Full wwPDB X-ray Structure Validation Report ⓘ

Jan 27, 2024 – 07:24 PM EST

PDB ID	:	1CRK
Title	:	MITOCHONDRIAL CREATINE KINASE
Authors	:	Fritz-Wolf, K.; Schnyder, T.; Wallimann, T.; Kabsch, W.
Deposited on	:	1996-03-08
Resolution	:	3.00 Å(reported)

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The 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:

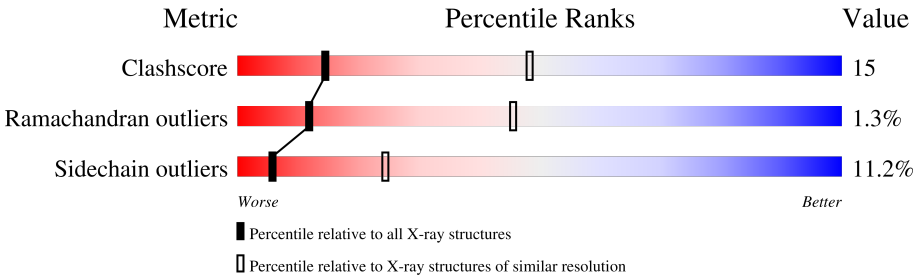
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	NOT EXECUTED
EDS	:	NOT EXECUTED
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 3.00 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Clashscore	141614	2416 (3.00-3.00)
Ramachandran outliers	138981	2333 (3.00-3.00)
Sidechain outliers	138945	2336 (3.00-3.00)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5%

Note EDS was not executed.

Mol	Chain	Length	Quality of chain
1	A	380	63% 32% 6%
1	B	380	62% 33% 5% •
1	C	380	62% 33% 5% •
1	D	380	64% 30% 6%

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
2	PO4	C	400	-	-	X	-
2	PO4	C	401	-	-	X	-

2 Entry composition (i)

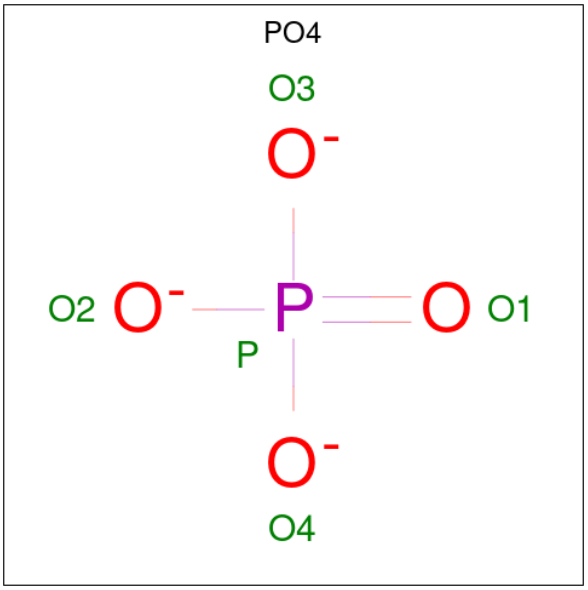
There are 2 unique types of molecules in this entry. The entry contains 12184 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called CREATINE KINASE.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	380	Total	C	N	O	S	0	0	0
			3036	1907	552	560	17			
1	B	380	Total	C	N	O	S	0	0	0
			3036	1907	552	560	17			
1	C	380	Total	C	N	O	S	0	0	0
			3036	1907	552	560	17			
1	D	380	Total	C	N	O	S	0	0	0
			3036	1907	552	560	17			

- Molecule 2 is PHOSPHATE ION (three-letter code: PO4) (formula: O_4P).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
2	A	1	Total	O	P	0	0
			5	4	1		
2	A	1	Total	O	P	0	0
			5	4	1		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	B	1	Total O P 5 4 1	0	0
2	B	1	Total O P 5 4 1	0	0
2	C	1	Total O P 5 4 1	0	0
2	C	1	Total O P 5 4 1	0	0
2	D	1	Total O P 5 4 1	0	0
2	D	1	Total O P 5 4 1	0	0

