LYS:HE2	2:B:174:ASP:HB2	1.48	0.95
4:D:982:LEU:HB2	4:D:995:TYR:HB2	1.47	0.95
2:A:104:LYS:HD3	2:A:110:VAL:HG22	1.50	0.94
4:D:1167:LYS:HE3	4:D:1170:LYS:HD3	1.50	0.94
4:D:79:LYS:HB3	6:F:569:THR:HB	1.52	0.92
4:D:885:VAL:HG11	4:D:1255:VAL:HG12	1.51	0.92
3:C:119:GLU:HB2	3:C:489:PRO:HD2	1.52	0.90
6:F:364:ARG:HA	6:F:367:ILE:HD12	1.50	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:104:LYS:HG2	2:B:110:VAL:HG22	1.53	0.90
3:C:1158:LYS:HA	3:C:1158:LYS:NZ	1.86	0.90
3:C:398:SER:HB2	3:C:401:GLY:H	1.32	0.90
3:C:982:GLY:HA3	3:C:1002:LEU:HG	1.49	0.90
4:D:845:ALA:HB3	4:D:881:LYS:HG2	1.53	0.90
3:C:164:THR:HG21	3:C:171:LEU:HG	1.54	0.89
2:A:100:LEU:HD21	2:A:121:VAL:HG11	1.55	0.89
3:C:1342:GLU:CG	4:D:18:ASP:OD1	2.20	0.89
6:F:288:MET:HG3	6:F:299:LYS:HD2	1.55	0.89
6:F:247:GLU:HA	6:F:250:LEU:HD12	1.55	0.89
3:C:106:GLU:HG2	3:C:109:ALA:HB3	1.54	0.88
2:B:105:SER:HB3	2:B:138:ALA:HB1	1.53	0.88
3:C:982:GLY:HA2	3:C:1003:THR:HG23	1.53	0.88
4:D:1280:VAL:HG21	4:D:1304:ARG:HE	1.36	0.88
4:D:905:ARG:HH21	4:D:907:HIS:HB2	1.39	0.88
6:F:223:GLU:HA	6:F:226:ALA:HB3	1.56	0.87
3:C:975:ILE:HA	3:C:978:VAL:HB	1.57	0.87
6:F:577:GLY:HA3	6:F:583:THR:HG22	1.56	0.86
6:F:331:HIS:HA	6:F:334:SER:HB2	1.56	0.86
6:F:547:VAL:HG11	6:F:607:LEU:HD11	1.57	0.86
5:E:34:GLY:O	5:E:35:LYS:HD3	1.75	0.85
4:D:1024:THR:HG22	4:D:1026:PRO:HD3	1.58	0.85
4:D:1042:ASP:HB3	4:D:1048:ARG:HB2	1.56	0.85
4:D:1341:ARG:HG2	4:D:1341:ARG:HH11	1.38	0.85
4:D:800:LEU:HD22	4:D:1256:ILE:HD13	1.58	0.85
6:F:161:LEU:HG	6:F:162:ILE:HG12	1.58	0.85
4:D:161:THR:HG22	4:D:164:GLN:HG3	1.56	0.85
5:E:4:VAL:HG23	5:E:5:THR:HG23	1.59	0.85
2:A:222:THR:HG22	2:B:232:VAL:HA	1.57	0.85
4:D:322:ARG:HG2	4:D:323:PRO:HD2	1.57	0.85
7:G:47:DT:H1'	7:G:48:DC:H5'	1.57	0.84
4:D:1037:PHE:HB3	4:D:1041:ILE:HD13	1.59	0.83
4:D:929:GLN:HG2	4:D:930:LEU:HG	1.60	0.83
4:D:111:THR:HG23	4:D:300:GLN:HB2	1.58	0.82
3:C:103:VAL:HG12	3:C:116:ASP:HB2	1.60	0.82
4:D:848:VAL:HG22	4:D:858:VAL:HG22	1.61	0.82
3:C:1008:GLN:HA	3:C:1011:LEU:HD12	1.60	0.82
5:E:30:MET:CE	5:E:49:ILE:HG22	2.09	0.82
3:C:453:ILE:HD11	3:C:587:LEU:HD11	1.60	0.81
6:F:144:LEU:HD13	6:F:265:GLN:HG2	1.62	0.81
3:C:1088:ASP:OD1	3:C:1088:ASP:N	2.13	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:166:ARG:HB3	2:B:170:ARG:HB2	1.61	0.81
3:C:1269:ARG:HH21	4:D:344:GLY:HA3	1.44	0.81
4:D:1031:VAL:HG21	4:D:1088:VAL:HG21	1.62	0.81
3:C:642:SER:HB3	4:D:770:LEU:HD21	1.61	0.80
3:C:1158:LYS:HA	3:C:1158:LYS:HZ2	1.46	0.80
3:C:221:LEU:HD12	3:C:313:ALA:HB1	1.63	0.80
3:C:1065:LYS:HE2	3:C:1235:LEU:HD12	1.64	0.80
6:F:390:ILE:HD11	6:F:432:THR:HG23	1.63	0.80
4:D:559:ALA:HB3	4:D:562:GLU:HG2	1.63	0.80
4:D:218:THR:HA	4:D:221:ILE:HG22	1.64	0.80
4:D:424:ASN:HB2	4:D:434:ILE:HG12	1.64	0.79
3:C:252:SER:HA	3:C:265:LYS:HG3	1.65	0.79
5:E:30:MET:CE	5:E:49:ILE:CG2	2.61	0.79
6:F:573:LEU:HD21	7:G:45:DT:H2'	1.63	0.79
4:D:746:LEU:HD23	4:D:758:PRO:HB3	1.62	0.79
6:F:137:TYR:HB2	6:F:361:ILE:HG21	1.63	0.78
4:D:17:PHE:CE1	4:D:1353:VAL:HG11	2.19	0.78
3:C:979:LEU:HD11	3:C:1011:LEU:HD11	1.65	0.78
4:D:1082:ASP:HB3	4:D:1088:VAL:HB	1.63	0.78
6:F:231:THR:HA	6:F:248:GLU:HB3	1.66	0.78
3:C:678:ARG:HG2	3:C:1108:ASN:HD22	1.49	0.77
4:D:84:ILE:HG22	4:D:91:GLU:HB3	1.64	0.77
4:D:661:VAL:HG23	4:D:682:VAL:HG22	1.67	0.77
6:F:229:VAL:HG12	6:F:232:ARG:HH21	1.50	0.77
4:D:253:VAL:HG11	6:F:523:ILE:HD12	1.67	0.76
2:B:18:GLN:HE22	2:B:21:SER:HA	1.49	0.76
3:C:255:ILE:HG22	3:C:262:TYR:HB2	1.68	0.75
3:C:979:LEU:HD11	3:C:1011:LEU:HD21	1.68	0.75
4:D:1341:ARG:HG2	4:D:1341:ARG:NH1	1.98	0.75
6:F:166:VAL:HG22	6:F:258:GLN:HA	1.68	0.75
4:D:839:VAL:HG23	4:D:882:VAL:HG11	1.68	0.75
2:A:64:VAL:HG21	2:A:78:ILE:HG13	1.69	0.75
4:D:1049:GLN:HB2	4:D:1059:LEU:HD11	1.69	0.74
3:C:360:LEU:HD13	3:C:378:ARG:HG3	1.68	0.74
3:C:453:ILE:HD13	3:C:530:ILE:HD12	1.69	0.74
4:D:1021:ASP:HB3	4:D:1024:THR:HB	1.68	0.74
2:K:280:ASP:O	2:K:284:ARG:N	2.21	0.74
3:C:594:VAL:HG22	3:C:599:VAL:HG22	1.70	0.74
4:D:857:LEU:HD12	4:D:871:LEU:HD21	1.68	0.74
2:B:61:ILE:HD13	2:B:142:MET:HB3	1.69	0.74
1:H:14:DT:OP2	6:F:584:ARG:NE	2.20	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:22:DG:H22	7:G:41:DC:H1'	1.52	0.73
3:C:3:TYR:N	3:C:7:GLU:OE1	2.22	0.73
3:C:81:ASP:OD1	3:C:81:ASP:N	2.19	0.73
6:F:141:ILE:HG22	6:F:145:LEU:HD23	1.70	0.73
3:C:97:ARG:HG3	3:C:121:GLU:HB3	1.68	0.73
4:D:1162:ILE:HG22	4:D:1178:THR:HB	1.70	0.73
6:F:111:LEU:HD21	6:F:119:ILE:HD12	1.69	0.73
4:D:863:LEU:HD21	4:D:901:ARG:HB2	1.70	0.73
6:F:593:LYS:HG2	6:F:596:ARG:HH12	1.54	0.73
3:C:119:GLU:HG2	3:C:490:GLN:HB2	1.71	0.73
1:H:38:DT:H2''	1:H:39:DA:H5'	1.70	0.72
2:A:192:VAL:HG12	2:A:195:ARG:HB2	1.71	0.72
2:B:73:GLY:O	2:B:134:THR:HG23	1.89	0.72
4:D:112:ALA:HA	4:D:238:ILE:HD13	1.71	0.72
4:D:1045:THR:HG21	4:D:1076:PRO:HB3	1.72	0.72
3:C:230:PHE:HB3	3:C:333:ILE:HB	1.72	0.72
3:C:1159:VAL:HG12	3:C:1160:ASP:N	2.03	0.72
2:A:234:LEU:HD12	2:B:214:GLU:HG2	1.71	0.71
3:C:241:LEU:HD21	3:C:246:LEU:HD11	1.71	0.71
6:F:108:VAL:O	6:F:385:ARG:NH2	2.23	0.71
3:C:960:LEU:HB3	3:C:1025:PHE:HE1	1.53	0.71
3:C:1246:ARG:NH1	4:D:348:ASP:OD1	2.23	0.71
3:C:864:LYS:HD3	3:C:875:ALA:HB1	1.72	0.71
4:D:1060:VAL:HG22	4:D:1106:ILE:HD12	1.72	0.71
6:F:354:THR:HG23	6:F:357:GLN:H	1.55	0.71
3:C:272:ARG:HA	3:C:275:ARG:HB2	1.72	0.71
4:D:262:THR:HG22	6:F:504:PRO:HB2	1.73	0.71
3:C:988:LYS:HA	3:C:991:LYS:HG2	1.71	0.71
4:D:1343:GLU:HB3	4:D:1345:ARG:HG3	1.71	0.71
6:F:574:GLU:OE2	6:F:588:ARG:NH2	2.23	0.71
6:F:336:GLU:HA	6:F:339:ARG:HG2	1.72	0.70
4:D:816:THR:HG22	4:D:818:GLU:H	1.56	0.70
4:D:836:ARG:NH2	4:D:866:GLU:OE1	2.24	0.70
2:K:302:GLU:N	7:G:56:DT:OP2	2.23	0.70
2:B:11:PRO:HB2	2:B:28:LEU:HD11	1.73	0.70
6:F:248:GLU:HA	6:F:251:LYS:HE2	1.72	0.70
3:C:199:ASP:OD1	3:C:199:ASP:N	2.23	0.70
3:C:1157:GLN:OE1	3:C:1157:GLN:HA	1.90	0.70
4:D:895:CYS:SG	4:D:898:CYS:N	2.62	0.70
4:D:1057:SER:HB2	4:D:1059:LEU:HD13	1.72	0.70
6:F:102:MET:HA	6:F:105:MET:HE2	1.72	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:796:LEU:N	3:C:1231:TYR:OH	2.25	0.69
3:C:1319:MET:HG3	3:C:1320:PRO:HD2	1.73	0.69
4:D:74:LYS:NZ	4:D:86:GLU:OE2	2.25	0.69
2:A:215:GLU:OE2	2:A:219:ARG:NH2	2.25	0.69
6:F:278:ASP:HA	6:F:281:ARG:HH22	1.57	0.69
7:G:29:DC:H4'	7:G:30:DA:H5'	1.73	0.69
1:H:6:DA:N6	7:G:57:DT:O4	2.26	0.69
3:C:61:SER:OG	3:C:66:SER:N	2.23	0.69
7:G:52:DC:H5'	7:G:52:DC:H6	1.57	0.69
1:H:62:DG:H4'	1:H:63:DG:H5'	1.74	0.69
2:B:181:GLU:HA	4:D:535:ARG:HH12	1.55	0.69
3:C:819:SER:HB2	3:C:1085:MET:HG3	1.75	0.68
4:D:510:LEU:O	4:D:514:THR:HG22	1.93	0.68
6:F:572:THR:O	6:F:576:VAL:N	2.24	0.68
2:A:50:SER:HB3	2:B:8:PHE:HZ	1.57	0.68
4:D:1027:VAL:HB	4:D:1121:LEU:HB2	1.74	0.68
4:D:91:GLU:OE2	4:D:101:ARG:NH2	2.22	0.68
6:F:160:ASP:O	6:F:265:GLN:NE2	2.27	0.68
3:C:323:ALA:O	3:C:327:GLN:NE2	2.27	0.68
4:D:568:SER:OG	4:D:570:LYS:NZ	2.27	0.68
4:D:973:LEU:H	4:D:1003:LEU:HD12	1.59	0.68
6:F:310:GLU:HB3	6:F:344:LEU:HD22	1.75	0.68
2:A:162:GLU:OE1	2:A:165:GLU:N	2.24	0.67
4:D:155:GLU:N	4:D:158:GLN:OE1	2.28	0.67
3:C:933:VAL:HG11	3:C:945:ALA:HB2	1.76	0.67
6:F:348:GLU:HA	6:F:351:THR:HG22	1.77	0.67
4:D:789:LYS:HG3	4:D:931:THR:HG21	1.74	0.67
4:D:734:ALA:O	4:D:738:ARG:NH1	2.27	0.67
4:D:1089:LEU:HA	4:D:1096:PRO:HA	1.77	0.67
4:D:1215:GLU:OE1	4:D:1215:GLU:N	2.26	0.67
3:C:618:GLN:HE21	4:D:770:LEU:HD22	1.59	0.67
4:D:930:LEU:HD12	4:D:1246:VAL:HG23	1.76	0.67
6:F:222:ALA:O	6:F:226:ALA:N	2.23	0.67
3:C:576:SER:OG	3:C:577:VAL:N	2.26	0.66
2:B:100:LEU:HB2	2:B:144:ILE:HG13	1.76	0.66
3:C:230:PHE:O	3:C:333:ILE:N	2.28	0.66
4:D:845:ALA:O	4:D:860:ARG:NH2	2.25	0.66
3:C:529:ARG:HD2	3:C:572:ILE:HG22	1.76	0.66
3:C:300:ASP:OD1	3:C:313:ALA:N	2.27	0.66
4:D:857:LEU:H	4:D:857:LEU:HD23	1.61	0.66
3:C:758:ARG:NH1	3:C:762:ASN:OD1	2.28	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:903:ARG:O	3:C:907:GLY:N	2.27	0.66
4:D:1158:GLU:OE1	4:D:1158:GLU:N	2.28	0.66
3:C:1158:LYS:HA	3:C:1158:LYS:CE	2.25	0.66
4:D:1065:ALA:HB2	4:D:1193:TRP:HB3	1.78	0.66
6:F:248:GLU:HG2	6:F:251:LYS:HE2	1.76	0.66
3:C:67:GLU:HG2	3:C:103:VAL:HG22	1.78	0.66
3:C:189:ASP:HB2	3:C:190:PRO:HD2	1.77	0.66
6:F:143:TYR:O	6:F:150:ARG:NH2	2.28	0.66
4:D:975:ILE:HG22	4:D:1028:ILE:HG21	1.78	0.65
4:D:1115:ILE:HD12	4:D:1119:ASP:HB3	1.78	0.65
3:C:179:TYR:HB2	3:C:398:SER:OG	1.96	0.65
3:C:1339:LEU:HD13	4:D:17:PHE:CD2	2.31	0.65
6:F:261:LEU:HD23	6:F:266:PHE:HD1	1.61	0.65
2:A:190:ALA:HB2	2:A:200:LYS:HB2	1.79	0.65
2:B:182:ARG:NH1	2:B:204:GLU:OE2	2.29	0.65
3:C:690:VAL:HG23	3:C:1236:ASN:HB3	1.78	0.65
3:C:1069:ARG:NH1	3:C:1114:GLU:OE2	2.29	0.65
4:D:479:GLU:HG2	5:E:20:VAL:HG11	1.78	0.65
4:D:986:ASP:OD2	4:D:990:ARG:NH1	2.30	0.65
6:F:474:MET:SD	6:F:476:ARG:NH2	2.70	0.65
4:D:710:ASP:N	4:D:710:ASP:OD1	2.28	0.65
6:F:577:GLY:O	6:F:581:ASP:N	2.28	0.65
3:C:101:ARG:HG2	3:C:118:LYS:HB2	1.78	0.65
6:F:601:PRO:O	6:F:603:ARG:NH2	2.29	0.65
4:D:161:THR:HG23	4:D:163:GLU:H	1.60	0.65
6:F:338:HIS:HA	6:F:341:LEU:HG	1.77	0.65
4:D:398:LYS:HD3	6:F:532:LEU:CD2	2.27	0.65
3:C:975:ILE:O	3:C:979:LEU:N	2.30	0.64
2:A:61:ILE:HB	2:A:64:VAL:HG12	1.78	0.64
6:F:225:ARG:HA	6:F:228:TYR:HB3	1.79	0.64
3:C:564:PRO:HD3	3:C:572:ILE:HB	1.79	0.64
5:E:30:MET:HB2	5:E:46:THR:HG22	1.79	0.64
1:H:43:DG:H1'	6:F:102:MET:HE3	1.79	0.64
4:D:1136:GLY:HA2	4:D:1140:ARG:HB2	1.79	0.64
3:C:1271:GLY:N	3:C:1274:GLU:OE1	2.30	0.64
6:F:150:ARG:CB	6:F:155:GLU:HB3	2.28	0.64
6:F:299:LYS:HG2	6:F:302:PHE:HE2	1.63	0.64
3:C:715:THR:HG21	3:C:782:VAL:HG22	1.79	0.64
4:D:1059:LEU:HB3	4:D:1107:VAL:HG23	1.80	0.64
6:F:294:GLN:HE22	6:F:333:VAL:HG11	1.63	0.64
6:F:358:VAL:O	6:F:362:ASN:ND2	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:391:ALA:HB2	6:F:439:ILE:HD13	1.80	0.64
2:A:191:ARG:NH1	2:A:195:ARG:O	2.30	0.64
4:D:1062:LEU:HD22	4:D:1066:GLU:HB3	1.81	0.63
4:D:1108:GLN:NE2	4:D:1120:THR:OG1	2.32	0.63
6:F:157:ARG:HD2	6:F:160:ASP:HB2	1.79	0.63
6:F:351:THR:HG23	6:F:353:LEU:H	1.63	0.63
3:C:1014:LEU:O	3:C:1018:TYR:N	2.31	0.63
3:C:1164:PHE:HB2	3:C:1168:GLU:HB3	1.79	0.63
4:D:709:ARG:HD2	4:D:714:GLU:HB2	1.80	0.63
4:D:750:PRO:HA	4:D:777:HIS:NE2	2.13	0.63
4:D:1025:MET:N	4:D:1124:ILE:O	2.28	0.63
6:F:150:ARG:HB3	6:F:155:GLU:HB3	1.81	0.63
2:A:195:ARG:NH2	2:A:197:ASP:OD1	2.31	0.63
6:F:360:ASP:HA	6:F:363:ARG:HB3	1.79	0.63
1:H:13:DT:H2''	1:H:14:DT:H71	1.79	0.63
3:C:896:THR:HB	3:C:897:PRO:HD2	1.80	0.63
3:C:1264:GLN:NE2	4:D:375:GLU:OE2	2.31	0.63
4:D:968:ASN:HD22	4:D:1117:SER:HB3	1.64	0.63
4:D:80:HIS:HB3	4:D:83:VAL:CG1	2.29	0.63
4:D:443:GLU:OE2	4:D:444:GLY:N	2.31	0.63
6:F:390:ILE:CD1	6:F:432:THR:HG23	2.29	0.63
3:C:12:ARG:HD3	3:C:1183:ALA:HB2	1.81	0.63
6:F:145:LEU:O	6:F:225:ARG:NH2	2.32	0.63
2:A:61:ILE:HB	2:A:64:VAL:CG1	2.29	0.62
1:H:42:DG:H22	3:C:375:PRO:HD2	1.64	0.62
3:C:119:GLU:HB2	3:C:489:PRO:CD	2.27	0.62
7:G:49:DA:H2''	7:G:50:DA:C5	2.34	0.62
2:A:22:THR:HB	2:A:207:THR:O	1.99	0.62
3:C:10:ARG:NH2	3:C:793:GLU:OE1	2.32	0.62
4:D:847:ASP:OD1	4:D:847:ASP:N	2.25	0.62
6:F:322:MET:HG3	6:F:324:LYS:HD3	1.81	0.62
4:D:1068:THR:HG22	4:D:1069:ALA:H	1.65	0.62
5:E:34:GLY:C	5:E:35:LYS:HD3	2.20	0.62
2:A:58:GLU:OE1	2:A:170:ARG:HD2	1.99	0.62
3:C:754:THR:O	3:C:754:THR:OG1	2.16	0.62
6:F:227:GLN:HE21	6:F:231:THR:HG22	1.64	0.62
2:B:104:LYS:NZ	2:B:105:SER:O	2.21	0.62
3:C:44:GLU:HG3	3:C:46:GLN:H	1.64	0.62
4:D:263:SER:OG	4:D:264:ASP:N	2.33	0.62
4:D:300:GLN:NE2	4:D:304:ASP:OD2	2.33	0.62
3:C:275:ARG:O	3:C:279:LYS:HG2	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:72:GLN:O	5:E:76:GLU:N	2.31	0.62
4:D:442:ILE:HD13	4:D:448:GLN:HG3	1.82	0.62
5:E:30:MET:HE1	5:E:49:ILE:CG2	2.30	0.62
5:E:38:LEU:HD12	5:E:38:LEU:N	2.15	0.62
6:F:282:THR:O	6:F:286:LEU:N	2.31	0.62
2:B:60:GLU:HB3	2:B:143:ARG:HB2	1.82	0.62
3:C:302:ILE:HA	3:C:309:LEU:HA	1.82	0.62
4:D:1037:PHE:HB3	4:D:1041:ILE:CD1	2.30	0.62
4:D:1057:SER:OG	4:D:1108:GLN:HA	1.99	0.62
4:D:1346:GLY:O	4:D:1350:ASN:HB2	2.00	0.61
1:H:40:DA:H5'	1:H:41:DT:H72	1.83	0.61
3:C:1023:HIS:O	3:C:1027:LYS:N	2.21	0.61
4:D:70:CYS:SG	4:D:71:LEU:N	2.73	0.61
4:D:255:LEU:HD23	4:D:261:ALA:HB2	1.82	0.61
4:D:1272:SER:HB2	4:D:1286:LYS:HZ3	1.64	0.61
3:C:960:LEU:HB3	3:C:1025:PHE:CE1	2.36	0.61
2:A:29:GLU:HB3	2:A:30:PRO:HD3	1.83	0.61
6:F:345:GLN:HA	6:F:348:GLU:HG3	1.81	0.61
2:A:97:GLU:OE2	2:A:145:LYS:HD2	2.01	0.61
4:D:120:LEU:HB3	4:D:121:PRO:HD3	1.82	0.61
3:C:106:GLU:HB2	3:C:114:VAL:HG21	1.82	0.61
3:C:813:GLU:HB2	4:D:461:PHE:HD2	1.64	0.61
4:D:426:ALA:HB3	4:D:427:PRO:HD3	1.83	0.61
4:D:826:ILE:HG12	4:D:831:VAL:HG12	1.83	0.61
4:D:1314:LEU:HD21	4:D:1331:VAL:HG21	1.83	0.61
3:C:988:LYS:HA	3:C:991:LYS:HE3	1.81	0.61
3:C:1338:GLU:O	4:D:20:ILE:HG23	2.01	0.61
4:D:822:MET:HE3	4:D:838:ARG:HB3	1.82	0.61
4:D:1215:GLU:HG3	4:D:1220:ILE:HD11	1.82	0.61
6:F:585:GLU:HA	6:F:588:ARG:CG	2.31	0.61
2:A:31:LEU:HD21	2:A:39:LEU:HD12	1.82	0.61
2:B:108:GLY:O	2:B:133:LEU:N	2.27	0.61
3:C:819:SER:OG	3:C:820:GLU:N	2.33	0.61
3:C:1002:LEU:HB2	3:C:1011:LEU:CD1	2.31	0.61
4:D:999:TYR:CD2	4:D:1102:PRO:HG3	2.36	0.61
3:C:378:ARG:NH1	3:C:382:GLU:OE2	2.34	0.60
4:D:1175:LEU:HD22	4:D:1190:ILE:HD11	1.83	0.60
6:F:313:ASP:HB3	6:F:316:PHE:HB2	1.82	0.60
3:C:172:TYR:O	3:C:432:LEU:HD11	2.01	0.60
4:D:17:PHE:CZ	4:D:1353:VAL:HG13	2.33	0.60
4:D:45:ASN:HB3	4:D:48:THR:O	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:1060:VAL:HG22	4:D:1106:ILE:CD1	2.32	0.60
2:A:74:VAL:HG12	2:A:133:LEU:HD13	1.83	0.60
3:C:84:GLU:N	3:C:84:GLU:OE1	2.35	0.60
3:C:662:SER:OG	3:C:663:VAL:N	2.33	0.60
3:C:69:GLN:HG2	3:C:101:ARG:O	2.01	0.60
3:C:272:ARG:O	3:C:276:GLN:N	2.34	0.60
3:C:971:LEU:HD21	3:C:1014:LEU:HD13	1.81	0.60
4:D:1163:VAL:HG21	4:D:1202:GLU:HB3	1.84	0.60
2:B:12:ARG:HD3	2:B:13:LEU:H	1.67	0.60
3:C:444:ASP:O	3:C:450:ASN:ND2	2.34	0.60
3:C:529:ARG:HD2	3:C:572:ILE:CG2	2.30	0.60
4:D:518:VAL:HG23	4:D:547:ARG:HH22	1.67	0.60
2:A:191:ARG:NH2	2:A:196:THR:O	2.25	0.60
3:C:65:ASN:O	3:C:105:TYR:HB2	2.00	0.60
3:C:415:GLU:OE1	3:C:415:GLU:N	2.33	0.60
3:C:1103:VAL:HG11	3:C:1112:ILE:CD1	2.32	0.60
4:D:1044:GLN:HB3	4:D:1074:LEU:CD1	2.31	0.60
6:F:494:ILE:O	6:F:498:LEU:HG	2.02	0.60
2:B:41:ASN:OD1	2:B:44:ARG:NH2	2.34	0.60
3:C:421:SER:OG	3:C:422:LYS:N	2.35	0.60
3:C:1072:ASN:ND2	3:C:1111:GLN:OE1	2.34	0.60
4:D:972:LYS:HD3	4:D:1003:LEU:HG	1.83	0.60
2:B:60:GLU:OE1	2:B:143:ARG:NH1	2.33	0.59
3:C:484:LEU:HA	3:C:487:LEU:HD22	1.84	0.59
3:C:1304:MET:O	3:C:1308:ILE:HG12	2.02	0.59
6:F:295:CYS:O	6:F:296:LYS:HG2	2.02	0.59
4:D:905:ARG:NH1	4:D:910:ASN:OD1	2.34	0.59
4:D:949:SER:HB3	4:D:1016:THR:HB	1.84	0.59
4:D:1032:SER:OG	4:D:1115:ILE:O	2.20	0.59
4:D:1078:LEU:O	4:D:1098:GLN:HA	2.02	0.59
2:A:14:VAL:HG22	2:A:15:ASP:H	1.66	0.59
4:D:860:ARG:O	4:D:862:THR:HG23	2.01	0.59
6:F:138:PRO:HD3	6:F:353:LEU:HD11	1.84	0.59
6:F:250:LEU:HA	6:F:253:SER:OG	2.01	0.59
6:F:585:GLU:HA	6:F:588:ARG:HG2	1.83	0.59
3:C:271:ALA:O	3:C:275:ARG:HG3	2.02	0.59
3:C:324:LYS:HA	3:C:327:GLN:HE22	1.68	0.59
4:D:929:GLN:O	4:D:930:LEU:HD23	2.02	0.59
4:D:1062:LEU:O	4:D:1067:ARG:NH2	2.27	0.59
6:F:359:LYS:O	6:F:363:ARG:N	2.35	0.59
3:C:269:ILE:HG13	3:C:269:ILE:O	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:146:GLU:OE1	6:F:150:ARG:HG3	2.03	0.59
3:C:272:ARG:O	3:C:276:GLN:HG3	2.01	0.59
6:F:571:TYR:HB3	6:F:575:GLU:HG3	1.83	0.59
4:D:972:LYS:HZ1	4:D:1028:ILE:HD12	1.67	0.59
6:F:227:GLN:O	6:F:231:THR:HG23	2.03	0.59
3:C:102:LEU:HB3	3:C:489:PRO:HG3	1.84	0.59
3:C:757:THR:HG22	3:C:765:ILE:O	2.03	0.59
4:D:1036:ARG:NH2	4:D:1085:GLY:O	2.36	0.59
4:D:393:THR:OG1	4:D:394:ILE:N	2.36	0.59
4:D:843:VAL:CG2	4:D:883:ARG:HD3	2.33	0.59
1:H:63:DG:H5''	4:D:1170:LYS:CG	2.32	0.58
2:K:298:LYS:HB3	7:G:55:DT:H2'	1.85	0.58
3:C:114:VAL:HG12	3:C:115:LYS:HD2	1.85	0.58
3:C:215:TYR:HB3	3:C:220:ILE:HD11	1.83	0.58
3:C:360:LEU:CD1	3:C:378:ARG:HG3	2.33	0.58
3:C:854:ILE:HG22	3:C:855:PRO:HD2	1.84	0.58
3:C:982:GLY:CA	3:C:1002:LEU:HG	2.28	0.58
3:C:1225:VAL:HG13	4:D:638:SER:HB2	1.83	0.58
4:D:201:LEU:HB2	4:D:221:ILE:HD13	1.85	0.58
3:C:594:VAL:CG2	3:C:599:VAL:HG22	2.33	0.58
3:C:757:THR:CG2	3:C:765:ILE:HG23	2.34	0.58
4:D:793:SER:O	4:D:797:THR:HG22	2.03	0.58
6:F:515:GLU:HG2	6:F:516:ASP:H	1.68	0.58
2:B:91:ARG:HD3	2:B:124:VAL:CG1	2.33	0.58
3:C:545:PHE:CE2	4:D:781:LYS:HD3	2.38	0.58
4:D:44:ILE:HD11	6:F:450:ILE:CD1	2.32	0.58
4:D:317:THR:HG21	4:D:320:ASN:HB3	1.86	0.58
4:D:1226:VAL:O	4:D:1229:VAL:HG12	2.03	0.58
5:E:70:GLN:O	5:E:74:GLU:HG2	2.03	0.58
6:F:572:THR:HB	6:F:575:GLU:HB3	1.84	0.58
6:F:612:ASP:OD1	6:F:612:ASP:N	2.36	0.58
2:K:301:THR:H	7:G:56:DT:H5'	1.68	0.58
4:D:1172:LYS:HE2	4:D:1189:MET:CE	2.33	0.58
1:H:16:DA:H1'	1:H:17:DC:H5'	1.85	0.58
4:D:1106:ILE:O	4:D:1122:ALA:HA	2.03	0.58
4:D:1281:GLU:OE1	4:D:1281:GLU:N	2.36	0.58
6:F:353:LEU:HD22	6:F:357:GLN:NE2	2.19	0.58
1:H:63:DG:H5''	4:D:1170:LYS:HG2	1.84	0.58
3:C:867:GLU:OE1	3:C:867:GLU:N	2.35	0.58
3:C:1103:VAL:HG11	3:C:1112:ILE:HD12	1.84	0.58
4:D:818:GLU:N	4:D:818:GLU:OE2	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:1051:ASP:OD1	4:D:1052:GLU:N	2.35	0.58
4:D:1176:VAL:HG13	4:D:1186:TYR:O	2.04	0.58
7:G:0:DC:H2''	7:G:1:DC:C5	2.38	0.58
1:H:62:DG:C4'	1:H:63:DG:H5'	2.33	0.58
4:D:979:ASN:OD1	4:D:979:ASN:N	2.37	0.58
5:E:30:MET:CE	5:E:49:ILE:HG21	2.33	0.58
4:D:1163:VAL:HG23	4:D:1202:GLU:O	2.03	0.58
7:G:43:DT:H2''	7:G:44:DT:H5'	1.86	0.58
4:D:317:THR:CG2	4:D:320:ASN:HB3	2.33	0.58
4:D:972:LYS:NZ	4:D:973:LEU:O	2.31	0.58
4:D:980:THR:HB	4:D:997:VAL:HB	1.85	0.58
2:B:167:PRO:HD2	2:B:170:ARG:HG3	1.84	0.58
4:D:552:ILE:HD12	4:D:589:TYR:CE1	2.39	0.58
4:D:973:LEU:HB2	4:D:1003:LEU:CD1	2.34	0.58
4:D:1002:VAL:O	4:D:1003:LEU:HD23	2.04	0.58
4:D:1025:MET:HB3	4:D:1124:ILE:CG2	2.34	0.58
4:D:1106:ILE:HG12	4:D:1123:ARG:O	2.04	0.58
2:A:58:GLU:HG2	2:A:145:LYS:HE2	1.86	0.57
2:B:56:VAL:HG23	2:B:173:VAL:HG11	1.85	0.57
2:B:61:ILE:HG22	2:B:64:VAL:H	1.69	0.57
3:C:560:PRO:HB2	4:D:776:THR:HG21	1.85	0.57
4:D:846:GLU:HA	4:D:860:ARG:CZ	2.34	0.57
4:D:966:VAL:O	4:D:973:LEU:HA	2.03	0.57
4:D:1025:MET:O	4:D:1124:ILE:HB	2.03	0.57
3:C:161:LYS:HD3	3:C:161:LYS:H	1.68	0.57
3:C:1010:GLN:HA	3:C:1013:GLN:CB	2.34	0.57
3:C:1101:LEU:O	4:D:731:ARG:HG2	2.04	0.57
3:C:1338:GLU:O	3:C:1339:LEU:HD23	2.04	0.57
4:D:562:GLU:O	4:D:563:LEU:HD13	2.04	0.57
4:D:986:ASP:OD1	4:D:990:ARG:N	2.33	0.57
6:F:525:ASP:OD1	6:F:528:LEU:HD13	2.04	0.57
4:D:208:THR:HG21	4:D:213:LYS:HE3	1.86	0.57
6:F:130:VAL:O	6:F:134:VAL:HG23	2.04	0.57
6:F:355:ILE:HG22	6:F:359:LYS:HG3	1.86	0.57
4:D:390:LEU:CD2	4:D:407:VAL:HG11	2.34	0.57
4:D:805:GLN:HA	4:D:805:GLN:HE21	1.68	0.57
4:D:839:VAL:HG22	4:D:864:LEU:HD12	1.85	0.57
4:D:868:TRP:O	4:D:872:LEU:HG	2.03	0.57
4:D:974:VAL:HG21	4:D:1030:GLU:CG	2.34	0.57
4:D:1036:ARG:NH2	4:D:1081:VAL:HG11	2.20	0.57
3:C:272:ARG:HA	3:C:275:ARG:HD2	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:557:ARG:NH2	3:C:611:GLU:OE1	2.25	0.57
3:C:1326:LEU:HD21	4:D:337:ARG:NH2	2.19	0.57
4:D:84:ILE:HG22	4:D:91:GLU:CB	2.34	0.57
3:C:602:GLU:OE2	3:C:604:HIS:NE2	2.36	0.57
4:D:885:VAL:HG22	4:D:1258:ARG:HD2	1.86	0.57
3:C:103:VAL:HA	3:C:116:ASP:HA	1.86	0.57
3:C:716:ALA:HB3	3:C:784:ALA:HB3	1.85	0.57
4:D:930:LEU:HD12	4:D:1246:VAL:CG2	2.34	0.57
4:D:930:LEU:CD1	4:D:1244:GLN:HB3	2.25	0.57
2:B:179:PRO:O	2:B:207:THR:HG22	2.03	0.57
3:C:309:LEU:HD23	3:C:309:LEU:H	1.70	0.57
3:C:314:ASN:OD1	3:C:352:ARG:NH2	2.36	0.57
4:D:473:THR:OG1	4:D:474:LEU:N	2.37	0.57
4:D:533:ALA:HB1	4:D:574:VAL:HG13	1.87	0.57
6:F:290:LEU:HD12	6:F:294:GLN:OE1	2.05	0.57
3:C:164:THR:CG2	3:C:171:LEU:HG	2.32	0.57
7:G:49:DA:H2''	7:G:50:DA:N7	2.20	0.57
2:K:259:ASP:O	2:K:310:ARG:NH1	2.38	0.56
2:A:118:ASP:OD1	2:A:119:GLY:N	2.36	0.56
2:B:46:ILE:CD1	2:B:224:LEU:HB2	2.35	0.56
2:B:104:LYS:HB3	2:B:140:ILE:CG2	2.35	0.56
3:C:298:ALA:HB3	3:C:334:GLU:HB3	1.86	0.56
4:D:1172:LYS:HE2	4:D:1189:MET:HE1	1.86	0.56
2:B:155:ALA:HA	2:B:158:ARG:HE	1.70	0.56
6:F:246:GLN:O	6:F:250:LEU:HG	2.05	0.56
6:F:397:ARG:NH1	7:G:26:DT:O4	2.26	0.56
6:F:400:GLN:HB2	6:F:403:ASP:OD1	2.05	0.56
7:G:52:DC:H5'	7:G:52:DC:C6	2.39	0.56
1:H:5:DC:H1'	1:H:6:DA:C8	2.40	0.56
1:H:30:DT:H73	1:H:31:DT:H73	1.86	0.56
2:A:180:VAL:HG12	2:A:207:THR:HG22	1.86	0.56
2:B:19:VAL:O	2:B:23:HIS:HB3	2.04	0.56
3:C:255:ILE:CG2	3:C:262:TYR:HB2	2.35	0.56
3:C:397:LEU:O	3:C:398:SER:OG	2.22	0.56
4:D:21:LYS:CG	4:D:22:ILE:N	2.68	0.56
4:D:146:VAL:O	4:D:147:ILE:HD13	2.05	0.56
4:D:355:ILE:HG12	4:D:464:ASP:O	2.05	0.56
4:D:664:ILE:HD13	4:D:681:LYS:HG2	1.87	0.56
6:F:310:GLU:HB3	6:F:344:LEU:CD2	2.34	0.56
3:C:1267:GLY:HA3	4:D:347:VAL:O	2.06	0.56
4:D:1034:PHE:HB2	4:D:1081:VAL:HG23	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:3:ARG:HH21	5:E:52:ARG:HD3	1.69	0.56
6:F:221:PHE:O	6:F:224:LEU:HB3	2.06	0.56
7:G:4:DG:H2''	7:G:5:DC:C5	2.41	0.56
3:C:642:SER:CB	4:D:770:LEU:HD21	2.33	0.56
3:C:993:PRO:HG2	3:C:996:ARG:CB	2.36	0.56
4:D:643:ASP:O	4:D:645:VAL:HG23	2.05	0.56
3:C:813:GLU:HB2	4:D:461:PHE:CD2	2.41	0.56
2:B:59:VAL:HA	2:B:143:ARG:O	2.06	0.56
3:C:276:GLN:O	3:C:280:ASP:HB2	2.05	0.56
3:C:301:TYR:HB2	3:C:311:CYS:SG	2.46	0.56
3:C:453:ILE:HD11	3:C:587:LEU:CD1	2.34	0.56
4:D:1163:VAL:HG21	4:D:1198:VAL:HG21	1.87	0.56
6:F:529:GLU:OE1	6:F:529:GLU:N	2.38	0.56
7:G:59:DT:H2'	7:G:60:DT:H71	1.88	0.56
3:C:582:ASN:HA	3:C:588:GLU:OE2	2.06	0.56
3:C:672:GLU:HB3	3:C:1187:PHE:CD1	2.41	0.56
3:C:1252:SER:HB3	3:C:1255:THR:O	2.06	0.56
4:D:850:LYS:NZ	4:D:855:ASP:HB3	2.21	0.56
6:F:233:ASP:O	6:F:236:LYS:NZ	2.25	0.56
6:F:303:ILE:O	6:F:307:THR:N	2.39	0.56
7:G:47:DT:H1'	7:G:48:DC:C5'	2.33	0.56
2:B:64:VAL:O	2:B:65:LEU:HD23	2.05	0.56
2:B:197:ASP:O	2:B:198:LEU:HD22	2.06	0.56
3:C:745:GLU:HG2	3:C:1017:GLN:OE1	2.06	0.56
4:D:210:SER:HB3	4:D:213:LYS:HB2	1.88	0.56
4:D:1152:GLU:O	4:D:1214:PRO:HD2	2.06	0.56
3:C:519:ASN:HB3	3:C:521:LEU:H	1.71	0.56
4:D:255:LEU:HD23	4:D:261:ALA:CB	2.35	0.56
4:D:1080:ILE:N	4:D:1097:ALA:O	2.38	0.56
6:F:144:LEU:HD12	6:F:147:GLN:HG3	1.87	0.56
6:F:234:THR:CG2	6:F:248:GLU:HB2	2.36	0.56
2:B:83:LEU:HD21	4:D:526:VAL:CG2	2.36	0.55
3:C:217:THR:HG23	3:C:351:LEU:HD22	1.87	0.55
3:C:398:SER:HB2	3:C:401:GLY:N	2.14	0.55
3:C:721:GLY:N	3:C:740:GLU:OE1	2.37	0.55
3:C:1298:VAL:HG23	3:C:1321:GLU:HG3	1.89	0.55
4:D:981:GLU:OE1	4:D:981:GLU:N	2.38	0.55
4:D:1162:ILE:HD12	4:D:1202:GLU:O	2.06	0.55
6:F:223:GLU:HA	6:F:226:ALA:CB	2.34	0.55
6:F:456:MET:CE	6:F:497:VAL:HG22	2.36	0.55
4:D:1162:ILE:CG2	4:D:1178:THR:HB	2.35	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:585:GLU:HG2	6:F:588:ARG:HH11	1.71	0.55
1:H:17:DC:H1'	1:H:18:DA:O4'	2.06	0.55
2:A:218:ARG:O	2:A:222:THR:HG23	2.05	0.55
3:C:102:LEU:CB	3:C:489:PRO:HG3	2.36	0.55
3:C:1164:PHE:HB2	3:C:1168:GLU:CB	2.36	0.55
4:D:297:ARG:NH2	6:F:104:GLU:OE1	2.38	0.55
4:D:390:LEU:HD21	4:D:407:VAL:HG11	1.88	0.55
4:D:1101:LEU:HD13	4:D:1107:VAL:HG11	1.88	0.55
4:D:1105:ALA:HB1	4:D:1122:ALA:CB	2.36	0.55
2:A:14:VAL:CG1	2:A:27:THR:HB	2.37	0.55
3:C:231:GLU:HA	3:C:331:LYS:O	2.05	0.55
3:C:699:LEU:HG	3:C:799:ASN:ND2	2.22	0.55
3:C:942:ASP:N	3:C:942:ASP:OD1	2.29	0.55
4:D:402:GLU:OE1	4:D:403:ARG:HG3	2.06	0.55
5:E:29:GLN:O	5:E:32:VAL:O	2.25	0.55
5:E:30:MET:HE1	5:E:49:ILE:HG22	1.88	0.55
6:F:247:GLU:O	6:F:251:LYS:HG3	2.06	0.55
6:F:306:PHE:CE2	6:F:310:GLU:HA	2.42	0.55
3:C:1115:THR:CG2	3:C:1228:GLY:HA3	2.37	0.55
4:D:1105:ALA:HB1	4:D:1122:ALA:HB1	1.88	0.55
6:F:234:THR:HG21	6:F:248:GLU:HB2	1.87	0.55
6:F:506:SER:O	6:F:509:THR:HG22	2.07	0.55
2:B:93:GLN:HG2	2:B:120:ASP:O	2.07	0.55
3:C:1009:ASN:O	3:C:1013:GLN:HB2	2.07	0.55
4:D:807:LEU:HD21	4:D:894:VAL:CG1	2.37	0.55
4:D:807:LEU:HD21	4:D:894:VAL:HG13	1.89	0.55
4:D:999:TYR:CE2	4:D:1027:VAL:HA	2.42	0.55
3:C:596:ASP:N	3:C:596:ASP:OD1	2.40	0.55
4:D:929:GLN:CG	4:D:930:LEU:HG	2.35	0.55
4:D:1191:PRO:HB3	4:D:1193:TRP:CZ3	2.42	0.55
6:F:256:PHE:HA	6:F:259:PHE:CE2	2.42	0.55
6:F:324:LYS:HB3	6:F:325:PRO:HD2	1.89	0.55
2:B:35:PHE:HA	2:B:38:THR:CG2	2.36	0.55
3:C:1010:GLN:O	3:C:1014:LEU:N	2.23	0.55
3:C:1259:LEU:HD22	6:F:521:ASP:O	2.07	0.55
4:D:44:ILE:HD11	6:F:450:ILE:HD13	1.89	0.55
4:D:591:ILE:HG22	4:D:592:VAL:HG13	1.88	0.55
6:F:108:VAL:HG21	6:F:381:GLU:O	2.06	0.55
6:F:261:LEU:HD23	6:F:266:PHE:CD1	2.41	0.55
3:C:820:GLU:HB2	3:C:1080:ASN:O	2.06	0.55
4:D:518:VAL:HG23	4:D:547:ARG:NH2	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:1031:VAL:HG21	4:D:1088:VAL:CG2	2.36	0.55
4:D:1039:ASP:OD1	4:D:1074:LEU:HD22	2.07	0.55
4:D:1089:LEU:HD12	4:D:1096:PRO:HA	1.88	0.55
6:F:322:MET:CG	6:F:324:LYS:HD3	2.36	0.55
2:B:36:GLY:HA3	2:B:187:VAL:HG21	1.87	0.54
2:B:109:PRO:HA	2:B:132:HIS:HA	1.90	0.54
4:D:1048:ARG:HA	4:D:1048:ARG:HE	1.71	0.54
6:F:150:ARG:O	6:F:155:GLU:N	2.26	0.54
6:F:435:ILE:O	6:F:439:ILE:HG13	2.07	0.54
3:C:761:GLN:N	3:C:761:GLN:OE1	2.41	0.54
4:D:79:LYS:CB	6:F:569:THR:HB	2.31	0.54
4:D:328:ALA:O	4:D:332:LYS:HB2	2.07	0.54
4:D:713:GLU:HG2	4:D:714:GLU:H	1.73	0.54
4:D:746:LEU:CD2	4:D:758:PRO:HB3	2.35	0.54
4:D:797:THR:OG1	4:D:797:THR:O	2.25	0.54
4:D:857:LEU:HD12	4:D:871:LEU:CD2	2.36	0.54
4:D:1268:ASN:HA	4:D:1274:PHE:CE1	2.42	0.54
2:B:191:ARG:NH1	2:B:193:GLU:HA	2.21	0.54
6:F:144:LEU:O	6:F:147:GLN:HB2	2.06	0.54
6:F:561:MET:CE	6:F:576:VAL:HA	2.38	0.54
7:G:29:DC:H2''	7:G:30:DA:C8	2.43	0.54
1:H:48:DT:O2	3:C:199:ASP:HB3	2.07	0.54
3:C:979:LEU:HA	3:C:1002:LEU:CD2	2.36	0.54
3:C:1070:HIS:NE2	3:C:1114:GLU:OE1	2.27	0.54
4:D:151:MET:HB3	4:D:175:GLU:OE2	2.07	0.54
4:D:161:THR:HG22	4:D:164:GLN:CG	2.32	0.54
4:D:1087:ASP:HB2	4:D:1096:PRO:HG3	1.89	0.54
6:F:163:THR:OG1	6:F:260:ARG:HD2	2.07	0.54
2:B:100:LEU:HB2	2:B:144:ILE:CG1	2.37	0.54
3:C:171:LEU:HD13	3:C:189:ASP:HA	1.90	0.54
3:C:985:GLU:HA	3:C:988:LYS:HG2	1.89	0.54
3:C:1010:GLN:OE1	3:C:1014:LEU:N	2.40	0.54
4:D:152:THR:HG22	4:D:153:ASN:H	1.73	0.54
4:D:1155:ILE:H	4:D:1155:ILE:HD13	1.73	0.54
6:F:133:SER:O	6:F:361:ILE:HG23	2.07	0.54
3:C:103:VAL:HG12	3:C:116:ASP:CB	2.36	0.54
3:C:575:LEU:HD12	3:C:576:SER:H	1.71	0.54
3:C:1075:VAL:CG1	4:D:356:THR:HG22	2.37	0.54
3:C:1161:LEU:HD12	3:C:1161:LEU:O	2.06	0.54
4:D:901:ARG:O	4:D:903:LEU:HG	2.07	0.54
2:A:45:ARG:NH2	3:C:1084:ASP:OD1	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:1002:LEU:HD23	3:C:1007:LYS:CB	2.26	0.54
3:C:1296:ASP:OD1	3:C:1321:GLU:N	2.41	0.54
6:F:572:THR:O	6:F:576:VAL:HG23	2.08	0.54
2:B:54:CYS:SG	2:B:148:ARG:HG2	2.47	0.54
2:B:91:ARG:HH11	2:B:124:VAL:HG11	1.73	0.54
3:C:1163:THR:O	3:C:1164:PHE:O	2.26	0.54
4:D:69:GLU:HG3	4:D:70:CYS:O	2.08	0.54
4:D:1102:PRO:HG2	4:D:1124:ILE:CD1	2.38	0.54
4:D:1106:ILE:N	4:D:1122:ALA:HB1	2.23	0.54
6:F:298:PRO:HB2	6:F:301:ASN:ND2	2.23	0.54
3:C:276:GLN:HA	3:C:279:LYS:NZ	2.23	0.54
3:C:540:ARG:NH2	3:C:567:PRO:HG2	2.23	0.54
3:C:1106:ARG:H	3:C:1106:ARG:HD2	1.72	0.54
4:D:291:ILE:HD13	6:F:409:ASN:HB3	1.90	0.54
4:D:1078:LEU:O	4:D:1080:ILE:HG13	2.08	0.54
4:D:1314:LEU:HD11	4:D:1331:VAL:HG22	1.90	0.54
4:D:1317:GLU:OE2	4:D:1345:ARG:NH2	2.41	0.54
6:F:561:MET:HE2	6:F:576:VAL:HA	1.90	0.54
7:G:56:DT:H2''	7:G:57:DT:H72	1.90	0.54
1:H:42:DG:O6	6:F:106:GLY:HA3	2.08	0.54
3:C:1158:LYS:CE	3:C:1158:LYS:CA	2.86	0.54
3:C:1260:GLY:HA3	3:C:1265:PHE:CA	2.28	0.54
4:D:697:MET:SD	4:D:741:ALA:HB3	2.48	0.54
4:D:968:ASN:OD1	4:D:972:LYS:N	2.41	0.54
6:F:561:MET:SD	6:F:576:VAL:HG13	2.48	0.54
3:C:231:GLU:OE2	3:C:284:LEU:HD11	2.08	0.53
3:C:1325:VAL:HG13	4:D:249:LEU:HD13	1.90	0.53
4:D:245:LEU:HG	4:D:246:PRO:HD2	1.91	0.53
4:D:603:LYS:O	4:D:607:THR:HG23	2.08	0.53
3:C:453:ILE:HD13	3:C:530:ILE:CD1	2.36	0.53
4:D:1105:ALA:O	4:D:1106:ILE:HD13	2.08	0.53
6:F:602:SER:HA	6:F:605:GLU:HB2	1.90	0.53
2:B:158:ARG:HD2	2:B:172:LEU:CD2	2.38	0.53
3:C:239:MET:HG2	3:C:240:GLU:O	2.08	0.53
3:C:1204:LEU:HB3	3:C:1205:PRO:HD2	1.90	0.53
4:D:518:VAL:CG1	4:D:707:ILE:HB	2.38	0.53
4:D:703:THR:HG21	4:D:715:LYS:HD3	1.90	0.53
4:D:1002:VAL:O	4:D:1018:ALA:HA	2.09	0.53
6:F:252:LEU:HA	6:F:255:VAL:HG22	1.91	0.53
2:A:58:GLU:OE2	2:A:145:LYS:NZ	2.24	0.53
4:D:952:VAL:O	4:D:1014:GLY:N	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:1144:LEU:HD21	4:D:1236:GLU:HB2	1.90	0.53
6:F:165:PHE:CZ	6:F:220:LYS:HB2	2.42	0.53
1:H:27:DA:H5'	1:H:27:DA:C8	2.43	0.53
2:A:212:ASP:HB3	2:A:215:GLU:HB3	1.89	0.53
3:C:211:ARG:NE	3:C:354:ASP:OD2	2.37	0.53
3:C:1040:ASP:OD1	3:C:1041:ASP:N	2.41	0.53
3:C:1321:GLU:O	3:C:1325:VAL:HG23	2.09	0.53
4:D:314:ARG:HH12	4:D:323:PRO:HG3	1.74	0.53
4:D:416:ILE:CG2	4:D:439:PRO:HG2	2.37	0.53
4:D:894:VAL:HG23	4:D:895:CYS:O	2.09	0.53
5:E:30:MET:HE2	5:E:49:ILE:HG22	1.88	0.53
6:F:161:LEU:O	6:F:261:LEU:HD12	2.08	0.53
6:F:363:ARG:O	6:F:367:ILE:HG13	2.08	0.53
7:G:3:DT:C2	7:G:4:DG:N7	2.76	0.53
1:H:58:DG:H4'	1:H:59:DC:OP2	2.08	0.53
2:A:233:ASP:N	2:A:233:ASP:OD1	2.41	0.53
4:D:201:LEU:HD11	4:D:220:ARG:NH1	2.24	0.53
4:D:1021:ASP:CB	4:D:1024:THR:HB	2.35	0.53
6:F:96:ASP:OD1	6:F:96:ASP:N	2.41	0.53
3:C:724:VAL:HG11	3:C:727:VAL:HG23	1.91	0.53
3:C:985:GLU:O	3:C:989:LEU:HB2	2.08	0.53
4:D:682:VAL:O	4:D:685:ILE:HG23	2.09	0.53
5:E:7:GLN:O	5:E:11:GLU:HG3	2.07	0.53
6:F:141:ILE:HG22	6:F:145:LEU:CD2	2.39	0.53
6:F:355:ILE:HA	6:F:358:VAL:HB	1.91	0.53
6:F:547:VAL:HG11	6:F:607:LEU:CD1	2.34	0.53
1:H:39:DA:H3'	6:F:429:THR:CG2	2.39	0.53
2:A:110:VAL:HG23	2:A:133:LEU:HD23	1.91	0.53
3:C:29:SER:O	3:C:33:ASP:HB2	2.09	0.53
3:C:130:MET:SD	3:C:134:GLY:HA2	2.49	0.53
3:C:233:ARG:HD3	3:C:238:GLN:OE1	2.09	0.53
3:C:757:THR:HG23	3:C:765:ILE:HG23	1.89	0.53
3:C:979:LEU:HA	3:C:1002:LEU:HD21	1.91	0.53
3:C:988:LYS:CA	3:C:991:LYS:HE3	2.38	0.53
3:C:1010:GLN:CD	3:C:1013:GLN:HB3	2.29	0.53
4:D:1051:ASP:OD2	4:D:1056:LEU:HB2	2.08	0.53
2:B:83:LEU:HD21	4:D:526:VAL:HG22	1.91	0.53
3:C:1010:GLN:HA	3:C:1013:GLN:HB3	1.90	0.53
3:C:1164:PHE:HD1	3:C:1168:GLU:HB2	1.72	0.53
4:D:1215:GLU:CG	4:D:1220:ILE:HD11	2.38	0.53
2:B:60:GLU:HB2	2:B:170:ARG:NH1	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:789:LYS:HG3	4:D:931:THR:CG2	2.39	0.53
4:D:1057:SER:CB	4:D:1059:LEU:HD13	2.39	0.53
4:D:1110:GLU:O	4:D:1113:VAL:HG22	2.09	0.53
1:H:44:DG:O5'	6:F:392:LYS:HD3	2.10	0.52
2:B:135:ASP:OD1	2:B:136:GLU:N	2.40	0.52
3:C:887:VAL:HB	3:C:913:VAL:CG2	2.40	0.52
4:D:40:LYS:HD3	4:D:42:GLU:OE1	2.08	0.52
4:D:337:ARG:N	4:D:341:ASN:O	2.42	0.52
6:F:341:LEU:O	6:F:344:LEU:HG	2.09	0.52
2:B:83:LEU:HD11	4:D:527:LEU:O	2.09	0.52
3:C:149:LEU:HD12	3:C:453:ILE:HG12	1.90	0.52
6:F:402:LEU:HD12	6:F:405:ILE:HD11	1.91	0.52
6:F:479:THR:HG22	6:F:482:GLU:OE1	2.09	0.52
2:B:112:ALA:O	2:B:115:ILE:HG13	2.08	0.52
3:C:172:TYR:CD2	3:C:435:ILE:HG22	2.44	0.52
3:C:1288:GLN:O	3:C:1292:THR:HB	2.09	0.52
6:F:166:VAL:CG2	6:F:258:GLN:HA	2.38	0.52
2:A:98:VAL:HG11	2:A:121:VAL:HG21	1.90	0.52