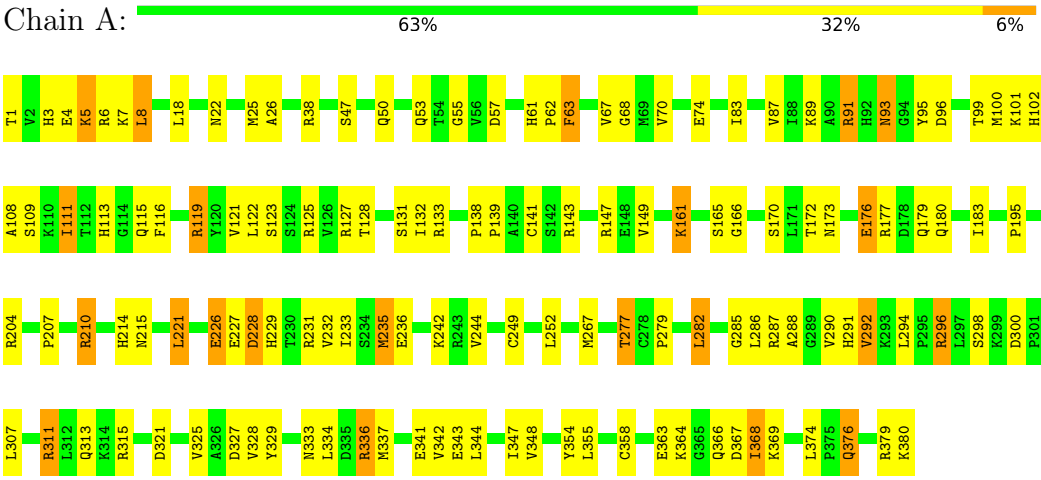
3 Residue-property plots (i)

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. 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. 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.

Note EDS was not executed.

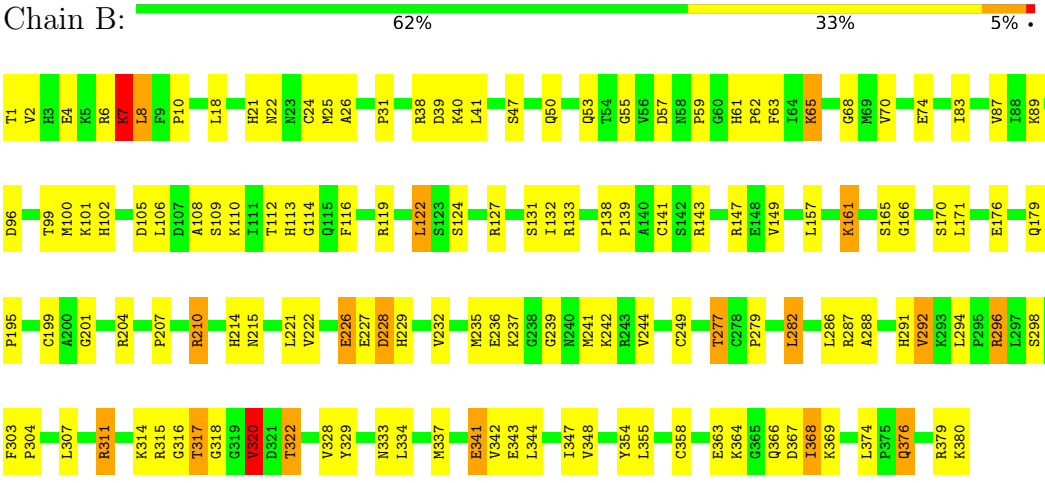
• Molecule 1: CREATINE KINASE

Chain A:



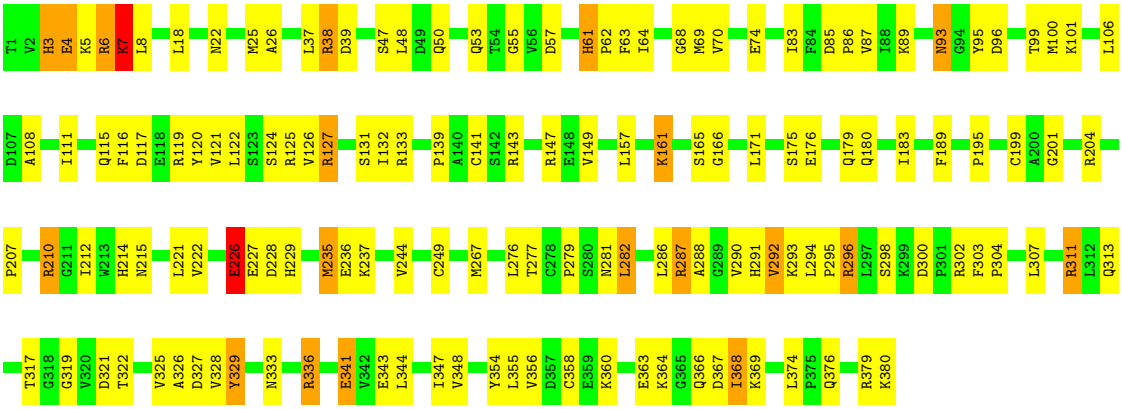
• Molecule 1: CREATINE KINASE

Chain B:



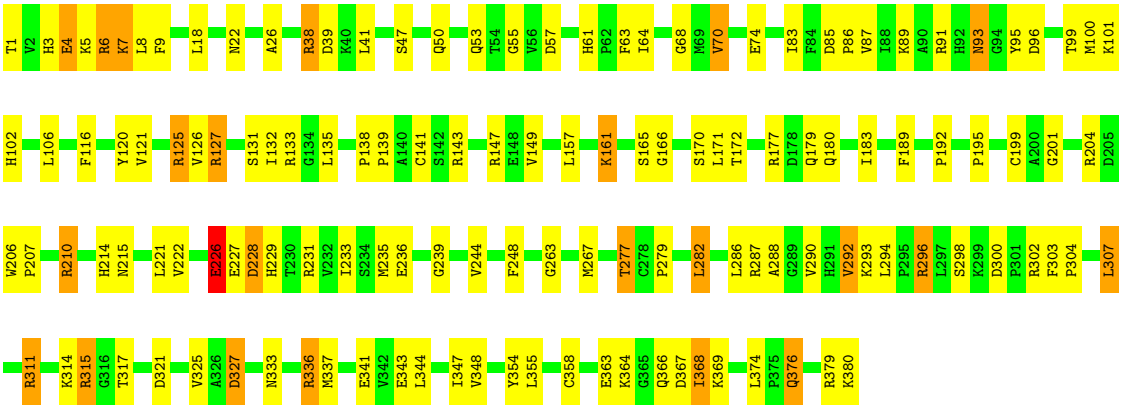
• Molecule 1: CREATINE KINASE

Chain C:



• Molecule 1: CREATINE KINASE

Chain D:



4 Data and refinement statistics (i)

Xtriage (Phenix) and EDS were not executed - this section is therefore incomplete.

Property	Value	Source
Space group	P 42	Depositor
Cell constants a, b, c, α, β, γ	126.00Å 126.00Å 144.70Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	8.00 – 3.00	Depositor
% Data completeness (in resolution range)	99.6 (8.00-3.00)	Depositor
R_{merge}	0.11	Depositor
R_{sym}	(Not available)	Depositor
Refinement program	X-PLOR	Depositor
R, R_{free}	0.217 , 0.264	Depositor
Estimated twinning fraction	No twinning to report.	Xtriage
Total number of atoms	12184	wwPDB-VP
Average B, all atoms (Å^2)	37.0	wwPDB-VP

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: PO4

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\| > 5$	RMSZ	$\#\|Z\| > 5$
1	A	0.42	0/3102	0.55	0/4189
1	B	0.42	0/3102	0.55	0/4189
1	C	0.41	0/3102	0.54	0/4189
1	D	0.42	0/3102	0.54	0/4189
All	All	0.42	0/12408	0.54	0/16756

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	2
1	B	0	2
1	C	0	3
1	D	0	2
All	All	0	9

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (9) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	109	SER	Mainchain
1	A	38	ARG	Sidechain
1	B	320	VAL	Peptide
1	B	38	ARG	Sidechain
1	C	38	ARG	Sidechain

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Mol	Chain	Res	Type	Group
1	C	6	ARG	Peptide
1	C	61	HIS	Peptide
1	D	38	ARG	Sidechain
1	D	91	ARG	Sidechain

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	3036	0	3030	95	0
1	B	3036	0	3030	94	0
1	C	3036	0	3030	97	0
1	D	3036	0	3030	90	0
2	A	10	0	0	0	0
2	B	10	0	0	1	0
2	C	10	0	0	6	0
2	D	10	0	0	1	0
All	All	12184	0	12120	374	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 15.