2:A:192:VAL:CG1	2:A:195:ARG:HB2	2.39	0.52
3:C:1254:VAL:O	4:D:99:ARG:NH2	2.32	0.52
4:D:46:TYR:CD2	6:F:452:ILE:HG22	2.43	0.52
4:D:1251:LYS:O	4:D:1255:VAL:HG13	2.08	0.52
3:C:685:MET:SD	3:C:1073:LYS:HG3	2.49	0.52
3:C:1275:VAL:O	3:C:1279:GLU:HG3	2.10	0.52
6:F:292:VAL:HG22	6:F:297:MET:O	2.09	0.52
6:F:511:ILE:HD11	6:F:517:SER:OG	2.09	0.52
7:G:59:DT:H71	7:G:59:DT:OP2	2.10	0.52
2:A:77:ASP:OD1	2:A:77:ASP:N	2.43	0.52
3:C:67:GLU:HG2	3:C:103:VAL:CG2	2.38	0.52
3:C:155:VAL:HG12	3:C:176:ILE:HG12	1.91	0.52
3:C:302:ILE:O	3:C:330:HIS:NE2	2.40	0.52
4:D:808:VAL:HG21	4:D:1359:ALA:HB2	1.92	0.52
4:D:1025:MET:HB3	4:D:1124:ILE:HB	1.92	0.52
4:D:1343:GLU:C	4:D:1344:LEU:HG	2.28	0.52
6:F:111:LEU:CD2	6:F:119:ILE:HD12	2.39	0.52
3:C:311:CYS:HA	3:C:315:MET:SD	2.50	0.52
3:C:528:ARG:HD3	3:C:663:VAL:HG11	1.92	0.52
3:C:979:LEU:HD11	3:C:1011:LEU:CD1	2.39	0.52
3:C:1252:SER:HB2	3:C:1259:LEU:HD23	1.90	0.52
4:D:985:ILE:HA	4:D:990:ARG:O	2.10	0.52
6:F:148:TYR:HA	6:F:151:VAL:HB	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:42:DG:H4'	1:H:43:DG:O4'	2.09	0.52
3:C:696:ASP:OD2	3:C:696:ASP:N	2.39	0.52
3:C:993:PRO:HG2	3:C:996:ARG:HB2	1.92	0.52
4:D:502:PRO:HB2	4:D:506:VAL:HG22	1.92	0.52
4:D:704:GLU:HB2	4:D:718:SER:HB3	1.91	0.52
4:D:1038:THR:CG2	4:D:1079:LYS:H	2.23	0.52
4:D:1266:ILE:HG13	4:D:1276:GLU:O	2.10	0.52
6:F:136:GLU:HG3	6:F:361:ILE:CD1	2.39	0.52
6:F:353:LEU:HB3	6:F:357:GLN:CB	2.40	0.52
1:H:11:DG:N2	7:G:53:DA:N3	2.48	0.52
1:H:12:DA:OP2	6:F:593:LYS:HE2	2.10	0.52
3:C:188:PHE:HE2	3:C:436:ARG:HB2	1.73	0.52
4:D:798:ARG:HD2	4:D:798:ARG:O	2.10	0.52
4:D:1030:GLU:OE2	4:D:1090:ILE:HG23	2.10	0.52
4:D:1160:SER:OG	4:D:1206:ARG:N	2.43	0.52
2:B:24:ALA:HB3	2:B:213:PRO:HB2	1.92	0.51
3:C:672:GLU:OE1	3:C:672:GLU:N	2.34	0.51
3:C:1006:GLU:HA	3:C:1009:ASN:HB2	1.91	0.51
3:C:1257:GLN:NE2	3:C:1322:SER:OG	2.42	0.51
4:D:518:VAL:HG11	4:D:707:ILE:HB	1.90	0.51
5:E:68:GLU:O	5:E:71:GLU:HB2	2.10	0.51
6:F:281:ARG:HB3	6:F:281:ARG:NH1	2.26	0.51
2:A:228:LEU:O	2:A:232:VAL:HG23	2.11	0.51
3:C:104:ILE:HB	3:C:115:LYS:HB2	1.91	0.51
3:C:898:GLU:OE1	3:C:898:GLU:N	2.43	0.51
3:C:1031:ALA:HA	3:C:1034:ARG:HH12	1.74	0.51
3:C:1157:GLN:NE2	3:C:1159:VAL:CG2	2.73	0.51
3:C:1339:LEU:HD22	4:D:20:ILE:HG12	1.92	0.51
4:D:708:ASN:OD1	4:D:708:ASN:N	2.41	0.51
4:D:872:LEU:HB3	4:D:877:VAL:HG11	1.91	0.51
6:F:125:ASP:HA	6:F:128:ASN:HB2	1.93	0.51
6:F:213:ASP:HB3	6:F:215:GLU:OE1	2.09	0.51
1:H:16:DA:H1'	1:H:17:DC:C5'	2.40	0.51
3:C:1248:THR:HG21	6:F:531:PRO:HG3	1.92	0.51
4:D:485:MET:HB3	4:D:488:ASN:HD22	1.75	0.51
4:D:807:LEU:HD22	4:D:915:ILE:HG13	1.91	0.51
2:A:110:VAL:HG21	2:A:140:ILE:HD11	1.92	0.51
2:A:134:THR:OG1	3:C:773:LEU:HD11	2.10	0.51
2:B:91:ARG:HD3	2:B:124:VAL:HG11	1.92	0.51
3:C:564:PRO:HG3	3:C:572:ILE:HG13	1.91	0.51
3:C:618:GLN:NE2	4:D:770:LEU:HD22	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:690:VAL:CG2	3:C:1236:ASN:HB3	2.39	0.51
4:D:991:THR:O	4:D:992:LYS:HD2	2.11	0.51
4:D:1175:LEU:CD2	4:D:1190:ILE:HD11	2.39	0.51
6:F:247:GLU:O	6:F:250:LEU:HB2	2.11	0.51
6:F:329:LYS:NZ	6:F:333:VAL:HG23	2.26	0.51
6:F:577:GLY:CA	6:F:583:THR:HG22	2.34	0.51
4:D:423:LEU:HG	4:D:466:MET:HE3	1.93	0.51
4:D:506:VAL:HG12	4:D:629:PHE:CE1	2.45	0.51
4:D:1027:VAL:CG1	4:D:1121:LEU:HB2	2.41	0.51
6:F:141:ILE:HG12	6:F:256:PHE:CE1	2.45	0.51
3:C:961:SER:O	3:C:965:GLN:HG3	2.11	0.51
4:D:262:THR:OG1	4:D:263:SER:N	2.43	0.51
4:D:416:ILE:HG22	4:D:439:PRO:HG2	1.93	0.51
4:D:554:GLU:OE1	4:D:589:TYR:N	2.44	0.51
4:D:1138:LEU:HB3	4:D:1139:PRO:HD3	1.91	0.51
4:D:1175:LEU:HD12	4:D:1176:VAL:H	1.74	0.51
6:F:278:ASP:HA	6:F:281:ARG:NH2	2.26	0.51
6:F:345:GLN:HA	6:F:348:GLU:CG	2.40	0.51
1:H:6:DA:H2''	1:H:7:DA:H5'	1.93	0.51
1:H:60:DA:H2''	1:H:61:DG:C8	2.45	0.51
3:C:236:LYS:HE2	3:C:236:LYS:HA	1.92	0.51
3:C:577:VAL:HG23	3:C:661:VAL:O	2.11	0.51
4:D:749:LYS:HE3	4:D:753:SER:OG	2.10	0.51
4:D:952:VAL:CG1	4:D:984:LEU:HD22	2.40	0.51
4:D:1011:VAL:CG1	4:D:1015:GLU:HB3	2.41	0.51
4:D:1109:LEU:CD1	4:D:1115:ILE:HD13	2.41	0.51
6:F:157:ARG:HD2	6:F:160:ASP:OD2	2.11	0.51
6:F:348:GLU:HB2	6:F:353:LEU:O	2.11	0.51
7:G:3:DT:O2	7:G:4:DG:N7	2.44	0.51
2:A:155:ALA:O	2:A:159:ILE:HG12	2.11	0.51
2:A:219:ARG:HG3	2:A:219:ARG:O	2.09	0.51
3:C:135:THR:HG22	3:C:527:LYS:HE2	1.93	0.51
3:C:215:TYR:HE2	3:C:426:ILE:HD11	1.76	0.51
3:C:594:VAL:HG11	3:C:650:VAL:HG23	1.93	0.51
4:D:311:ARG:NH2	4:D:1329:THR:HG21	2.26	0.51
7:G:48:DC:H2''	7:G:49:DA:C8	2.46	0.51
2:A:26:VAL:HG11	2:A:217:ILE:HD12	1.93	0.51
3:C:319:LEU:HA	3:C:322:LEU:HB2	1.92	0.51
3:C:563:THR:HB	3:C:564:PRO:HD2	1.93	0.51
3:C:1305:TYR:O	3:C:1309:VAL:HG13	2.11	0.51
4:D:437:PHE:HZ	4:D:453:VAL:HG11	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:704:GLU:HB2	4:D:718:SER:CB	2.40	0.51
4:D:966:VAL:HA	4:D:973:LEU:HD23	1.93	0.51
4:D:998:PRO:O	4:D:1001:ALA:HB2	2.11	0.51
2:A:134:THR:HG21	3:C:727:VAL:O	2.11	0.51
3:C:18:ARG:HD3	3:C:1188:ASP:OD1	2.11	0.51
3:C:153:PRO:O	3:C:401:GLY:HA2	2.11	0.51
3:C:276:GLN:HA	3:C:279:LYS:HZ2	1.75	0.51
3:C:1017:GLN:HA	3:C:1017:GLN:HE21	1.75	0.51
4:D:514:THR:HG21	4:D:596:LEU:CB	2.41	0.51
4:D:1027:VAL:CB	4:D:1121:LEU:HB2	2.39	0.51
4:D:1102:PRO:O	4:D:1105:ALA:HB2	2.11	0.51
4:D:1272:SER:HB2	4:D:1286:LYS:NZ	2.26	0.51
6:F:320:ILE:HA	6:F:327:SER:HB2	1.92	0.51
6:F:571:TYR:HB3	6:F:575:GLU:CG	2.40	0.51
2:B:23:HIS:ND1	2:B:206:GLU:HG2	2.25	0.50
2:B:57:THR:O	2:B:173:VAL:HG12	2.12	0.50
3:C:979:LEU:HG	3:C:1002:LEU:HD22	1.93	0.50
3:C:1163:THR:HG22	3:C:1168:GLU:OE2	2.10	0.50
3:C:1243:MET:CE	4:D:445:LYS:HE2	2.41	0.50
4:D:495:ASN:N	4:D:495:ASN:OD1	2.45	0.50
3:C:98:VAL:O	3:C:121:GLU:HA	2.11	0.50
3:C:208:ILE:HD11	3:C:365:GLU:HB3	1.93	0.50
4:D:16:GLU:OE1	4:D:1369:ARG:NH2	2.44	0.50
4:D:557:LYS:HA	4:D:562:GLU:O	2.11	0.50
4:D:843:VAL:HG21	4:D:883:ARG:HD3	1.94	0.50
7:G:38:DA:H2''	7:G:39:DC:C6	2.47	0.50
2:A:71:LYS:NZ	2:A:140:ILE:HG22	2.26	0.50
4:D:298:MET:CE	6:F:406:GLN:HG3	2.41	0.50
4:D:929:GLN:HG2	4:D:930:LEU:CG	2.36	0.50
4:D:1104:LYS:O	4:D:1124:ILE:HA	2.11	0.50
3:C:494:ASN:HB3	3:C:497:PRO:HD2	1.93	0.50
3:C:982:GLY:CA	3:C:1003:THR:HG23	2.36	0.50
4:D:210:SER:O	4:D:214:ARG:NE	2.44	0.50
5:E:78:ALA:O	5:E:80:LEU:HG	2.12	0.50
3:C:274:ILE:O	3:C:278:GLU:HG3	2.11	0.50
4:D:975:ILE:CG2	4:D:1028:ILE:HG21	2.41	0.50
6:F:143:TYR:O	6:F:147:GLN:HG2	2.12	0.50
6:F:331:HIS:HA	6:F:334:SER:CB	2.37	0.50
3:C:979:LEU:CD1	3:C:1011:LEU:HD11	2.40	0.50
3:C:1099:ASN:OD1	3:C:1100:PRO:HD2	2.11	0.50
3:C:1157:GLN:HB3	3:C:1159:VAL:HG23	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:583:VAL:HG13	4:D:584:PRO:HD2	1.94	0.50
4:D:884:SER:OG	4:D:886:VAL:HG12	2.11	0.50
4:D:1163:VAL:CG2	4:D:1202:GLU:HB3	2.41	0.50
6:F:290:LEU:HB2	6:F:337:VAL:HG12	1.93	0.50
6:F:582:VAL:HG23	6:F:584:ARG:NH1	2.25	0.50
3:C:272:ARG:O	3:C:272:ARG:HG2	2.11	0.50
3:C:571:LEU:O	3:C:572:ILE:HD13	2.12	0.50
3:C:589:THR:HG22	3:C:590:PRO:HD2	1.94	0.50
3:C:1061:GLN:NE2	3:C:1240:ASP:OD1	2.45	0.50
4:D:959:LYS:HA	4:D:1007:ASP:OD2	2.12	0.50
4:D:1032:SER:OG	4:D:1116:SER:HA	2.12	0.50
3:C:228:VAL:HB	3:C:335:THR:HG23	1.94	0.50
3:C:1023:HIS:HA	3:C:1026:GLU:HB3	1.92	0.50
4:D:279:LEU:HD13	4:D:295:GLU:CG	2.42	0.50
4:D:959:LYS:HD2	4:D:985:ILE:HG13	1.94	0.50
5:E:49:ILE:O	5:E:53:GLU:HG3	2.12	0.50
6:F:476:ARG:HB3	6:F:476:ARG:CZ	2.42	0.50
6:F:476:ARG:HB3	6:F:476:ARG:NH1	2.27	0.50
6:F:487:MET:O	6:F:488:LEU:HD13	2.12	0.50
3:C:263:VAL:HG12	3:C:264:GLU:H	1.77	0.50
3:C:272:ARG:HA	3:C:275:ARG:CB	2.42	0.50
3:C:632:ASP:OD1	3:C:632:ASP:N	2.45	0.50
3:C:979:LEU:CD1	3:C:1011:LEU:HD21	2.41	0.50
4:D:1037:PHE:CZ	4:D:1111:ASP:HB2	2.47	0.50
6:F:354:THR:O	6:F:358:VAL:N	2.35	0.50
3:C:631:GLU:OE1	3:C:631:GLU:N	2.45	0.49
3:C:897:PRO:HG2	3:C:898:GLU:OE1	2.12	0.49
3:C:974:ARG:O	3:C:978:VAL:N	2.45	0.49
4:D:412:LEU:O	4:D:416:ILE:HG12	2.12	0.49
6:F:456:MET:HE3	6:F:497:VAL:HG22	1.94	0.49
1:H:50:DT:C2'	1:H:51:DC:H5'	2.43	0.49
3:C:702:THR:HG22	3:C:1184:THR:O	2.12	0.49
3:C:1150:ASP:N	3:C:1150:ASP:OD1	2.44	0.49
4:D:1059:LEU:HB2	4:D:1107:VAL:O	2.11	0.49
6:F:286:LEU:HG	6:F:290:LEU:CD2	2.42	0.49
7:G:6:DA:C8	7:G:6:DA:H5'	2.47	0.49
2:A:57:THR:HG21	2:A:147:GLN:NE2	2.28	0.49
3:C:84:GLU:O	3:C:88:ARG:HG3	2.12	0.49
3:C:778:GLU:O	3:C:781:ASP:HB2	2.13	0.49
3:C:826:ASP:OD1	3:C:829:THR:HB	2.12	0.49
3:C:1157:GLN:NE2	3:C:1159:VAL:HG21	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:218:THR:HA	4:D:221:ILE:CG2	2.39	0.49
4:D:844:THR:OG1	4:D:861:ASN:HA	2.12	0.49
4:D:1087:ASP:HB2	4:D:1096:PRO:CG	2.41	0.49
2:A:183:ILE:HD12	2:A:205:MET:HB2	1.94	0.49
2:B:28:LEU:HD12	2:B:29:GLU:H	1.78	0.49
2:B:205:MET:HE1	2:B:213:PRO:O	2.12	0.49
3:C:104:ILE:N	3:C:115:LYS:O	2.31	0.49
3:C:484:LEU:HA	3:C:487:LEU:CD2	2.41	0.49
3:C:1339:LEU:HD22	4:D:17:PHE:HD2	1.77	0.49
4:D:205:LEU:HD12	4:D:214:ARG:HB2	1.95	0.49
4:D:1196:LEU:HD11	4:D:1210:ILE:CG2	2.43	0.49
2:B:105:SER:CB	2:B:138:ALA:HB1	2.35	0.49
3:C:972:PHE:CD2	3:C:975:ILE:HD11	2.47	0.49
4:D:1027:VAL:HG22	4:D:1102:PRO:CD	2.33	0.49
6:F:283:GLN:HE22	6:F:286:LEU:HD22	1.78	0.49
6:F:341:LEU:HB2	6:F:344:LEU:CD2	2.42	0.49
1:H:43:DG:H2'	1:H:44:DG:C8	2.48	0.49
1:H:63:DG:OP1	4:D:1170:LYS:HA	2.12	0.49
3:C:971:LEU:HD21	3:C:1014:LEU:CD1	2.42	0.49
3:C:1157:GLN:HE21	3:C:1159:VAL:HG21	1.77	0.49
4:D:709:ARG:NH1	4:D:714:GLU:OE1	2.33	0.49
4:D:975:ILE:HD11	4:D:977:SER:O	2.12	0.49
4:D:1069:ALA:O	4:D:1072:LYS:HE2	2.12	0.49
3:C:230:PHE:CB	3:C:333:ILE:HB	2.41	0.49
3:C:319:LEU:O	3:C:323:ALA:N	2.46	0.49
3:C:1103:VAL:HG21	3:C:1112:ILE:HD11	1.95	0.49
6:F:148:TYR:HB2	6:F:221:PHE:CE1	2.48	0.49
6:F:360:ASP:N	6:F:360:ASP:OD1	2.46	0.49
1:H:62:DG:H1'	1:H:63:DG:O4'	2.12	0.49
2:A:183:ILE:CD1	2:A:205:MET:HB2	2.42	0.49
4:D:84:ILE:HA	4:D:91:GLU:HA	1.94	0.49
5:E:10:VAL:O	5:E:14:GLY:HA2	2.12	0.49
6:F:479:THR:HG23	6:F:482:GLU:H	1.78	0.49
2:K:298:LYS:O	7:G:55:DT:H2'	2.13	0.49
3:C:444:ASP:OD1	3:C:444:ASP:N	2.35	0.49
3:C:949:GLU:OE2	3:C:1037:THR:HG22	2.13	0.49
3:C:985:GLU:HG2	3:C:988:LYS:HD3	1.93	0.49
3:C:1078:LYS:NZ	3:C:1080:ASN:OD1	2.44	0.49
4:D:179:LYS:NZ	4:D:183:GLU:HG3	2.28	0.49
6:F:283:GLN:NE2	6:F:286:LEU:HD22	2.28	0.49
1:H:62:DG:H2''	1:H:63:DG:O5'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:595:THR:HG23	3:C:600:THR:CG2	2.42	0.49
4:D:208:THR:HG21	4:D:213:LYS:HB3	1.94	0.49
4:D:371:LYS:NZ	4:D:443:GLU:OE2	2.46	0.49
4:D:622:ASP:O	4:D:625:MET:N	2.43	0.49
4:D:640:GLY:N	4:D:643:ASP:OD2	2.45	0.49
6:F:144:LEU:HD12	6:F:147:GLN:HB2	1.95	0.49
1:H:42:DG:H2''	1:H:43:DG:OP2	2.13	0.48
1:H:43:DG:O6	3:C:371:ARG:NH1	2.46	0.48
2:A:58:GLU:HB3	2:A:172:LEU:HD23	1.95	0.48
2:B:20:SER:HG	2:B:23:HIS:HB3	1.78	0.48
2:B:60:GLU:O	2:B:142:MET:HA	2.13	0.48
3:C:193:ASN:OD1	3:C:350:THR:HG23	2.13	0.48
3:C:812:PHE:CD2	3:C:813:GLU:HG2	2.49	0.48
4:D:398:LYS:HD3	6:F:532:LEU:HD23	1.95	0.48
4:D:591:ILE:HG22	4:D:592:VAL:CG1	2.42	0.48
4:D:709:ARG:HD2	4:D:714:GLU:CB	2.43	0.48
6:F:275:VAL:HA	6:F:278:ASP:OD2	2.13	0.48
6:F:354:THR:N	6:F:357:GLN:OE1	2.45	0.48
2:B:164:ASP:OD1	2:B:164:ASP:N	2.45	0.48
3:C:303:ASP:HB3	3:C:306:THR:OG1	2.12	0.48
4:D:1089:LEU:HD12	4:D:1096:PRO:CA	2.42	0.48
4:D:1162:ILE:O	4:D:1177:ILE:HA	2.13	0.48
6:F:140:ALA:HB1	6:F:269:LEU:HD22	1.95	0.48
6:F:573:LEU:HG	7:G:45:DT:OP2	2.14	0.48
7:G:29:DC:C4'	7:G:30:DA:H5'	2.39	0.48
2:K:285:THR:HG22	2:K:287:VAL:H	1.78	0.48
2:B:60:GLU:HB2	2:B:170:ARG:HH11	1.79	0.48
3:C:44:GLU:OE2	3:C:46:GLN:HB2	2.14	0.48
3:C:270:THR:O	3:C:273:HIS:HB2	2.12	0.48
4:D:733:SER:OG	4:D:734:ALA:N	2.46	0.48
4:D:972:LYS:CD	4:D:1003:LEU:HG	2.42	0.48
4:D:1060:VAL:HA	4:D:1105:ALA:O	2.14	0.48
6:F:133:SER:OG	6:F:364:ARG:HG2	2.13	0.48
6:F:134:VAL:HG13	6:F:273:MET:CE	2.42	0.48
7:G:29:DC:H1'	7:G:30:DA:O4'	2.13	0.48
2:K:300:LEU:HB3	7:G:56:DT:H3'	1.94	0.48
2:A:82:LEU:HD11	2:A:171:LEU:HD23	1.95	0.48
3:C:273:HIS:O	3:C:277:LEU:HG	2.13	0.48
3:C:799:ASN:OD1	3:C:799:ASN:N	2.47	0.48
3:C:1115:THR:HG22	3:C:1228:GLY:HA3	1.96	0.48
4:D:514:THR:HG21	4:D:596:LEU:HB3	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:826:ILE:CG1	4:D:831:VAL:HG12	2.43	0.48
6:F:286:LEU:HA	6:F:289:LYS:HB2	1.95	0.48
6:F:336:GLU:HG3	6:F:339:ARG:HH11	1.78	0.48
2:B:162:GLU:HG3	2:B:166:ARG:CZ	2.44	0.48
2:B:166:ARG:HB3	2:B:170:ARG:CB	2.40	0.48
3:C:119:GLU:CG	3:C:490:GLN:HB2	2.42	0.48
4:D:353:SER:OG	4:D:447:ILE:HG13	2.13	0.48
4:D:1025:MET:HE3	4:D:1124:ILE:HG22	1.94	0.48
6:F:523:ILE:HG13	6:F:523:ILE:O	2.14	0.48
1:H:41:DT:H72	6:F:428:SER:OG	2.13	0.48
3:C:122:VAL:HG21	3:C:493:ILE:HB	1.96	0.48
3:C:1004:ASP:O	3:C:1005:GLU:HG3	2.14	0.48
4:D:950:ILE:HD13	4:D:982:LEU:HD12	1.94	0.48
6:F:144:LEU:HD12	6:F:147:GLN:CB	2.43	0.48
6:F:326:TRP:O	6:F:330:LEU:HG	2.14	0.48
6:F:341:LEU:HB2	6:F:344:LEU:HD21	1.96	0.48
6:F:489:MET:HE1	6:F:493:LYS:HB2	1.96	0.48
2:B:107:ILE:HG12	2:B:135:ASP:CG	2.33	0.48
3:C:1003:THR:OG1	3:C:1007:LYS:HD2	2.14	0.48
3:C:1104:PRO:HG2	4:D:725:MET:SD	2.54	0.48
3:C:1242:LYS:HD2	4:D:465:GLN:HE22	1.79	0.48
4:D:105:ILE:HD13	4:D:273:ILE:HG12	1.94	0.48
4:D:185:ILE:O	4:D:189:LEU:HD12	2.14	0.48
4:D:197:GLU:O	4:D:201:LEU:HG	2.14	0.48
4:D:1109:LEU:HB3	4:D:1113:VAL:CG2	2.44	0.48
1:H:42:DG:H4'	1:H:43:DG:O5'	2.13	0.48
2:B:43:LEU:O	2:B:47:LEU:HG	2.13	0.48
2:B:106:GLY:H	2:B:138:ALA:CB	2.27	0.48
2:B:190:ALA:O	2:B:198:LEU:HB2	2.14	0.48
3:C:1031:ALA:HA	3:C:1034:ARG:NH1	2.27	0.48
4:D:559:ALA:HB3	4:D:562:GLU:CG	2.37	0.48
4:D:738:ARG:NH1	4:D:738:ARG:HB3	2.29	0.48
4:D:1109:LEU:HB3	4:D:1113:VAL:HG21	1.95	0.48
5:E:30:MET:HB2	5:E:46:THR:CG2	2.41	0.48
5:E:41:GLU:HG3	5:E:41:GLU:O	2.13	0.48
6:F:465:ARG:HA	6:F:468:ARG:HH12	1.78	0.48
3:C:424:ASP:O	3:C:428:VAL:HG23	2.13	0.48
4:D:194:LEU:HD23	4:D:224:LEU:HD22	1.94	0.48
4:D:377:PHE:O	4:D:381:ILE:HG13	2.13	0.48
4:D:548:VAL:HG21	4:D:574:VAL:HG22	1.94	0.48
4:D:1106:ILE:H	4:D:1122:ALA:HB1	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:1280:VAL:HG11	4:D:1304:ARG:NH2	2.11	0.48
6:F:140:ALA:CB	6:F:269:LEU:HD22	2.44	0.48
1:H:38:DT:H2''	1:H:39:DA:C5'	2.41	0.48
3:C:367:TYR:CD1	3:C:384:LEU:HD13	2.49	0.48
4:D:665:GLN:O	4:D:669:GLN:HG2	2.13	0.48
2:A:14:VAL:HG13	2:A:15:ASP:OD1	2.14	0.47
2:A:111:THR:OG1	2:A:112:ALA:N	2.47	0.47
3:C:160:ASP:O	3:C:164:THR:OG1	2.26	0.47
3:C:966:ILE:O	3:C:969:ALA:HB3	2.14	0.47
3:C:1295:SER:HB2	4:D:346:ARG:O	2.14	0.47
4:D:611:ILE:HG22	4:D:612:LEU:HD12	1.95	0.47
4:D:785:ASP:O	4:D:789:LYS:HG2	2.14	0.47
4:D:986:ASP:OD2	4:D:990:ARG:HB3	2.13	0.47
4:D:1052:GLU:HG3	4:D:1053:LEU:H	1.77	0.47
3:C:149:LEU:CD1	3:C:453:ILE:HG12	2.44	0.47
3:C:296:VAL:HA	3:C:315:MET:O	2.13	0.47
3:C:979:LEU:CD1	3:C:1002:LEU:HD22	2.44	0.47
3:C:1105:SER:HB2	4:D:731:ARG:HG3	1.96	0.47
4:D:506:VAL:O	4:D:510:LEU:HD22	2.14	0.47
1:H:6:DA:H2''	1:H:7:DA:C5'	2.43	0.47
2:A:211:ILE:CG2	2:A:216:ALA:HB2	2.44	0.47
2:A:211:ILE:HG23	2:A:216:ALA:HB2	1.95	0.47
2:B:62:ASP:N	2:B:62:ASP:OD1	2.40	0.47
3:C:229:ILE:HG23	3:C:240:GLU:HB2	1.95	0.47
3:C:629:PHE:HE2	3:C:650:VAL:HG21	1.80	0.47
3:C:1008:GLN:CA	3:C:1011:LEU:HD12	2.38	0.47
4:D:536:LEU:CD1	4:D:541:LEU:HD12	2.44	0.47
6:F:310:GLU:O	6:F:344:LEU:HD11	2.14	0.47
3:C:77:GLU:OE1	3:C:77:GLU:N	2.46	0.47
3:C:106:GLU:HB2	3:C:114:VAL:CG2	2.45	0.47
3:C:1101:LEU:HD23	4:D:725:MET:SD	2.54	0.47
4:D:523:GLU:OE1	4:D:547:ARG:N	2.47	0.47
4:D:611:ILE:C	4:D:612:LEU:HD12	2.35	0.47
4:D:1025:MET:HB3	4:D:1124:ILE:HG22	1.96	0.47
4:D:1314:LEU:HD23	4:D:1326:GLN:OE1	2.14	0.47
6:F:289:LYS:O	6:F:293:GLU:HB2	2.14	0.47
3:C:18:ARG:HB2	3:C:1188:ASP:OD2	2.14	0.47
3:C:841:ARG:HG3	3:C:842:ASP:H	1.79	0.47
3:C:1276:TRP:HH2	4:D:798:ARG:HG2	1.78	0.47
4:D:38:VAL:HG11	4:D:56:LEU:HD12	1.96	0.47
4:D:1009:GLU:N	4:D:1009:GLU:OE1	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:22:DG:H22	7:G:41:DC:C1'	2.25	0.47
2:A:62:ASP:OD1	2:A:63:GLY:N	2.48	0.47
3:C:38:PHE:HD2	3:C:39:ILE:HG23	1.79	0.47
3:C:78:PRO:HB3	3:C:93:SER:O	2.14	0.47
3:C:803:ALA:HB2	3:C:1227:VAL:HG12	1.96	0.47
3:C:905:ILE:O	6:F:599:ARG:NH1	2.48	0.47
4:D:872:LEU:O	4:D:877:VAL:HG12	2.15	0.47
6:F:548:LEU:HD11	6:F:560:ARG:HG3	1.96	0.47
1:H:6:DA:H2''	1:H:7:DA:O4'	2.15	0.47
2:A:19:VAL:HB	2:A:23:HIS:HB3	1.97	0.47
3:C:145:ILE:HD13	3:C:512:SER:HA	1.97	0.47
3:C:262:TYR:CE1	3:C:276:GLN:HB3	2.49	0.47
3:C:742:TYR:HB3	3:C:743:PRO:HD2	1.95	0.47
3:C:979:LEU:HD12	3:C:1002:LEU:HD22	1.95	0.47
3:C:1122:LYS:HD2	3:C:1178:LYS:O	2.15	0.47
3:C:1283:ALA:HA	4:D:479:GLU:OE1	2.13	0.47
4:D:233:LYS:HB3	4:D:235:GLU:OE1	2.15	0.47
4:D:647:PRO:HG2	4:D:650:LYS:HB2	1.96	0.47
4:D:720:ASN:ND2	4:D:722:ILE:HG22	2.30	0.47
4:D:980:THR:O	4:D:997:VAL:HG23	2.14	0.47
4:D:1136:GLY:HA2	4:D:1140:ARG:CB	2.44	0.47
6:F:122:ARG:O	6:F:126:GLY:N	2.43	0.47
6:F:150:ARG:CG	6:F:155:GLU:HB3	2.44	0.47
3:C:287:VAL:HB	3:C:288:PRO:HD2	1.97	0.47
3:C:654:ASP:N	3:C:654:ASP:OD1	2.46	0.47
3:C:845:LEU:HD12	3:C:845:LEU:H	1.79	0.47
3:C:1103:VAL:HG22	3:C:1111:GLN:HE21	1.79	0.47
4:D:269:TYR:O	4:D:273:ILE:HG13	2.15	0.47
4:D:948:SER:OG	4:D:1022:PRO:HD3	2.14	0.47
6:F:271:ASN:O	6:F:275:VAL:HG23	2.15	0.47
2:A:98:VAL:HG11	2:A:121:VAL:CG2	2.45	0.47
3:C:38:PHE:O	3:C:49:LEU:HB2	2.14	0.47
3:C:128:PRO:C	3:C:129:LEU:HD23	2.35	0.47
3:C:179:TYR:OH	3:C:462:ASN:ND2	2.45	0.47
4:D:208:THR:CG2	4:D:213:LYS:HE3	2.45	0.47
6:F:227:GLN:HE21	6:F:231:THR:CG2	2.28	0.47
2:A:175:ALA:HB1	2:A:177:TYR:CE1	2.50	0.47
3:C:320:ASP:O	3:C:324:LYS:N	2.46	0.47
3:C:974:ARG:O	3:C:978:VAL:HG23	2.15	0.47
3:C:1005:GLU:HB3	3:C:1006:GLU:OE1	2.15	0.47
3:C:1155:VAL:HG12	3:C:1156:ARG:H	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:150:ARG:HG2	6:F:155:GLU:HB3	1.97	0.47
6:F:234:THR:HG23	6:F:245:ALA:O	2.14	0.47
1:H:40:DA:H5'	1:H:41:DT:C7	2.45	0.46
2:B:205:MET:CE	2:B:217:ILE:HG13	2.45	0.46
3:C:221:LEU:CD1	3:C:313:ALA:HB1	2.40	0.46
4:D:58:CYS:SG	4:D:59:ALA:N	2.88	0.46
4:D:441:LEU:HD22	4:D:441:LEU:H	1.80	0.46
4:D:548:VAL:HG12	4:D:549:LYS:H	1.80	0.46
4:D:930:LEU:HD22	4:D:1244:GLN:OE1	2.14	0.46
4:D:978:ARG:HD2	4:D:978:ARG:N	2.30	0.46
4:D:1023:HIS:C	4:D:1125:PRO:HA	2.35	0.46
4:D:1037:PHE:CE2	4:D:1111:ASP:HB2	2.50	0.46
6:F:282:THR:HA	6:F:285:ARG:HB2	1.96	0.46
2:A:166:ARG:HB2	2:A:167:PRO:HD3	1.96	0.46
2:B:27:THR:OG1	2:B:28:LEU:N	2.48	0.46
3:C:132:ASP:OD1	3:C:132:ASP:N	2.48	0.46
4:D:39:LYS:O	4:D:40:LYS:HG3	2.15	0.46
4:D:62:PHE:CD1	4:D:247:PRO:HD3	2.50	0.46
4:D:186:GLN:O	4:D:190:LYS:HB3	2.15	0.46
4:D:254:PRO:HB3	4:D:260:PHE:CE1	2.50	0.46
4:D:848:VAL:HG11	4:D:880:VAL:HG13	1.97	0.46
4:D:1040:MET:SD	4:D:1078:LEU:HG	2.56	0.46
4:D:1196:LEU:HG	4:D:1198:VAL:HG12	1.96	0.46
6:F:383:ASN:OD1	6:F:383:ASN:N	2.45	0.46
3:C:217:THR:HG23	3:C:351:LEU:CD2	2.45	0.46
3:C:690:VAL:HG11	3:C:830:THR:HG21	1.96	0.46
3:C:1128:ILE:O	3:C:1132:LEU:HB3	2.16	0.46
4:D:743:MET:CG	4:D:760:THR:HA	2.45	0.46
4:D:949:SER:HA	4:D:1019:ASN:OD1	2.16	0.46
4:D:959:LYS:HB2	4:D:985:ILE:CG1	2.45	0.46
6:F:137:TYR:HB2	6:F:361:ILE:HD13	1.97	0.46
2:A:194:GLN:O	2:A:195:ARG:HG2	2.14	0.46
2:B:201:LEU:HD21	2:B:203:ILE:HD11	1.97	0.46
3:C:215:TYR:CB	3:C:220:ILE:HD11	2.44	0.46
4:D:122:SER:OG	4:D:125:GLY:HA3	2.14	0.46
4:D:1167:LYS:HE3	4:D:1170:LYS:CD	2.34	0.46
6:F:570:ASP:OD1	6:F:570:ASP:N	2.49	0.46
6:F:593:LYS:HA	6:F:596:ARG:NH1	2.29	0.46
1:H:5:DC:H1'	1:H:6:DA:N7	2.31	0.46
2:A:14:VAL:HG12	2:A:27:THR:HB	1.97	0.46
3:C:252:SER:CA	3:C:265:LYS:HG3	2.42	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:697:LYS:HA	3:C:795:ALA:HB2	1.97	0.46
4:D:294:ASN:ND2	6:F:406:GLN:HE21	2.14	0.46
4:D:485:MET:HG3	4:D:486:SER:H	1.80	0.46
4:D:1101:LEU:HD22	4:D:1107:VAL:HG12	1.96	0.46
5:E:41:GLU:HB2	5:E:49:ILE:HD11	1.97	0.46
1:H:48:DT:H2"	3:C:183:TRP:CZ3	2.51	0.46
2:B:89:ALA:O	2:B:124:VAL:HG22	2.15	0.46
3:C:360:LEU:HD22	3:C:378:ARG:HE	1.79	0.46
3:C:953:LEU:CD1	3:C:1033:ARG:HG3	2.46	0.46
4:D:848:VAL:HG22	4:D:858:VAL:CG2	2.38	0.46
4:D:952:VAL:HG11	4:D:984:LEU:HD22	1.96	0.46
4:D:959:LYS:HB2	4:D:985:ILE:HG12	1.97	0.46
4:D:1027:VAL:CG2	4:D:1122:ALA:HB3	2.46	0.46
6:F:503:GLU:HB2	6:F:504:PRO:HD2	1.97	0.46
3:C:672:GLU:HB3	3:C:1187:PHE:CE1	2.51	0.46
3:C:993:PRO:HG2	3:C:996:ARG:HB3	1.97	0.46
3:C:1304:MET:CE	3:C:1308:ILE:HD11	2.45	0.46
6:F:165:PHE:HD1	6:F:259:PHE:HA	1.80	0.46
6:F:519:LEU:O	6:F:519:LEU:HD23	2.15	0.46
2:A:191:ARG:HD3	2:A:191:ARG:HA	1.70	0.46
3:C:521:LEU:O	3:C:525:THR:HG22	2.16	0.46
3:C:975:ILE:O	3:C:979:LEU:HD13	2.16	0.46
4:D:21:LYS:HG2	4:D:22:ILE:N	2.31	0.46
4:D:74:LYS:HD3	4:D:87:LYS:NZ	2.30	0.46
4:D:500:ILE:HG22	4:D:500:ILE:O	2.16	0.46
4:D:1314:LEU:HD21	4:D:1331:VAL:CG2	2.45	0.46
4:D:1314:LEU:HD23	4:D:1326:GLN:CB	2.45	0.46
3:C:109:ALA:HB1	3:C:110:PRO:HD2	1.98	0.46
3:C:205:PRO:O	3:C:208:ILE:HG22	2.16	0.46
3:C:232:ILE:HG23	3:C:237:LEU:HD23	1.97	0.46
3:C:296:VAL:CG2	3:C:314:ASN:HA	2.46	0.46
3:C:1242:LYS:HD2	4:D:465:GLN:NE2	2.30	0.46
4:D:41:PRO:HB2	4:D:270:ARG:HG2	1.98	0.46
4:D:288:PRO:HB3	6:F:377:LYS:HG2	1.97	0.46
6:F:573:LEU:HD12	6:F:574:GLU:H	1.80	0.46
2:A:155:ALA:N	2:A:174:ASP:OD1	2.45	0.46
3:C:724:VAL:HG22	3:C:734:ILE:CD1	2.46	0.46
4:D:536:LEU:HD12	4:D:541:LEU:HD12	1.98	0.46
4:D:664:ILE:CG2	4:D:681:LYS:HD2	2.46	0.46
4:D:1045:THR:HG21	4:D:1076:PRO:CB	2.45	0.46
4:D:1057:SER:HB2	4:D:1059:LEU:CD1	2.42	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:1174:ARG:HA	4:D:1189:MET:HA	1.97	0.46
5:E:30:MET:HE1	5:E:49:ILE:HG21	1.96	0.46
6:F:102:MET:SD	6:F:388:ILE:HD13	2.56	0.46
6:F:295:CYS:SG	6:F:330:LEU:HD23	2.56	0.46
7:G:52:DC:H2''	7:G:53:DA:C8	2.51	0.46
2:A:51:MET:HE2	2:A:216:ALA:HB1	1.98	0.45
3:C:243:PRO:O	3:C:246:LEU:HD12	2.15	0.45
3:C:836:LEU:CD1	3:C:1054:LEU:HD13	2.46	0.45
3:C:1010:GLN:HA	3:C:1013:GLN:HB2	1.97	0.45
3:C:1211:ARG:O	3:C:1211:ARG:HD3	2.16	0.45
4:D:411:ILE:O	4:D:415:VAL:HG23	2.16	0.45
2:B:162:GLU:OE2	2:B:165:GLU:HA	2.16	0.45
3:C:34:SER:O	3:C:457:GLY:HA3	2.16	0.45
3:C:812:PHE:CE2	3:C:813:GLU:HG2	2.51	0.45
3:C:1079:ILE:O	3:C:1079:ILE:HG13	2.16	0.45
4:D:452:LEU:HD13	4:D:500:ILE:HG22	1.97	0.45
4:D:616:PRO:HA	4:D:619:ILE:HG22	1.98	0.45
4:D:1074:LEU:O	4:D:1075:ARG:HD3	2.16	0.45
3:C:255:ILE:O	3:C:262:TYR:N	2.49	0.45
3:C:646:SER:OG	3:C:649:GLN:HG3	2.16	0.45
3:C:1072:ASN:OD1	3:C:1072:ASN:N	2.48	0.45
4:D:822:MET:CE	4:D:838:ARG:HB3	2.44	0.45
4:D:872:LEU:HB3	4:D:877:VAL:CG1	2.46	0.45
4:D:967:VAL:HG13	4:D:972:LYS:N	2.32	0.45
4:D:1235:ASN:O	4:D:1239:ASP:HB2	2.16	0.45
4:D:1268:ASN:O	4:D:1300:ALA:HB1	2.17	0.45
6:F:247:GLU:HG2	6:F:250:LEU:HD12	1.97	0.45
2:A:15:ASP:OD1	2:A:15:ASP:N	2.49	0.45
2:B:20:SER:O	2:B:23:HIS:N	2.28	0.45
2:B:205:MET:HG2	2:B:206:GLU:O	2.16	0.45
3:C:106:GLU:CB	3:C:114:VAL:HG21	2.47	0.45
4:D:681:LYS:O	4:D:685:ILE:HG22	2.16	0.45
4:D:766:GLY:C	4:D:767:LEU:HD12	2.36	0.45
4:D:843:VAL:HG23	4:D:883:ARG:HD3	1.98	0.45
6:F:353:LEU:HB3	6:F:357:GLN:HB2	1.98	0.45
6:F:387:VAL:HG22	6:F:435:ILE:HD13	1.98	0.45
6:F:544:THR:O	6:F:548:LEU:HB3	2.16	0.45
2:A:69:SER:OG	2:A:70:THR:N	2.49	0.45
2:B:158:ARG:HD2	2:B:172:LEU:HD21	1.98	0.45
4:D:264:ASP:HB2	4:D:324:LEU:HD22	1.99	0.45
4:D:285:LEU:HG	6:F:413:MET:HE1	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:548:VAL:HG21	4:D:574:VAL:CG2	2.47	0.45
4:D:895:CYS:SG	4:D:897:HIS:N	2.89	0.45
4:D:1034:PHE:HB2	4:D:1081:VAL:CG2	2.47	0.45
6:F:90:GLU:OE1	6:F:90:GLU:N	2.49	0.45
6:F:312:SER:OG	6:F:314:THR:HG23	2.17	0.45
2:A:14:VAL:HG12	2:A:27:THR:O	2.17	0.45
3:C:788:SER:O	3:C:789:THR:HG23	2.16	0.45
3:C:1028:LYS:HE2	3:C:1028:LYS:HB3	1.78	0.45
4:D:800:LEU:HD22	4:D:1256:ILE:CD1	2.38	0.45
4:D:844:THR:O	4:D:861:ASN:HB3	2.16	0.45
4:D:865:HIS:CE1	4:D:867:GLN:HG2	2.51	0.45
4:D:999:TYR:HE2	4:D:1027:VAL:HG13	1.81	0.45
5:E:30:MET:HE3	5:E:49:ILE:CG2	2.45	0.45
6:F:335:GLU:O	6:F:339:ARG:HG2	2.17	0.45
6:F:436:ARG:O	6:F:440:THR:HG22	2.16	0.45
1:H:42:DG:C6	6:F:106:GLY:HA3	2.52	0.45
2:B:57:THR:C	2:B:173:VAL:HG12	2.36	0.45
3:C:106:GLU:OE1	3:C:106:GLU:HA	2.16	0.45
3:C:979:LEU:HD11	3:C:1011:LEU:CD2	2.41	0.45
3:C:1132:LEU:HD11	3:C:1174:GLU:HG2	1.98	0.45
3:C:1307:ASN:HB3	3:C:1312:ASN:O	2.17	0.45
4:D:490:ILE:O	4:D:490:ILE:HG12	2.17	0.45
4:D:925:GLU:HG3	4:D:926:PRO:HD3	1.98	0.45
4:D:974:VAL:HG21	4:D:1030:GLU:CB	2.46	0.45
3:C:228:VAL:HB	3:C:335:THR:CG2	2.47	0.45
3:C:347:ILE:HD13	3:C:347:ILE:HA	1.75	0.45
3:C:1211:ARG:H	3:C:1211:ARG:HG3	1.56	0.45
4:D:17:PHE:HE2	4:D:20:ILE:HD11	1.81	0.45
4:D:80:HIS:HB3	4:D:83:VAL:HG12	1.99	0.45
4:D:133:ARG:NH2	6:F:93:ARG:HA	2.32	0.45
4:D:1026:PRO:HA	4:D:1122:ALA:O	2.17	0.45
4:D:1038:THR:HG21	4:D:1079:LYS:CB	2.47	0.45
4:D:1059:LEU:CB	4:D:1107:VAL:HG23	2.46	0.45
4:D:1101:LEU:HD13	4:D:1107:VAL:CG1	2.46	0.45
3:C:936:ARG:HH21	3:C:1047:LEU:CD2	2.30	0.45
3:C:953:LEU:HD21	3:C:1033:ARG:HD2	1.99	0.45
3:C:1214:ASP:OD1	3:C:1215:GLY:N	2.48	0.45
3:C:1337:ILE:HG13	4:D:21:LYS:O	2.17	0.45
4:D:841:GLY:O	4:D:842:ARG:HG3	2.16	0.45
4:D:850:LYS:HB3	4:D:851:PRO:HD2	1.99	0.45
4:D:1038:THR:HG21	4:D:1079:LYS:H	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:228:TYR:HA	6:F:252:LEU:HD22	1.99	0.45
3:C:677:ASN:OD1	4:D:779:ALA:HB1	2.17	0.45
3:C:1103:VAL:CG2	3:C:1111:GLN:HE21	2.31	0.45
3:C:1341:ASP:OD1	3:C:1341:ASP:N	2.41	0.45
4:D:929:GLN:OE1	4:D:930:LEU:HG	2.17	0.45
4:D:1027:VAL:CG2	4:D:1102:PRO:HD2	2.33	0.45
6:F:227:GLN:CG	6:F:252:LEU:HD13	2.46	0.45
6:F:337:VAL:O	6:F:341:LEU:HD23	2.17	0.45
7:G:26:DT:H6	7:G:26:DT:H2'	1.64	0.45
3:C:12:ARG:NH1	3:C:1182:ILE:O	2.50	0.44
3:C:128:PRO:O	3:C:129:LEU:HD23	2.17	0.44
3:C:413:GLU:OE1	3:C:413:GLU:N	2.36	0.44
3:C:810:TYR:CE1	4:D:359:PRO:HD2	2.51	0.44
4:D:17:PHE:O	4:D:17:PHE:CD1	2.70	0.44
4:D:294:ASN:HD22	6:F:406:GLN:HE21	1.65	0.44
4:D:807:LEU:HD12	4:D:1259:GLN:OE1	2.17	0.44
4:D:1058:SER:O	4:D:1060:VAL:HG23	2.17	0.44
7:G:57:DT:H2''	7:G:58:DG:O5'	2.17	0.44
3:C:210:LEU:HD21	3:C:429:MET:CE	2.48	0.44
4:D:967:VAL:CG1	4:D:971:GLY:HA2	2.47	0.44
4:D:1208:ASP:OD1	4:D:1209:VAL:N	2.50	0.44
1:H:17:DC:O2	7:G:46:DG:N2	2.49	0.44
1:H:40:DA:H8	6:F:428:SER:HB3	1.81	0.44
2:A:26:VAL:HG22	2:A:203:ILE:HB	2.00	0.44
2:B:39:LEU:HA	2:B:39:LEU:HD23	1.70	0.44
3:C:242:VAL:HG22	3:C:245:ARG:HE	1.82	0.44
3:C:320:ASP:OD1	3:C:320:ASP:N	2.49	0.44
3:C:468:LEU:O	3:C:468:LEU:HD23	2.18	0.44
3:C:900:LYS:HG2	6:F:563:PHE:CD1	2.53	0.44
3:C:906:PHE:CD2	6:F:611:LEU:HD11	2.53	0.44
4:D:650:LYS:HG3	4:D:693:VAL:HG21	1.99	0.44
4:D:967:VAL:CG2	4:D:973:LEU:HG	2.47	0.44
4:D:1045:THR:CG2	4:D:1076:PRO:HB3	2.46	0.44
4:D:1260:MET:HG3	4:D:1307:LEU:O	2.18	0.44
6:F:291:CYS:HB3	6:F:297:MET:CE	2.47	0.44
2:B:59:VAL:HG22	2:B:171:LEU:HB2	1.99	0.44
4:D:1153:PRO:O	4:D:1194:ARG:NH2	2.49	0.44
5:E:30:MET:H	5:E:30:MET:HG2	1.54	0.44
6:F:235:ILE:HD13	6:F:245:ALA:O	2.17	0.44
6:F:585:GLU:OE2	6:F:588:ARG:HD2	2.17	0.44
7:G:2:DC:H2''	7:G:3:DT:H6	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:56:DT:H2''	7:G:57:DT:C5	2.53	0.44
3:C:319:LEU:HA	3:C:322:LEU:HD12	1.98	0.44
3:C:988:LYS:HA	3:C:991:LYS:CG	2.42	0.44
3:C:1004:ASP:HA	3:C:1008:GLN:HG2	2.00	0.44
3:C:1304:MET:HE1	3:C:1308:ILE:HD11	2.00	0.44
3:C:1339:LEU:HD22	4:D:17:PHE:CD2	2.52	0.44
4:D:294:ASN:HB3	6:F:406:GLN:NE2	2.32	0.44
6:F:342:GLN:O	6:F:346:GLN:HG3	2.17	0.44
6:F:515:GLU:HG2	6:F:516:ASP:OD1	2.18	0.44
2:A:42:ALA:O	2:A:46:ILE:HG12	2.18	0.44
2:B:205:MET:HE3	2:B:213:PRO:HB3	1.98	0.44
3:C:204:LEU:HD11	3:C:369:MET:HE3	1.99	0.44
3:C:316:GLU:O	3:C:317:LEU:HD23	2.18	0.44
4:D:552:ILE:HD11	4:D:570:LYS:HB2	1.99	0.44
4:D:615:LYS:HB2	4:D:616:PRO:HD3	2.00	0.44
4:D:1087:ASP:HB2	4:D:1096:PRO:HB3	1.98	0.44
6:F:217:ALA:O	6:F:221:PHE:HB2	2.18	0.44
6:F:250:LEU:HB3	6:F:254:GLU:OE2	2.17	0.44
6:F:343:LYS:O	6:F:347:ILE:HG13	2.17	0.44
2:A:90:VAL:HG23	2:A:123:ILE:HD13	2.00	0.44
2:B:96:ASP:O	2:B:147:GLN:HA	2.18	0.44
3:C:96:LEU:HB3	3:C:125:GLY:O	2.17	0.44
3:C:367:TYR:OH	3:C:374:GLU:OE2	2.23	0.44
4:D:161:THR:CG2	4:D:164:GLN:HG3	2.37	0.44
4:D:678:ARG:HD2	4:D:678:ARG:O	2.18	0.44
4:D:966:VAL:HG12	4:D:967:VAL:H	1.83	0.44
4:D:1095:MET:SD	4:D:1096:PRO:HD2	2.58	0.44
4:D:1282:TYR:O	4:D:1285:VAL:HG22	2.18	0.44
6:F:426:LYS:HG2	6:F:427:PHE:H	1.83	0.44
6:F:470:MET:HE2	6:F:478:PRO:HB3	1.97	0.44
1:H:12:DA:H1'	1:H:13:DT:H5'	2.00	0.44
3:C:618:GLN:NE2	4:D:770:LEU:HB2	2.32	0.44
3:C:1115:THR:HG23	3:C:1228:GLY:HA3	2.00	0.44
4:D:426:ALA:HB3	4:D:427:PRO:CD	2.48	0.44
7:G:12:DG:H8	7:G:12:DG:H5''	1.82	0.44
2:A:193:GLU:HG3	2:A:194:GLN:N	2.33	0.44
2:A:225:ALA:CB	2:B:232:VAL:HG11	2.47	0.44
3:C:745:GLU:CG	3:C:1017:GLN:HG3	2.48	0.44
3:C:755:LYS:HA	3:C:766:ASN:HB2	1.99	0.44
3:C:1298:VAL:HG23	3:C:1321:GLU:CG	2.47	0.44
4:D:931:THR:O	4:D:931:THR:OG1	2.35	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:1341:ARG:HH11	4:D:1341:ARG:CG	2.14	0.44
7:G:0:DC:H2''	7:G:1:DC:C6	2.53	0.44
1:H:18:DA:H2''	1:H:19:DA:C8	2.53	0.43
2:A:71:LYS:HG3	2:A:72:GLU:N	2.33	0.43
3:C:135:THR:CG2	3:C:527:LYS:HE2	2.48	0.43
3:C:1001:GLY:O	3:C:1002:LEU:HD12	2.18	0.43
3:C:1014:LEU:HA	3:C:1017:GLN:HB2	1.99	0.43
4:D:158:GLN:C	4:D:159:ILE:HD12	2.39	0.43
4:D:949:SER:HB3	4:D:1016:THR:CB	2.47	0.43
4:D:1021:ASP:HB3	4:D:1024:THR:O	2.18	0.43
4:D:1048:ARG:HH21	4:D:1059:LEU:HD21	1.83	0.43
1:H:63:DG:OP1	4:D:1170:LYS:HG3	2.18	0.43
2:A:73:GLY:O	2:A:134:THR:HG22	2.18	0.43
2:A:226:GLU:O	2:B:10:LYS:NZ	2.51	0.43
2:B:14:VAL:HB	2:B:28:LEU:HD13	1.99	0.43
3:C:818:VAL:O	3:C:1079:ILE:HA	2.18	0.43
3:C:1289:GLU:OE1	4:D:473:THR:HG22	2.18	0.43
3:C:1335:ILE:HD12	4:D:1336:ALA:CB	2.48	0.43
4:D:1099:TYR:HD1	4:D:1099:TYR:HA	1.67	0.43
4:D:1167:LYS:O	4:D:1167:LYS:HD2	2.18	0.43
6:F:163:THR:HG21	6:F:262:VAL:HG13	2.00	0.43
6:F:329:LYS:NZ	6:F:332:ASP:HB2	2.33	0.43
6:F:582:VAL:HG23	6:F:584:ARG:HH12	1.82	0.43
7:G:36:DT:H2''	7:G:37:DA:C8	2.53	0.43
7:G:42:DT:H6	7:G:42:DT:H2'	1.63	0.43
1:H:52:DA:H2''	1:H:53:DC:H5'	1.99	0.43
3:C:8:LYS:HD3	3:C:1168:GLU:OE1	2.17	0.43
3:C:272:ARG:HA	3:C:275:ARG:CG	2.48	0.43
3:C:839:VAL:HG21	3:C:841:ARG:NH2	2.33	0.43
3:C:848:GLU:CD	3:C:888:THR:HG22	2.38	0.43
4:D:133:ARG:CZ	6:F:93:ARG:HG2	2.47	0.43
4:D:572:THR:HG1	4:D:576:ARG:HB2	1.83	0.43
4:D:949:SER:O	4:D:951:GLN:HG2	2.18	0.43
4:D:1063:ASP:OD1	4:D:1066:GLU:N	2.51	0.43
3:C:219:GLN:HA	3:C:222:ASP:HB3	2.01	0.43
3:C:624:ASP:OD2	3:C:628:HIS:HB2	2.18	0.43
4:D:555:TYR:HE1	4:D:565:ALA:HB2	1.83	0.43
4:D:683:ILE:HA	4:D:683:ILE:HD13	1.79	0.43
4:D:1034:PHE:O	4:D:1080:ILE:HG23	2.19	0.43
4:D:1061:VAL:HG23	4:D:1107:VAL:HG22	2.00	0.43
6:F:134:VAL:HG13	6:F:273:MET:HE3	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:316:PHE:O	6:F:320:ILE:HD12	2.18	0.43
7:G:27:DA:H1'	7:G:28:DG:H5'	1.99	0.43
1:H:22:DG:N2	7:G:41:DC:H1'	2.27	0.43
1:H:47:DC:H6	1:H:47:DC:H5''	1.84	0.43