All (374) 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)
1:D:4:GLU:HG2	1:D:41:LEU:HD21	1.45	0.96
1:A:133:ARG:HG3	1:A:133:ARG:HH11	1.38	0.89
1:C:133:ARG:HG3	1:C:133:ARG:HH11	1.36	0.87
1:A:111:ILE:HD12	1:A:242:LYS:HG3	1.60	0.84
1:B:133:ARG:HH11	1:B:133:ARG:HG3	1.41	0.84
1:D:133:ARG:HG3	1:D:133:ARG:HH11	1.41	0.84
1:C:303:PHE:HB3	1:C:304:PRO:HD3	1.65	0.76
1:A:303:PHE:HB3	1:A:304:PRO:HD3	1.65	0.76
1:A:195:PRO:O	1:A:199:CYS:HB2	1.86	0.75
1:B:24:CYS:SG	1:B:65:LYS:NZ	2.59	0.75
1:C:287:ARG:HG3	1:C:336:ARG:NH2	2.00	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:195:PRO:O	1:C:199:CYS:HB2	1.88	0.74
1:D:303:PHE:HB3	1:D:304:PRO:HD3	1.68	0.74
1:B:303:PHE:HB3	1:B:304:PRO:HD3	1.67	0.73
1:D:195:PRO:O	1:D:199:CYS:HB2	1.88	0.73
1:B:195:PRO:O	1:B:199:CYS:HB2	1.89	0.73
1:C:143:ARG:O	1:C:147:ARG:HD3	1.90	0.72
1:D:317:THR:HB	1:D:325:VAL:HG22	1.72	0.71
1:A:303:PHE:HE2	1:A:329:TYR:HE2	1.38	0.71
1:B:279:PRO:O	1:B:282:LEU:HD22	1.92	0.70
1:C:291:HIS:HA	1:C:329:TYR:O	1.92	0.70
1:B:143:ARG:O	1:B:147:ARG:HD3	1.93	0.68
1:B:132:ILE:H	1:B:229:HIS:HD2	1.40	0.68
1:C:132:ILE:H	1:C:229:HIS:HD2	1.40	0.68
1:B:2:VAL:HB	1:B:40:LYS:HD2	1.75	0.67
1:D:132:ILE:H	1:D:229:HIS:HD2	1.43	0.67
1:B:161:LYS:H	1:B:161:LYS:HE2	1.61	0.66
1:D:143:ARG:O	1:D:147:ARG:HD3	1.95	0.66
1:A:132:ILE:H	1:A:229:HIS:HD2	1.43	0.66
1:A:161:LYS:HE2	1:A:161:LYS:H	1.60	0.66
1:B:132:ILE:H	1:B:229:HIS:CD2	2.14	0.66
1:C:132:ILE:H	1:C:229:HIS:CD2	2.14	0.65
1:A:106:LEU:HD22	1:A:249:CYS:SG	2.36	0.65
1:A:132:ILE:H	1:A:229:HIS:CD2	2.15	0.65
1:D:61:HIS:HE1	1:D:63:PHE:HD2	1.43	0.65
1:B:24:CYS:SG	1:B:65:LYS:HE2	2.37	0.65
1:B:132:ILE:N	1:B:229:HIS:HD2	1.95	0.65
1:A:303:PHE:HE2	1:A:329:TYR:CE2	2.15	0.64
1:B:311:ARG:HH12	1:B:334:LEU:HD12	1.63	0.64
1:B:343:GLU:O	1:B:347:ILE:HG12	1.97	0.64
1:C:116:PHE:HB2	1:C:121:VAL:HG21	1.80	0.64
1:C:132:ILE:N	1:C:229:HIS:HD2	1.95	0.64
1:A:132:ILE:N	1:A:229:HIS:HD2	1.96	0.63
1:D:161:LYS:HE2	1:D:161:LYS:H	1.64	0.63
1:C:201:GLY:O	1:C:204:ARG:HD3	1.97	0.63
1:A:143:ARG:O	1:A:147:ARG:HD3	1.98	0.63
1:A:343:GLU:O	1:A:347:ILE:HG12	1.98	0.63
1:C:343:GLU:O	1:C:347:ILE:HG12	1.99	0.63
1:B:105:ASP:O	1:B:342:VAL:HG23	1.98	0.62
1:B:114:GLY:HA3	1:B:242:LYS:HB2	1.81	0.62
1:D:132:ILE:H	1:D:229:HIS:CD2	2.18	0.62
1:D:132:ILE:N	1:D:229:HIS:HD2	1.97	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:279:PRO:HA	1:C:282:LEU:HD22	1.81	0.62
1:A:287:ARG:HH12	1:A:315:ARG:NH2	1.98	0.61
1:B:201:GLY:O	1:B:204:ARG:HD3	2.00	0.61