3:C:818:VAL:HG12	3:C:819:SER:O	2.18	0.43
4:D:208:THR:HG21	4:D:213:LYS:CB	2.48	0.43
4:D:645:VAL:O	4:D:741:ALA:HB1	2.17	0.43
4:D:1004:ALA:N	4:D:1017:VAL:O	2.50	0.43
4:D:1062:LEU:HB3	4:D:1066:GLU:O	2.17	0.43
6:F:108:VAL:HG21	6:F:382:ALA:HA	1.99	0.43
6:F:248:GLU:CA	6:F:251:LYS:HE2	2.45	0.43
7:G:43:DT:H2''	7:G:44:DT:C5'	2.48	0.43
2:B:211:ILE:HD13	2:B:211:ILE:HA	1.88	0.43
3:C:79:VAL:HG13	3:C:80:PHE:H	1.83	0.43
3:C:797:GLY:N	3:C:1231:TYR:OH	2.50	0.43
3:C:867:GLU:OE2	3:C:943:LYS:HD2	2.19	0.43
3:C:887:VAL:HB	3:C:913:VAL:HG22	2.00	0.43
3:C:905:ILE:HG22	3:C:906:PHE:CE1	2.54	0.43
3:C:1002:LEU:CD2	3:C:1007:LYS:HB2	2.27	0.43
4:D:646:ILE:HD12	4:D:762:ASN:ND2	2.33	0.43
4:D:1328:THR:HG23	4:D:1332:LEU:HD23	2.00	0.43
4:D:1355:ARG:NH1	4:D:1369:ARG:HH12	2.17	0.43
6:F:102:MET:HA	6:F:105:MET:CE	2.46	0.43
6:F:219:GLU:HG3	6:F:220:LYS:HG2	2.00	0.43
6:F:269:LEU:O	6:F:273:MET:HG2	2.18	0.43
6:F:452:ILE:HD11	6:F:457:ILE:HD11	2.00	0.43
7:G:3:DT:H2''	7:G:4:DG:C8	2.54	0.43
3:C:35:PHE:CE2	3:C:39:ILE:HG12	2.53	0.43
3:C:979:LEU:HG	3:C:1002:LEU:HD13	2.00	0.43
3:C:988:LYS:HE3	3:C:988:LYS:HB2	1.72	0.43
4:D:848:VAL:HG13	4:D:858:VAL:HG21	2.00	0.43
6:F:261:LEU:HD21	6:F:266:PHE:HA	2.00	0.43
7:G:30:DA:H2''	7:G:31:DC:O5'	2.19	0.43
7:G:32:DA:H2''	7:G:33:DA:C5'	2.48	0.43
3:C:138:ILE:HB	3:C:143:ARG:HD2	2.01	0.43
3:C:303:ASP:OD1	3:C:305:SER:N	2.47	0.43
3:C:632:ASP:OD1	3:C:633:LEU:HD23	2.18	0.43
3:C:1075:VAL:HG11	4:D:356:THR:HG22	2.00	0.43
3:C:1103:VAL:HB	3:C:1104:PRO:HD3	2.01	0.43
3:C:1294:LYS:O	4:D:348:ASP:HB2	2.18	0.43
4:D:641:ILE:HD12	4:D:641:ILE:HA	1.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:1172:LYS:HE2	4:D:1189:MET:HE2	2.01	0.43
6:F:324:LYS:HG3	6:F:326:TRP:CZ2	2.53	0.43
6:F:364:ARG:O	6:F:367:ILE:HB	2.18	0.43
7:G:6:DA:H5'	7:G:6:DA:H8	1.82	0.43
2:A:225:ALA:HB3	2:B:232:VAL:HG11	2.01	0.43
3:C:1146:GLN:O	3:C:1146:GLN:NE2	2.48	0.43
4:D:120:LEU:HD23	4:D:120:LEU:HA	1.68	0.43
4:D:1016:THR:O	4:D:1016:THR:OG1	2.33	0.43
4:D:1107:VAL:HG12	4:D:1121:LEU:O	2.19	0.43
5:E:19:LEU:HD11	5:E:51:LEU:CD2	2.48	0.43
6:F:261:LEU:CD2	6:F:266:PHE:HA	2.49	0.43
6:F:298:PRO:HD3	6:F:326:TRP:CD2	2.53	0.43
6:F:354:THR:HG22	6:F:357:GLN:OE1	2.18	0.43
6:F:574:GLU:OE1	6:F:583:THR:HB	2.18	0.43
2:A:61:ILE:HG22	2:A:62:ASP:H	1.84	0.43
3:C:887:VAL:HB	3:C:913:VAL:HG21	2.01	0.43
3:C:1007:LYS:HE3	3:C:1007:LYS:HB3	1.83	0.43
3:C:1292:THR:HG21	3:C:1317:PRO:HB2	2.01	0.43
4:D:79:LYS:HE2	6:F:569:THR:HB	2.01	0.43
4:D:94:GLN:O	4:D:97:VAL:HG12	2.19	0.43
4:D:694:SER:HB3	4:D:738:ARG:NH2	2.34	0.43
4:D:1027:VAL:HB	4:D:1121:LEU:H	1.84	0.43
1:H:58:DG:H2''	1:H:59:DC:C6	2.54	0.42
2:A:135:ASP:OD1	2:A:136:GLU:N	2.52	0.42
2:B:61:ILE:HG22	2:B:64:VAL:N	2.33	0.42
4:D:491:LEU:HD12	4:D:904:ALA:O	2.19	0.42
4:D:527:LEU:HB2	4:D:550:VAL:HG12	2.00	0.42
4:D:820:ILE:HG22	4:D:1227:HIS:ND1	2.34	0.42
4:D:1196:LEU:HD12	4:D:1196:LEU:HA	1.83	0.42
4:D:1269:ALA:HB3	4:D:1274:PHE:HD1	1.83	0.42
6:F:147:GLN:HG2	6:F:150:ARG:HH21	1.84	0.42
6:F:147:GLN:HG2	6:F:150:ARG:NH2	2.33	0.42
6:F:287:ILE:HD12	6:F:310:GLU:OE1	2.19	0.42
6:F:294:GLN:NE2	6:F:333:VAL:HG21	2.34	0.42
6:F:548:LEU:HD22	6:F:560:ARG:HH21	1.84	0.42
2:B:162:GLU:HG3	2:B:166:ARG:NH1	2.34	0.42
3:C:148:GLN:O	3:C:453:ILE:HG23	2.19	0.42
3:C:441:GLU:HA	3:C:441:GLU:OE2	2.19	0.42
3:C:629:PHE:CE2	3:C:650:VAL:HG21	2.54	0.42
3:C:1120:ALA:HB2	3:C:1199:LEU:HD21	2.01	0.42
4:D:572:THR:OG1	4:D:576:ARG:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:1042:ASP:CB	4:D:1048:ARG:HB2	2.37	0.42
4:D:1221:LEU:HD22	4:D:1306:LEU:HB2	2.01	0.42
6:F:389:SER:HA	6:F:392:LYS:HE3	2.02	0.42
2:B:34:GLY:O	2:B:38:THR:HG22	2.20	0.42
3:C:510:GLN:OE1	3:C:510:GLN:N	2.47	0.42
3:C:636:CYS:HB2	3:C:645:PHE:CD2	2.54	0.42
3:C:981:ALA:HB3	3:C:1007:LYS:HE3	2.02	0.42
4:D:116:PHE:O	4:D:124:ILE:HG13	2.19	0.42
4:D:162:GLU:H	4:D:162:GLU:HG3	1.59	0.42
4:D:846:GLU:HA	4:D:860:ARG:NH1	2.35	0.42
6:F:354:THR:O	6:F:358:VAL:HG23	2.20	0.42
2:B:188:GLU:OE2	2:B:202:VAL:HG21	2.20	0.42
3:C:231:GLU:CG	3:C:233:ARG:HG3	2.50	0.42
3:C:724:VAL:HG11	3:C:727:VAL:CG2	2.49	0.42
3:C:972:PHE:HD2	3:C:975:ILE:HD11	1.85	0.42
3:C:1083:GLU:OE1	3:C:1083:GLU:N	2.52	0.42
3:C:1240:ASP:OD1	3:C:1240:ASP:N	2.52	0.42
3:C:1264:GLN:OE1	3:C:1264:GLN:HA	2.20	0.42
4:D:982:LEU:O	4:D:994:SER:HA	2.18	0.42
6:F:267:ASP:O	6:F:271:ASN:HB2	2.19	0.42
6:F:347:ILE:O	6:F:350:GLU:HB2	2.19	0.42
6:F:572:THR:CB	6:F:575:GLU:HB3	2.48	0.42
7:G:32:DA:H2''	7:G:33:DA:H5'	2.01	0.42
1:H:15:DG:O6	6:F:585:GLU:HG3	2.20	0.42
2:A:13:LEU:HD12	2:A:14:VAL:H	1.84	0.42
3:C:12:ARG:CD	3:C:1183:ALA:HB2	2.48	0.42
3:C:17:LYS:N	3:C:17:LYS:HD2	2.35	0.42
3:C:158:ASP:OD1	3:C:159:SER:N	2.47	0.42
3:C:227:LYS:HD2	3:C:334:GLU:CG	2.49	0.42
3:C:1164:PHE:CD1	3:C:1168:GLU:HB2	2.52	0.42
4:D:24:LEU:HD12	4:D:24:LEU:HA	1.85	0.42
4:D:903:LEU:HD21	4:D:909:ILE:HD13	2.01	0.42
4:D:1030:GLU:CD	4:D:1090:ILE:HG23	2.40	0.42
4:D:1266:ILE:HD11	4:D:1278:GLU:HG3	2.02	0.42
2:A:71:LYS:HZ3	2:A:140:ILE:HG22	1.84	0.42
3:C:260:LYS:HD3	3:C:262:TYR:CE1	2.55	0.42
4:D:78:LEU:O	4:D:78:LEU:HD23	2.19	0.42
4:D:395:LYS:HE2	4:D:395:LYS:HB3	1.87	0.42
4:D:549:LYS:HE3	4:D:549:LYS:HB2	1.85	0.42
4:D:1038:THR:HG21	4:D:1079:LYS:HB2	2.02	0.42
6:F:157:ARG:CD	6:F:160:ASP:HB2	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:262:VAL:HG12	6:F:263:PRO:CD	2.50	0.42
6:F:562:ARG:HG2	6:F:591:GLU:OE1	2.19	0.42
3:C:1327:LEU:O	3:C:1331:ARG:HG3	2.19	0.42
4:D:117:LEU:HB2	4:D:124:ILE:HD12	2.02	0.42
4:D:552:ILE:HG13	4:D:570:LYS:HG3	2.02	0.42
4:D:658:GLU:O	4:D:661:VAL:HG12	2.19	0.42
4:D:848:VAL:HG13	4:D:858:VAL:CG2	2.50	0.42
4:D:1168:GLU:HG2	4:D:1173:ARG:HG3	2.02	0.42
5:E:76:GLU:HA	5:E:79:GLU:HB2	2.01	0.42
6:F:248:GLU:HA	6:F:251:LYS:HG3	2.01	0.42
6:F:262:VAL:HG12	6:F:263:PRO:HD2	2.02	0.42
6:F:511:ILE:HD13	6:F:522:PHE:CE2	2.55	0.42
2:B:64:VAL:HG21	2:B:78:ILE:HD11	2.01	0.42
3:C:50:GLU:OE2	3:C:70:TYR:OH	2.23	0.42
3:C:454:ARG:HG2	3:C:458:GLU:CD	2.40	0.42
3:C:622:ASN:HB2	3:C:630:VAL:HG22	2.00	0.42
3:C:736:VAL:HG23	3:C:737:ASN:O	2.20	0.42
3:C:1103:VAL:HG11	3:C:1112:ILE:HD11	2.01	0.42
3:C:1223:ARG:HH21	4:D:721:SER:HB3	1.85	0.42
4:D:218:THR:CA	4:D:221:ILE:HG22	2.41	0.42
4:D:733:SER:HB3	4:D:736:GLN:HE21	1.84	0.42
4:D:1024:THR:HG22	4:D:1026:PRO:CD	2.39	0.42
4:D:1108:GLN:HG2	4:D:1109:LEU:HD23	2.01	0.42
4:D:1306:LEU:HD23	4:D:1306:LEU:O	2.18	0.42
3:C:1222:GLU:OE1	4:D:512:TYR:OH	2.32	0.42
3:C:1292:THR:HG21	3:C:1317:PRO:CB	2.50	0.42
4:D:309:ASN:HB2	4:D:326:SER:HB3	2.01	0.42
4:D:416:ILE:HG22	4:D:416:ILE:O	2.19	0.42
4:D:416:ILE:HD12	4:D:416:ILE:HG23	1.84	0.42
4:D:766:GLY:O	4:D:767:LEU:HD12	2.20	0.42
4:D:1314:LEU:HD22	4:D:1314:LEU:HA	1.61	0.42
6:F:96:ASP:O	6:F:100:MET:HG3	2.20	0.42
2:A:13:LEU:HD12	2:A:14:VAL:N	2.35	0.42
2:A:64:VAL:HG23	2:A:69:SER:HB3	2.01	0.42
2:B:59:VAL:CG2	2:B:171:LEU:HD12	2.50	0.42
2:B:158:ARG:H	2:B:158:ARG:HG3	1.48	0.42
3:C:22:LEU:HB3	3:C:655:VAL:HG11	2.01	0.42
3:C:231:GLU:HG3	3:C:233:ARG:HG3	2.01	0.42
3:C:550:VAL:HG11	4:D:776:THR:HG22	2.02	0.42
3:C:696:ASP:O	3:C:697:LYS:HB3	2.20	0.42
3:C:1043:ALA:HB1	3:C:1044:PRO:HD2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:1297:ASP:O	3:C:1301:ARG:HG2	2.20	0.42
4:D:816:THR:OG1	4:D:889:ASP:HB2	2.20	0.42
4:D:1142:ALA:O	4:D:1146:GLU:HG2	2.19	0.42
4:D:1194:ARG:HD2	4:D:1211:SER:OG	2.20	0.42
6:F:136:GLU:O	6:F:138:PRO:HD3	2.20	0.42
6:F:286:LEU:O	6:F:290:LEU:HD22	2.20	0.42
2:B:12:ARG:NE	2:B:12:ARG:HA	2.35	0.41
2:B:98:VAL:HG21	2:B:121:VAL:HG21	2.02	0.41
3:C:101:ARG:HD3	3:C:118:LYS:NZ	2.35	0.41
3:C:900:LYS:HG2	6:F:563:PHE:HD1	1.84	0.41
3:C:992:LEU:HD22	3:C:996:ARG:HH11	1.85	0.41
4:D:211:GLU:O	4:D:215:LYS:HB2	2.19	0.41
4:D:973:LEU:N	4:D:1003:LEU:HD12	2.32	0.41
5:E:15:ASN:HB3	5:E:18:ASP:OD1	2.19	0.41
6:F:234:THR:HB	6:F:248:GLU:OE1	2.19	0.41
6:F:585:GLU:CD	6:F:588:ARG:HD2	2.41	0.41
2:A:182:ARG:O	2:A:183:ILE:HD13	2.20	0.41
2:B:29:GLU:HB3	2:B:200:LYS:HG3	2.02	0.41
3:C:98:VAL:HG21	3:C:124:MET:SD	2.60	0.41
3:C:979:LEU:CG	3:C:1002:LEU:HD22	2.49	0.41
4:D:510:LEU:HD23	4:D:601:ILE:HD13	2.02	0.41
4:D:1238:GLN:OE1	4:D:1238:GLN:HA	2.20	0.41
4:D:1314:LEU:HD22	4:D:1322:ALA:HB1	2.01	0.41
6:F:144:LEU:HD12	6:F:147:GLN:CG	2.49	0.41
6:F:299:LYS:HA	6:F:302:PHE:HD2	1.85	0.41
6:F:383:ASN:O	6:F:386:LEU:HB3	2.20	0.41
1:H:13:DT:C2'	1:H:14:DT:H71	2.48	0.41
2:A:219:ARG:O	2:A:223:ILE:HG13	2.20	0.41
3:C:187:GLU:HG3	3:C:188:PHE:O	2.20	0.41
3:C:678:ARG:HA	3:C:678:ARG:HD2	1.73	0.41
3:C:685:MET:HE2	3:C:1073:LYS:HD3	2.01	0.41
4:D:963:VAL:CG2	4:D:980:THR:HG23	2.50	0.41
6:F:585:GLU:HG2	6:F:588:ARG:NH1	2.33	0.41
2:A:75:GLN:O	2:A:76:GLU:HG3	2.20	0.41
2:B:62:ASP:OD1	2:B:141:SER:HB3	2.20	0.41
3:C:179:TYR:HB2	3:C:397:LEU:O	2.20	0.41
3:C:538:LEU:CD2	3:C:547:VAL:HG21	2.50	0.41
3:C:1010:GLN:NE2	3:C:1013:GLN:HB3	2.34	0.41
3:C:1210:ILE:HG22	3:C:1211:ARG:H	1.84	0.41
4:D:233:LYS:N	4:D:233:LYS:HD2	2.35	0.41
4:D:270:ARG:O	4:D:274:ASN:ND2	2.52	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:1037:PHE:HD1	4:D:1037:PHE:HA	1.70	0.41
6:F:452:ILE:HD11	6:F:457:ILE:CD1	2.50	0.41
1:H:61:DG:H4'	1:H:62:DG:OP1	2.20	0.41
2:B:36:GLY:HA3	2:B:187:VAL:CG2	2.50	0.41
2:B:203:ILE:HG22	2:B:204:GLU:H	1.86	0.41
3:C:634:VAL:O	3:C:644:LEU:HA	2.20	0.41
3:C:1287:LEU:O	3:C:1291:LEU:HG	2.20	0.41
4:D:15:GLU:OE2	4:D:15:GLU:HA	2.21	0.41
4:D:639:VAL:HG13	4:D:639:VAL:O	2.20	0.41
4:D:1191:PRO:HB3	4:D:1193:TRP:HZ3	1.82	0.41
3:C:660:VAL:HG21	4:D:769:VAL:CG1	2.50	0.41
3:C:930:ASP:O	3:C:931:VAL:HG23	2.20	0.41
4:D:846:GLU:HA	4:D:860:ARG:NH2	2.36	0.41
4:D:888:CYS:SG	4:D:889:ASP:N	2.93	0.41
4:D:1025:MET:HB3	4:D:1124:ILE:CB	2.49	0.41
2:A:32:GLU:HG3	2:A:33:ARG:H	1.86	0.41
2:A:179:PRO:HB2	2:A:211:ILE:HB	2.03	0.41
2:B:12:ARG:O	2:B:13:LEU:HB3	2.20	0.41
2:B:76:GLU:OE2	2:B:131:CYS:HA	2.21	0.41
2:B:212:ASP:OD1	2:B:212:ASP:N	2.53	0.41
3:C:298:ALA:HB3	3:C:334:GLU:CB	2.50	0.41
3:C:824:GLN:HE22	3:C:1082:ILE:HD11	1.86	0.41
3:C:1288:GLN:O	3:C:1288:GLN:HG2	2.20	0.41
4:D:1036:ARG:HH21	4:D:1081:VAL:HG11	1.85	0.41
4:D:1348:LYS:O	4:D:1348:LYS:HG2	2.20	0.41
6:F:471:LEU:HD12	6:F:477:GLU:HA	2.02	0.41
2:A:89:ALA:O	2:A:124:VAL:HG12	2.21	0.41
3:C:207:THR:HA	3:C:210:LEU:HD12	2.01	0.41
3:C:564:PRO:CD	3:C:572:ILE:HB	2.48	0.41
3:C:1248:THR:HG21	6:F:531:PRO:CG	2.51	0.41
3:C:1253:LEU:HA	6:F:525:ASP:HB3	2.03	0.41
4:D:654:ILE:O	4:D:658:GLU:HB2	2.20	0.41
4:D:958:ILE:O	4:D:1008:GLY:N	2.39	0.41
4:D:983:LYS:CE	4:D:991:THR:HB	2.50	0.41
6:F:234:THR:HB	6:F:248:GLU:CD	2.40	0.41
6:F:295:CYS:SG	6:F:329:LYS:HD3	2.61	0.41
6:F:346:GLN:O	6:F:350:GLU:HG3	2.19	0.41
2:K:269:CYS:O	2:K:273:GLU:N	2.53	0.41
2:B:28:LEU:HD12	2:B:29:GLU:N	2.35	0.41
3:C:67:GLU:O	3:C:102:LEU:HD12	2.21	0.41
3:C:78:PRO:HG3	3:C:92:TYR:HE1	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:86:GLN:HA	3:C:140:GLY:HA2	2.01	0.41
3:C:242:VAL:CG2	3:C:245:ARG:HB2	2.50	0.41
3:C:303:ASP:OD2	3:C:328:SER:OG	2.37	0.41
3:C:854:ILE:CG2	3:C:855:PRO:HD2	2.49	0.41
3:C:1012:GLU:O	3:C:1015:ALA:HB3	2.20	0.41
3:C:1339:LEU:HB3	4:D:17:PHE:HB2	2.02	0.41
4:D:265:LEU:HD23	4:D:265:LEU:HA	1.91	0.41
4:D:664:ILE:HD13	4:D:681:LYS:CG	2.48	0.41
4:D:682:VAL:HA	4:D:685:ILE:CG2	2.50	0.41
4:D:918:ILE:O	4:D:918:ILE:HG13	2.21	0.41
4:D:1059:LEU:HB3	4:D:1107:VAL:CG2	2.50	0.41
4:D:1144:LEU:HD23	4:D:1237:VAL:HG23	2.03	0.41
6:F:165:PHE:CE2	6:F:220:LYS:HB2	2.56	0.41
6:F:476:ARG:O	6:F:477:GLU:HB3	2.20	0.41
6:F:511:ILE:HD13	6:F:522:PHE:HE2	1.85	0.41
1:H:58:DG:H1	7:G:5:DC:H42	1.68	0.41
2:A:100:LEU:HD21	2:A:121:VAL:CG1	2.40	0.41
3:C:296:VAL:HG21	3:C:314:ASN:HA	2.03	0.41
3:C:557:ARG:O	3:C:575:LEU:HD12	2.21	0.41
3:C:972:PHE:HD1	3:C:994:ARG:HH21	1.69	0.41
3:C:1065:LYS:HE2	3:C:1235:LEU:CD1	2.42	0.41
4:D:21:LYS:HG3	4:D:22:ILE:H	1.86	0.41
4:D:422:LEU:HA	4:D:422:LEU:HD12	1.86	0.41
4:D:949:SER:CB	4:D:1016:THR:HB	2.51	0.41
4:D:1027:VAL:O	4:D:1120:THR:HA	2.21	0.41
4:D:1211:SER:OG	4:D:1212:ASP:N	2.53	0.41
1:H:45:DA:H8	1:H:45:DA:O5'	2.04	0.40
2:B:11:PRO:HB2	2:B:28:LEU:CD1	2.47	0.40
3:C:26:TYR:HE2	3:C:32:LEU:HD12	1.85	0.40
3:C:839:VAL:HG12	3:C:1049:ILE:HG12	2.02	0.40
3:C:1077:SER:OG	4:D:357:VAL:HG23	2.21	0.40
4:D:963:VAL:CG1	4:D:980:THR:HG23	2.51	0.40
4:D:967:VAL:HA	4:D:973:LEU:HA	2.03	0.40
4:D:1197:ASN:HB2	4:D:1210:ILE:O	2.21	0.40
5:E:21:LEU:HA	5:E:21:LEU:HD23	1.87	0.40
6:F:516:ASP:OD1	6:F:516:ASP:N	2.49	0.40
2:B:24:ALA:HB3	2:B:213:PRO:CB	2.51	0.40
2:B:102:LEU:HD12	2:B:103:ASN:H	1.87	0.40
3:C:471:VAL:HG21	3:C:498:ILE:HD11	2.03	0.40
3:C:715:THR:HG21	3:C:782:VAL:CG2	2.47	0.40
3:C:724:VAL:CG1	3:C:727:VAL:HG23	2.49	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:963:GLU:O	3:C:967:LEU:HB3	2.21	0.40
4:D:74:LYS:HD3	4:D:87:LYS:HZ2	1.84	0.40
4:D:999:TYR:HE2	4:D:1027:VAL:HA	1.84	0.40
6:F:329:LYS:HZ1	6:F:333:VAL:HG23	1.86	0.40
6:F:336:GLU:HA	6:F:339:ARG:CG	2.45	0.40
1:H:12:DA:H2''	1:H:13:DT:O5'	2.21	0.40
2:B:61:ILE:HG21	2:B:64:VAL:HB	2.03	0.40
3:C:230:PHE:CE1	3:C:239:MET:HG3	2.57	0.40
3:C:367:TYR:CE1	3:C:384:LEU:HD13	2.56	0.40
3:C:633:LEU:HD12	3:C:644:LEU:HB3	2.04	0.40
3:C:1019:ASP:HA	3:C:1022:LYS:HB3	2.03	0.40
3:C:1024:GLU:O	3:C:1028:LYS:HG3	2.21	0.40
3:C:1247:SER:O	3:C:1248:THR:OG1	2.31	0.40
4:D:905:ARG:NH2	4:D:907:HIS:HB2	2.21	0.40
4:D:996:LYS:HG3	4:D:997:VAL:H	1.86	0.40
4:D:1174:ARG:HG3	4:D:1189:MET:HB3	2.03	0.40
4:D:1261:LEU:O	4:D:1261:LEU:HD12	2.22	0.40
6:F:246:GLN:N	6:F:246:GLN:OE1	2.53	0.40
6:F:281:ARG:HB3	6:F:281:ARG:CZ	2.51	0.40
6:F:303:ILE:HG13	6:F:304:THR:H	1.86	0.40
1:H:17:DC:H2''	1:H:18:DA:O5'	2.20	0.40
2:B:91:ARG:HD3	2:B:124:VAL:HG13	2.02	0.40
3:C:59:ILE:HD12	3:C:475:VAL:HG11	2.04	0.40
3:C:114:VAL:HG12	3:C:115:LYS:CE	2.52	0.40
3:C:272:ARG:HG2	3:C:276:GLN:HG3	2.02	0.40
3:C:292:ILE:HG23	3:C:295:LYS:HG3	2.03	0.40
3:C:320:ASP:O	3:C:324:LYS:HG3	2.21	0.40
3:C:419:ILE:HD13	3:C:419:ILE:H	1.86	0.40
3:C:1293:VAL:CG2	3:C:1315:MET:HE3	2.52	0.40
4:D:88:CYS:O	4:D:90:VAL:N	2.46	0.40
4:D:120:LEU:CB	4:D:121:PRO:HD3	2.51	0.40
4:D:398:LYS:HD3	6:F:532:LEU:HD21	2.04	0.40
4:D:1025:MET:HE3	4:D:1124:ILE:CG2	2.51	0.40
4:D:1273:ASP:OD2	4:D:1276:GLU:HB2	2.22	0.40
6:F:163:THR:HG23	6:F:262:VAL:HG22	2.03	0.40
7:G:41:DC:C3'	7:G:42:DT:H5''	2.52	0.40
2:A:95:LYS:HZ1	2:A:120:ASP:HB2	1.87	0.40
2:A:231:PHE:HE1	2:B:39:LEU:HD13	1.87	0.40
3:C:626:GLU:HB2	3:C:628:HIS:HD2	1.85	0.40
3:C:1014:LEU:HD12	3:C:1017:GLN:HB2	2.03	0.40
4:D:593:ASN:O	4:D:593:ASN:ND2	2.55	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:703:THR:CG2	4:D:715:LYS:HD3	2.49	0.40
4:D:865:HIS:HE1	4:D:867:GLN:HG2	1.87	0.40
4:D:923:ILE:HD11	4:D:1252:HIS:O	2.22	0.40
4:D:1307:LEU:N	4:D:1307:LEU:HD23	2.36	0.40
6:F:96:ASP:HA	6:F:97:PRO:HD3	1.86	0.40
6:F:224:LEU:HG	6:F:225:ARG:HD3	2.03	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	
2	A	228/329 (69%)	207 (91%)	21 (9%)	0	100	100
2	B	226/329 (69%)	199 (88%)	26 (12%)	1 (0%)	34	71
2	K	63/329 (19%)	56 (89%)	7 (11%)	0	100	100
3	C	1335/1342 (100%)	1165 (87%)	167 (12%)	3 (0%)	47	80
4	D	1331/1407 (95%)	1179 (89%)	152 (11%)	0	100	100
5	E	71/91 (78%)	65 (92%)	6 (8%)	0	100	100
6	F	466/613 (76%)	440 (94%)	26 (6%)	0	100	100
All	All	3720/4440 (84%)	3311 (89%)	405 (11%)	4 (0%)	54	84

All (4) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	C	1164	PHE
2	B	21	SER
3	C	1159	VAL
3	C	1224	PRO

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	A	198/286 (69%)	182 (92%)	16 (8%)	11	43
2	B	196/286 (68%)	175 (89%)	21 (11%)	6	33
2	K	57/286 (20%)	45 (79%)	12 (21%)	1	7
3	C	1154/1157 (100%)	1043 (90%)	111 (10%)	8	37
4	D	1103/1168 (94%)	982 (89%)	121 (11%)	6	31
5	E	64/75 (85%)	56 (88%)	8 (12%)	4	25
6	F	420/540 (78%)	388 (92%)	32 (8%)	13	45
All	All	3192/3798 (84%)	2871 (90%)	321 (10%)	11	35

All (321) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	K	254	LEU
2	K	257	VAL
2	K	263	THR
2	K	270	LEU
2	K	277	TYR
2	K	303	ILE
2	K	306	VAL
2	K	307	LEU
2	K	313	SER
2	K	314	LEU
2	K	318	LEU
2	K	319	GLU
2	A	33	ARG
2	A	54	CYS
2	A	71	LYS
2	A	77	ASP
2	A	96	ASP
2	A	111	THR
2	A	150	ARG
2	A	163	GLU

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Mol	Chain	Res	Type
2	A	176	CYS
2	A	177	TYR
2	A	182	ARG
2	A	191	ARG
2	A	193	GLU
2	A	211	ILE
2	A	229	GLU
2	A	233	ASP
2	B	12	ARG
2	B	14	VAL
2	B	16	ILE
2	B	17	GLU
2	B	27	THR
2	B	29	GLU
2	B	38	THR
2	B	70	THR
2	B	91	ARG
2	B	137	ASN
2	B	141	SER
2	B	143	ARG
2	B	146	VAL
2	B	150	ARG
2	B	158	ARG
2	B	164	ASP
2	B	183	ILE
2	B	187	VAL
2	B	207	THR
2	B	210	THR
2	B	212	ASP
3	C	21	VAL
3	C	46	GLN
3	C	49	LEU
3	C	60	GLN
3	C	79	VAL
3	C	81	ASP
3	C	91	THR
3	C	97	ARG
3	C	117	ILE
3	C	132	ASP
3	C	150	HIS
3	C	161	LYS
3	C	197	ARG

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Mol	Chain	Res	Type
3	C	199	ASP
3	C	203	LYS
3	C	230	PHE
3	C	234	ASP
3	C	269	ILE
3	C	284	LEU
3	C	285	ILE
3	C	287	VAL
3	C	296	VAL
3	C	311	CYS
3	C	318	SER
3	C	327	GLN
3	C	347	ILE
3	C	350	THR
3	C	351	LEU
3	C	352	ARG
3	C	366	ILE
3	C	391	SER
3	C	414	ILE
3	C	419	ILE
3	C	444	ASP
3	C	448	LEU
3	C	465	ARG
3	C	472	GLU
3	C	481	LEU
3	C	486	THR
3	C	494	ASN
3	C	524	ILE
3	C	531	SER
3	C	538	LEU
3	C	546	GLU
3	C	547	VAL
3	C	549	ASP
3	C	551	HIS
3	C	601	ASP
3	C	609	ILE
3	C	641	GLU
3	C	663	VAL
3	C	678	ARG
3	C	704	MET
3	C	717	VAL
3	C	750	ILE

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Mol	Chain	Res	Type
3	C	754	THR
3	C	764	CYS
3	C	765	ILE
3	C	789	THR
3	C	791	LEU
3	C	819	SER
3	C	829	THR
3	C	834	GLN
3	C	844	LYS
3	C	845	LEU
3	C	851	THR
3	C	857	VAL
3	C	890	LYS
3	C	892	GLU
3	C	895	LEU
3	C	911	SER
3	C	912	ASP
3	C	915	ASP
3	C	922	ASN
3	C	942	ASP
3	C	963	GLU
3	C	966	ILE
3	C	972	PHE
3	C	973	SER
3	C	980	VAL
3	C	998	LEU
3	C	1007	LYS
3	C	1013	GLN
3	C	1020	GLU
3	C	1023	HIS
3	C	1030	GLU
3	C	1056	VAL
3	C	1069	ARG
3	C	1088	ASP
3	C	1106	ARG
3	C	1124	ILE
3	C	1126	ASP
3	C	1127	LYS
3	C	1134	GLN
3	C	1150	ASP
3	C	1157	GLN
3	C	1158	LYS

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Mol	Chain	Res	Type
3	C	1161	LEU
3	C	1162	SER
3	C	1174	GLU
3	C	1191	LYS
3	C	1211	ARG
3	C	1217	THR
3	C	1232	MET
3	C	1233	LEU
3	C	1240	ASP
3	C	1246	ARG
3	C	1254	VAL
3	C	1287	LEU
3	C	1293	VAL
3	C	1295	SER
4	D	15	GLU
4	D	17	PHE
4	D	24	LEU
4	D	46	TYR
4	D	56	LEU
4	D	60	ARG
4	D	78	LEU
4	D	113	HIS
4	D	120	LEU
4	D	136	GLU
4	D	166	LEU
4	D	167	ASP
4	D	170	GLU
4	D	179	LYS
4	D	183	GLU
4	D	186	GLN
4	D	192	MET
4	D	214	ARG
4	D	216	LYS
4	D	217	LEU
4	D	227	PHE
4	D	232	ASN
4	D	244	VAL
4	D	248	ASP
4	D	255	LEU
4	D	262	THR
4	D	297	ARG
4	D	300	GLN

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Mol	Chain	Res	Type
4	D	303	VAL
4	D	306	LEU
4	D	316	ILE
4	D	332	LYS
4	D	352	ARG
4	D	393	THR
4	D	402	GLU
4	D	407	VAL
4	D	408	VAL
4	D	413	ASP
4	D	422	LEU
4	D	423	LEU
4	D	424	ASN
4	D	425	ARG
4	D	431	ARG
4	D	434	ILE
4	D	460	ASP
4	D	468	VAL
4	D	473	THR
4	D	487	THR
4	D	510	LEU
4	D	517	CYS
4	D	527	LEU
4	D	545	HIS
4	D	548	VAL
4	D	552	ILE
4	D	569	LEU
4	D	585	LYS
4	D	591	ILE
4	D	592	VAL
4	D	602	SER
4	D	624	ILE
4	D	642	ASP
4	D	648	GLU
4	D	652	GLU
4	D	678	ARG
4	D	685	ILE
4	D	704	GLU
4	D	708	ASN
4	D	709	ARG
4	D	710	ASP
4	D	738	ARG

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Mol	Chain	Res	Type
4	D	762	ASN
4	D	775	SER
4	D	780	ARG
4	D	786	THR
4	D	797	THR
4	D	805	GLN
4	D	847	ASP
4	D	848	VAL
4	D	849	LEU
4	D	869	CYS
4	D	874	GLU
4	D	894	VAL
4	D	895	CYS
4	D	902	ASP
4	D	905	ARG
4	D	913	GLU
4	D	918	ILE
4	D	922	SER
4	D	925	GLU
4	D	928	THR
4	D	929	GLN
4	D	931	THR
4	D	952	VAL
4	D	972	LYS
4	D	978	ARG
4	D	979	ASN
4	D	991	THR
4	D	996	LYS
4	D	999	TYR
4	D	1016	THR
4	D	1037	PHE
4	D	1041	ILE
4	D	1099	TYR
4	D	1111	ASP
4	D	1143	ASP
4	D	1155	ILE
4	D	1167	LYS
4	D	1193	TRP
4	D	1206	ARG
4	D	1249	ASN
4	D	1266	ILE
4	D	1275	LEU

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Mol	Chain	Res	Type
4	D	1307	LEU
4	D	1314	LEU
4	D	1327	GLU
4	D	1329	THR
4	D	1341	ARG
4	D	1342	ASP
4	D	1344	LEU
4	D	1365	TYR
4	D	1366	HIS
5	E	3	ARG
5	E	4	VAL
5	E	16	ARG
5	E	28	ARG
5	E	30	MET
5	E	36	ASP
5	E	46	THR
5	E	79	GLU
6	F	105	MET
6	F	108	VAL
6	F	146	GLU
6	F	216	LEU
6	F	247	GLU
6	F	262	VAL
6	F	265	GLN
6	F	279	ARG
6	F	286	LEU
6	F	293	GLU
6	F	296	LYS
6	F	299	LYS
6	F	302	PHE
6	F	306	PHE
6	F	328	GLU
6	F	329	LYS
6	F	383	ASN
6	F	392	LYS
6	F	400	GLN
6	F	454	VAL
6	F	459	THR
6	F	465	ARG
6	F	500	ILE
6	F	505	ILE
6	F	540	LEU

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Mol	Chain	Res	Type
6	F	546	ASP
6	F	547	VAL
6	F	559	LEU
6	F	566	ASP
6	F	573	LEU
6	F	587	ILE
6	F	603	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (41) such sidechains are listed below:

Mol	Chain	Res	Type
2	A	41	ASN
2	A	66	HIS
2	A	147	GLN
2	B	93	GLN
2	B	147	GLN
3	C	60	GLN
3	C	69	GLN
3	C	120	GLN
3	C	462	ASN
3	C	463	GLN
3	C	618	GLN
3	C	620	ASN
3	C	628	HIS
3	C	798	GLN
3	C	1013	GLN
3	C	1061	GLN
3	C	1108	ASN
3	C	1116	HIS
3	C	1257	GLN
3	C	1268	GLN
4	D	186	GLN
4	D	196	GLN
4	D	277	ASN
4	D	488	ASN
4	D	702	GLN
4	D	720	ASN
4	D	736	GLN
4	D	792	ASN
4	D	861	ASN
4	D	865	HIS
4	D	1197	ASN

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Mol	Chain	Res	Type
4	D	1235	ASN
4	D	1249	ASN
5	E	29	GLN
6	F	227	GLN
6	F	294	GLN
6	F	301	ASN
6	F	400	GLN
6	F	406	GLN
6	F	455	HIS
6	F	464	ASN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 3 ligands modelled in this entry, 3 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

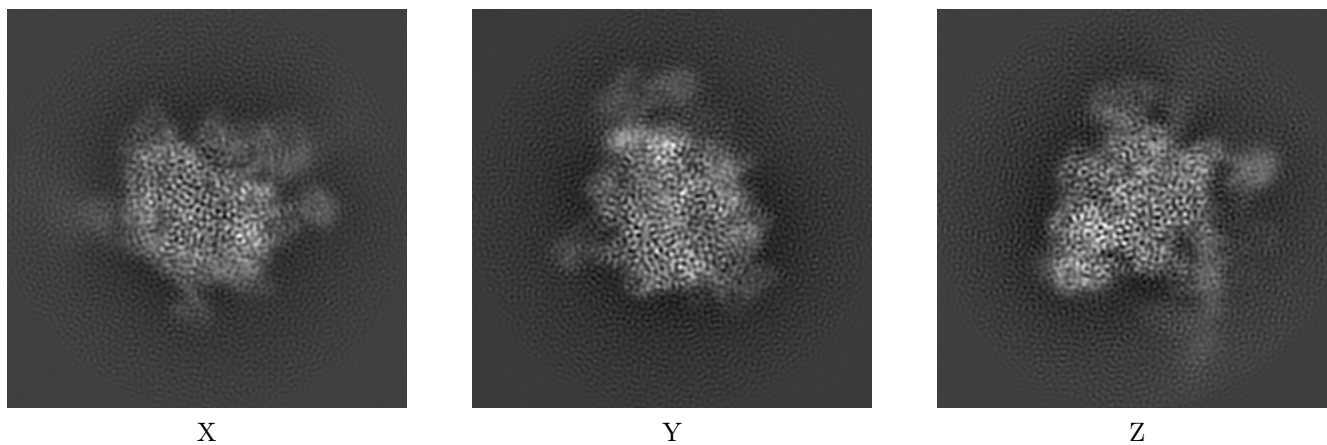
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-30376. 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](#)

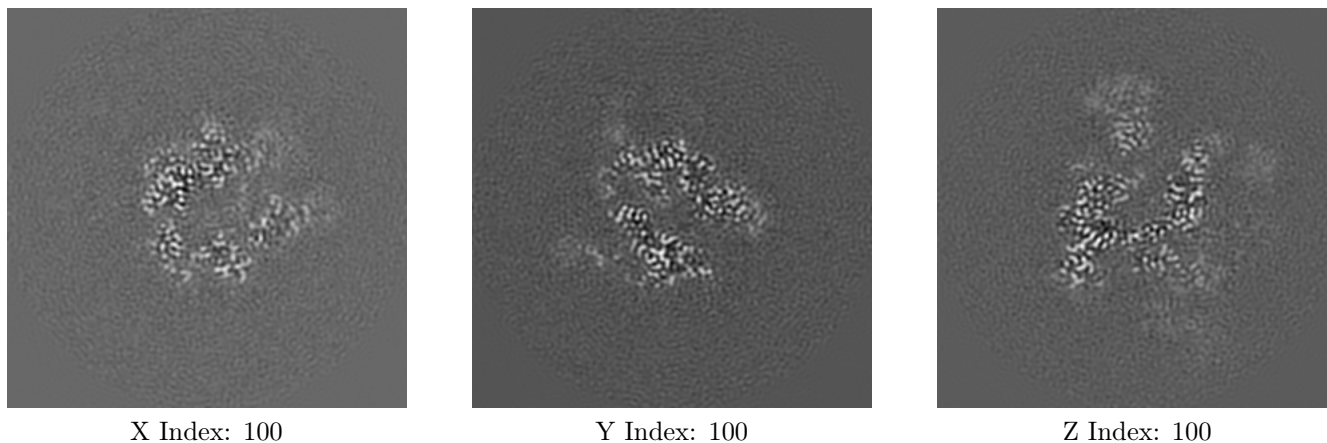
6.1.1 Primary map



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

6.2 Central slices [i](#)

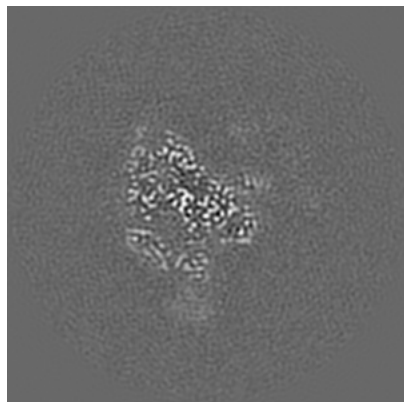
6.2.1 Primary map



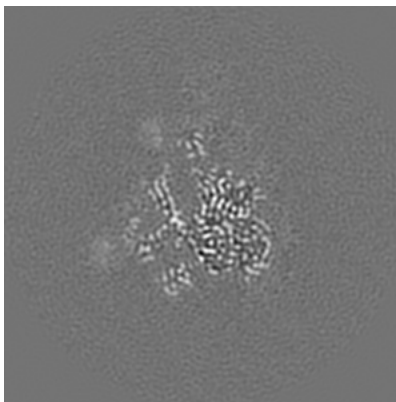
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

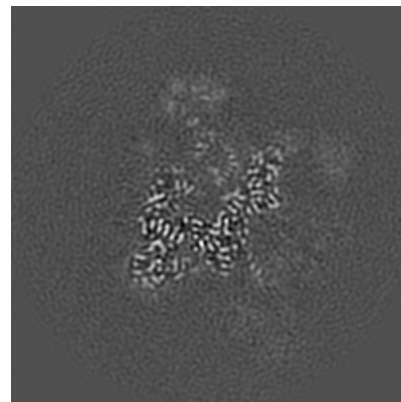
6.3.1 Primary map



X Index: 74



Y Index: 86

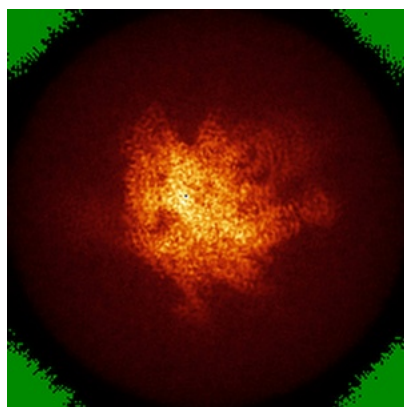


Z Index: 104

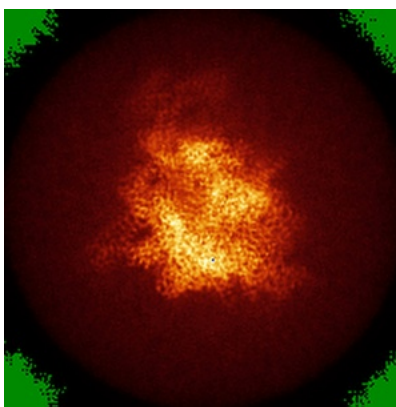
The images above show the largest variance slices of the map in three orthogonal directions.

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

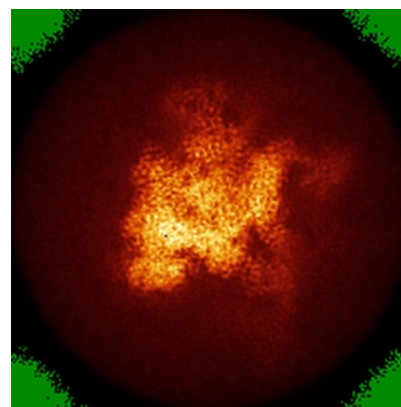
6.4.1 Primary map



X



Y

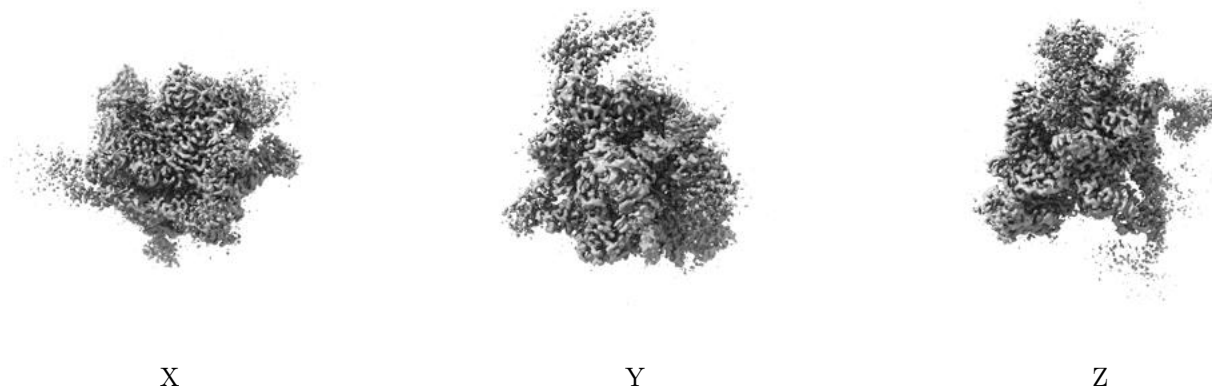


Z

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

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.0259. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

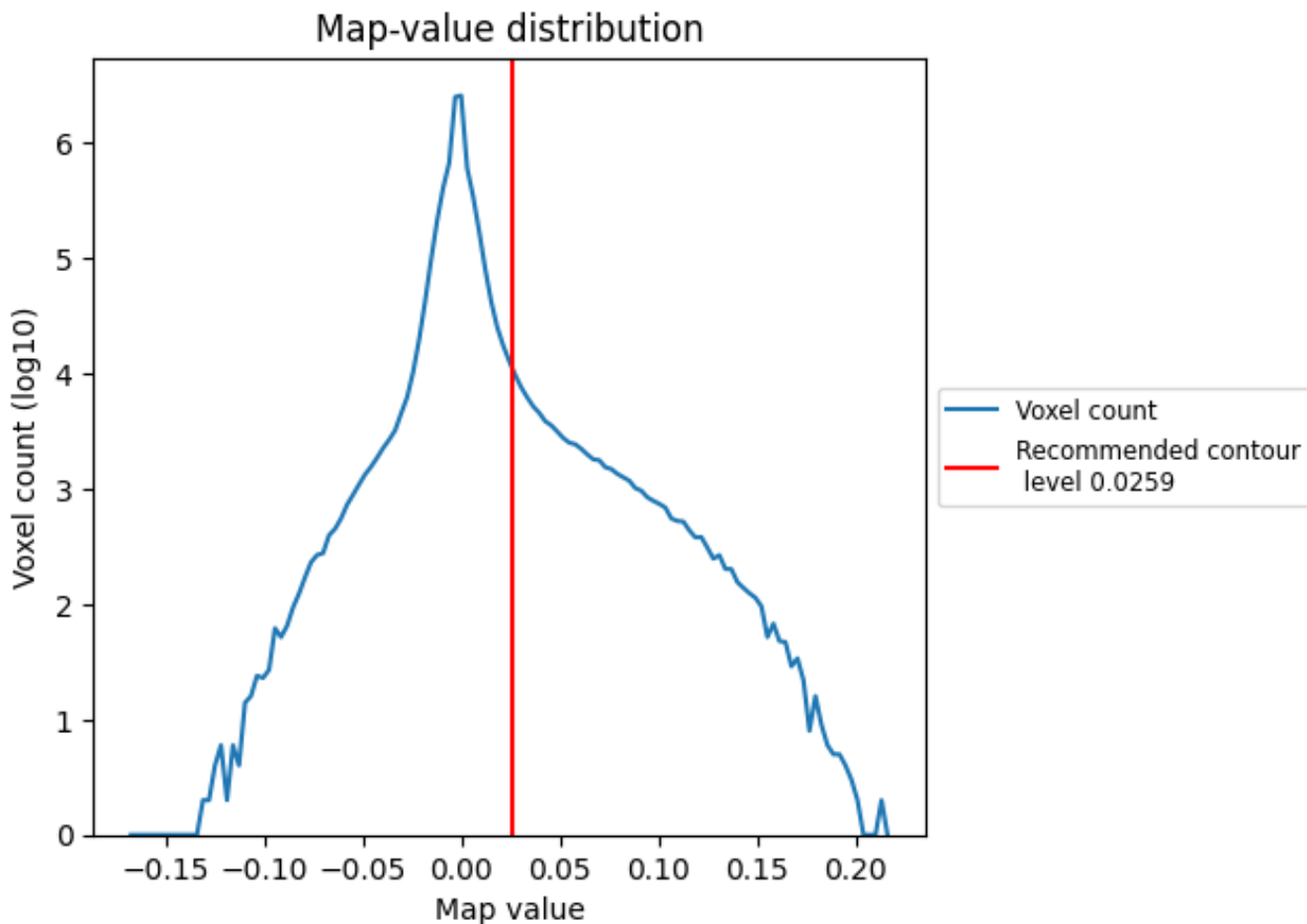
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

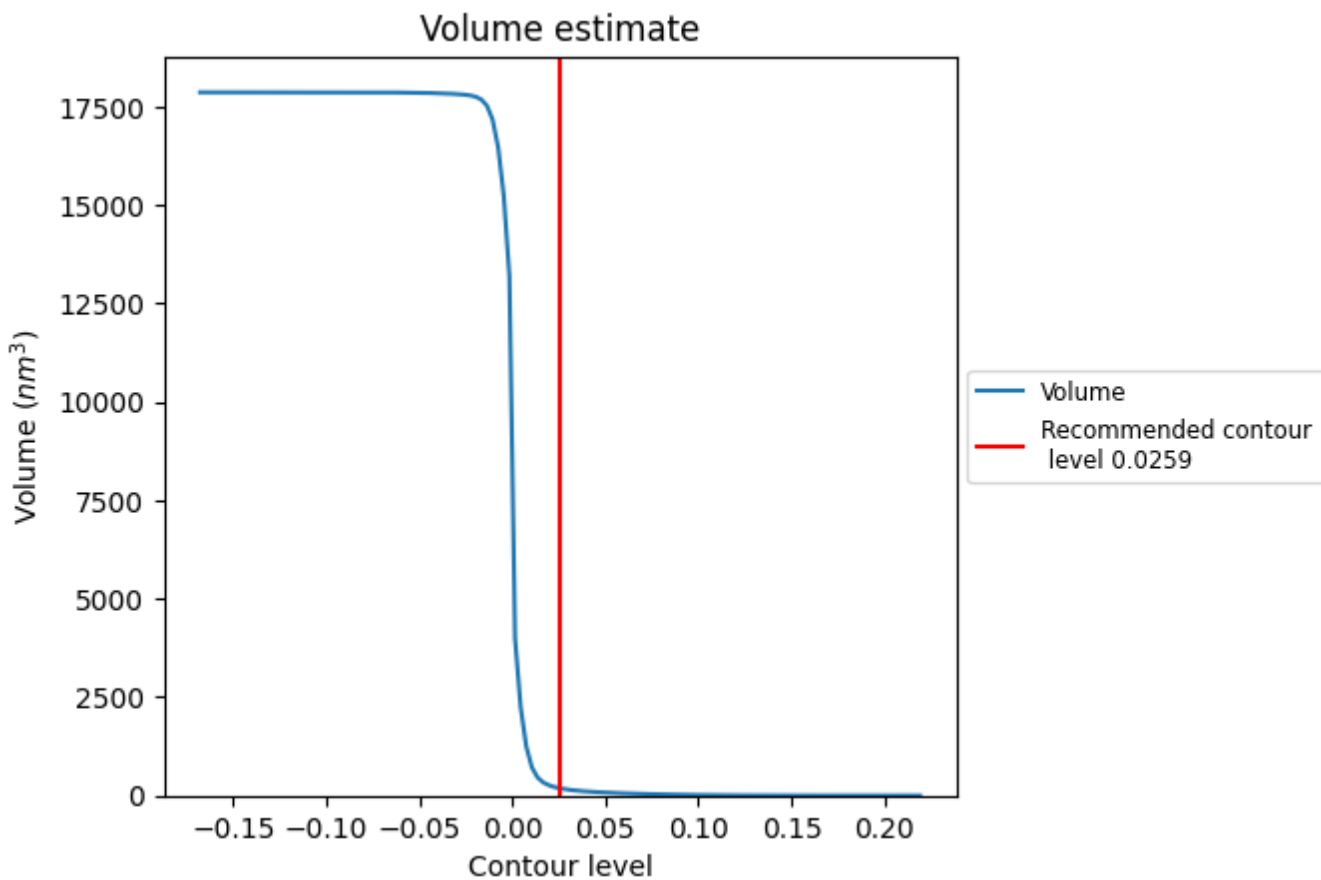
This section contains the results of statistical analysis of the map.

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.

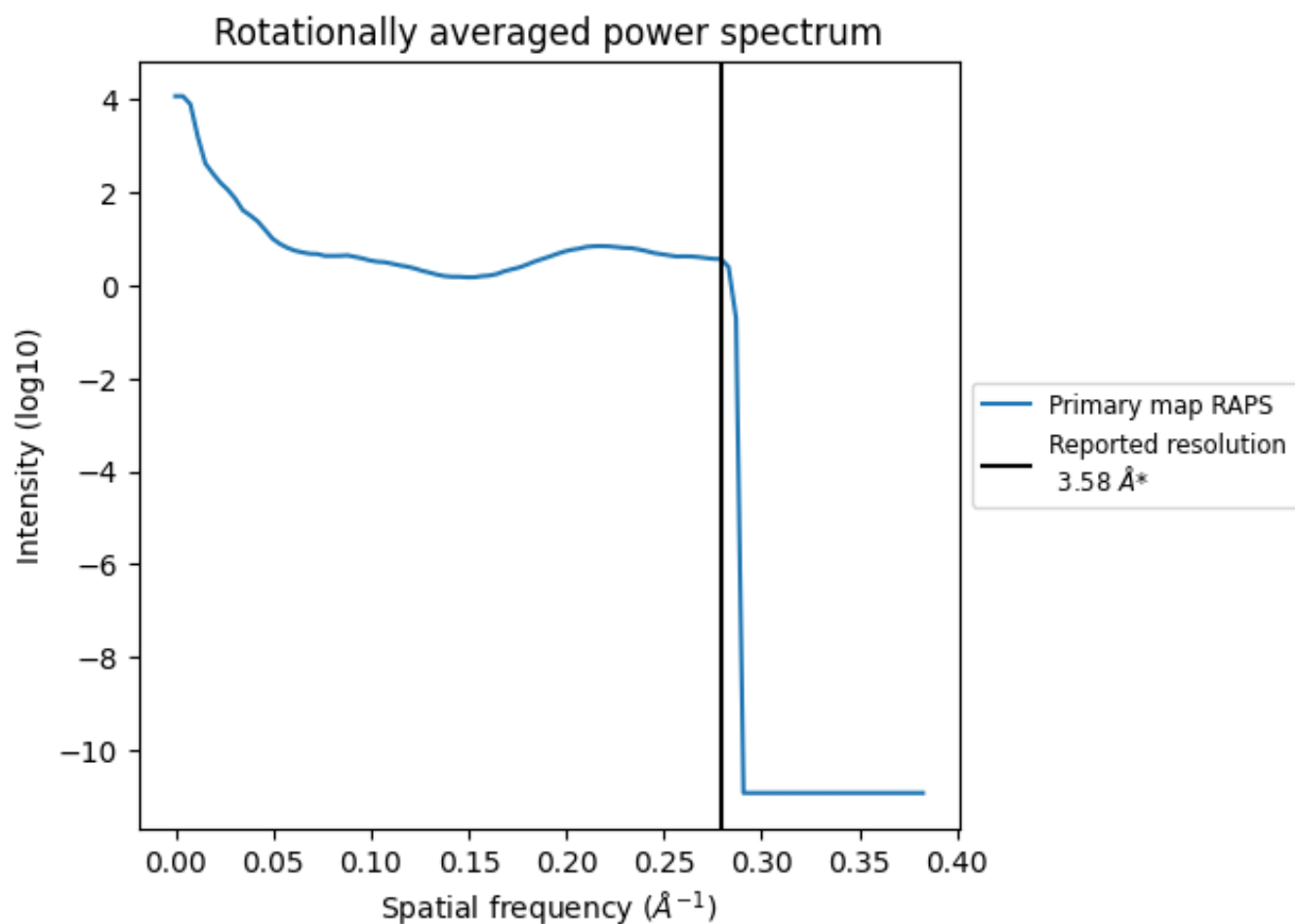
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 182 nm³; this corresponds to an approximate mass of 165 kDa.

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

7.3 Rotationally averaged power spectrum [\(i\)](#)



*Reported resolution corresponds to spatial frequency of 0.279\AA^{-1}

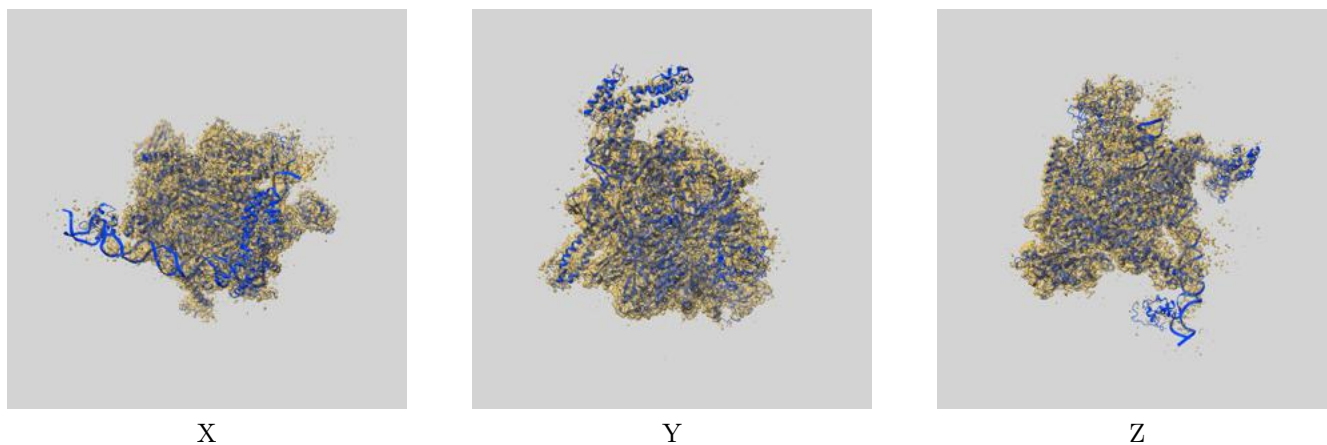
8 Fourier-Shell correlation

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

9 Map-model fit [i](#)

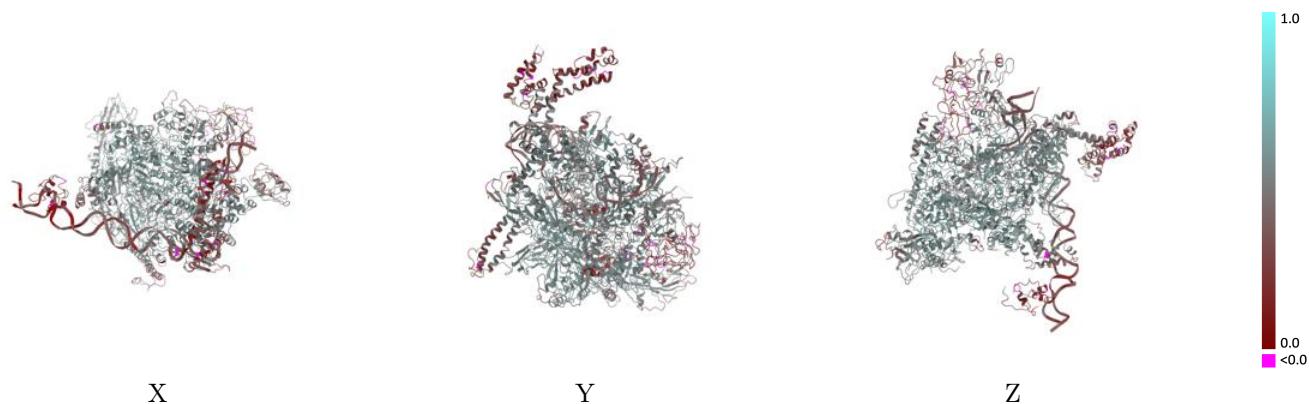
This section contains information regarding the fit between EMDB map EMD-30376 and PDB model 7CHW. Per-residue inclusion information can be found in section 3 on page 6.

9.1 Map-model overlay [i](#)



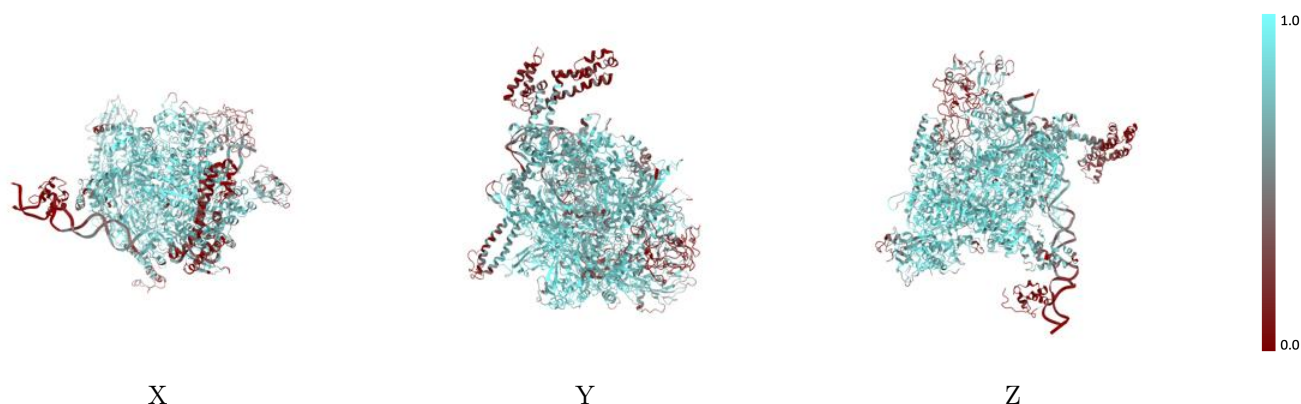
The images above show the 3D surface view of the map at the recommended contour level 0.0259 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



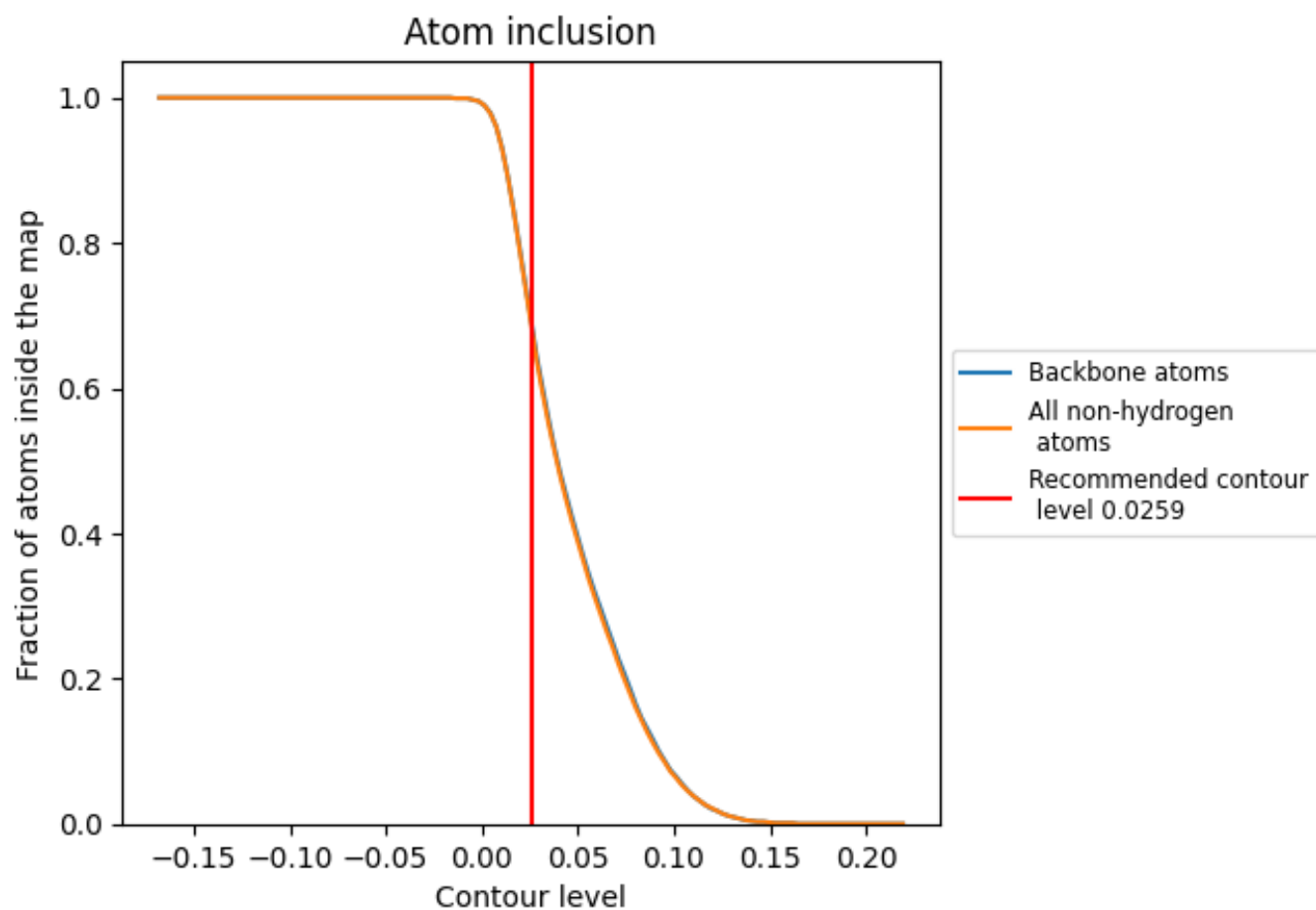
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.0259).





















9.4 Atom inclusion [i](#)



At the recommended contour level, 69% of all backbone atoms, 68% 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 (0.0259) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.6830	 0.4700
A	 0.7950	 0.5300
B	 0.7040	 0.4860
C	 0.7760	 0.5100
D	 0.7170	 0.4880
E	 0.7660	 0.5040
F	 0.4970	 0.3890
G	 0.4570	 0.3200
H	 0.4590	 0.3370
K	 0.0240	 0.2210