1:B:4:GLU:HG2	1:B:6:ARG:H	1.65	0.61
1:C:3:HIS:HA	1:C:39:ASP:O	1.99	0.61
1:B:24:CYS:SG	1:B:65:LYS:CE	2.88	0.61
1:D:343:GLU:O	1:D:347:ILE:HG12	2.01	0.61
1:C:161:LYS:HE2	1:C:161:LYS:H	1.66	0.60
1:A:47:SER:OG	1:A:50:GLN:HG3	2.02	0.60
1:A:207:PRO:O	1:A:210:ARG:HG2	2.02	0.60
1:B:279:PRO:HA	1:B:282:LEU:HD22	1.84	0.60
1:A:279:PRO:O	1:A:282:LEU:HD22	2.02	0.59
1:D:201:GLY:O	1:D:204:ARG:HD3	2.03	0.59
1:A:287:ARG:HG2	1:A:336:ARG:NH2	2.18	0.58
1:D:292:VAL:HB	1:D:294:LEU:HG	1.85	0.58
1:A:311:ARG:NH2	1:A:376:GLN:HA	2.18	0.58
1:B:292:VAL:HB	1:B:294:LEU:HG	1.85	0.58
1:C:292:VAL:HB	1:C:294:LEU:HG	1.84	0.58
1:C:47:SER:OG	1:C:50:GLN:HG3	2.03	0.58
1:B:7:LYS:HB2	1:B:7:LYS:HZ3	1.69	0.58
1:D:125:ARG:HG3	1:D:125:ARG:HH11	1.69	0.57
1:A:18:LEU:HD13	1:A:26:ALA:HA	1.86	0.57
1:A:201:GLY:O	1:A:204:ARG:HD3	2.03	0.57
1:A:279:PRO:HA	1:A:282:LEU:HD22	1.84	0.57
1:B:47:SER:OG	1:B:50:GLN:HG3	2.05	0.57
1:B:99:THR:HG23	1:B:100:MET:HG3	1.86	0.57
1:B:102:HIS:HD2	1:B:337:MET:O	1.88	0.57
1:B:21:HIS:CD2	1:B:59:PRO:HA	2.40	0.57
1:B:315:ARG:HA	1:B:320:VAL:HG23	1.87	0.56
1:B:83:ILE:O	1:B:87:VAL:HG23	2.05	0.56
1:C:63:PHE:CD1	1:C:64:ILE:HG12	2.41	0.56
1:A:292:VAL:HB	1:A:294:LEU:HG	1.86	0.56
1:C:149:VAL:HG21	1:C:229:HIS:CE1	2.41	0.56
1:C:47:SER:H	1:C:50:GLN:HE21	1.51	0.56
1:B:131:SER:HA	1:B:229:HIS:HB2	1.87	0.56
1:A:123:SER:HB3	1:A:291:HIS:HB2	1.88	0.56
1:D:47:SER:OG	1:D:50:GLN:HG3	2.06	0.56
1:B:311:ARG:HH21	1:B:376:GLN:HB3	1.71	0.56
1:B:6:ARG:O	1:B:8:LEU:N	2.39	0.55
1:B:47:SER:H	1:B:50:GLN:HE21	1.53	0.55
1:A:47:SER:H	1:A:50:GLN:HE21	1.54	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:131:SER:HA	1:A:229:HIS:HB2	1.89	0.55
1:A:96:ASP:HB3	1:A:99:THR:HG22	1.87	0.55
1:A:303:PHE:CE2	1:A:329:TYR:HE2	2.23	0.55
1:B:207:PRO:O	1:B:210:ARG:HG2	2.06	0.55
1:C:18:LEU:HD13	1:C:26:ALA:HA	1.87	0.55
1:C:207:PRO:O	1:C:210:ARG:HG2	2.07	0.55
1:B:96:ASP:HB3	1:B:99:THR:HG22	1.88	0.55
1:D:18:LEU:HD13	1:D:26:ALA:HA	1.88	0.55
1:A:83:ILE:O	1:A:87:VAL:HG23	2.07	0.55
1:D:47:SER:H	1:D:50:GLN:HE21	1.53	0.55
1:B:7:LYS:HB2	1:B:7:LYS:NZ	2.22	0.54
1:B:18:LEU:HD13	1:B:26:ALA:HA	1.89	0.54
1:D:287:ARG:HG3	1:D:336:ARG:NH2	2.22	0.54
1:C:89:LYS:HA	1:C:95:TYR:O	2.07	0.54
1:B:166:GLY:HA3	1:B:215:ASN:HA	1.90	0.54
1:B:149:VAL:HG21	1:B:229:HIS:CE1	2.42	0.54
1:B:292:VAL:O	1:B:328:VAL:HA	2.07	0.54
1:C:131:SER:HA	1:C:229:HIS:HB2	1.90	0.54
1:D:166:GLY:HA3	1:D:215:ASN:HA	1.89	0.54
1:A:166:GLY:HA3	1:A:215:ASN:HA	1.90	0.54
1:C:6:ARG:O	1:C:38:ARG:NH2	2.40	0.54
1:C:125:ARG:HB3	1:C:235:MET:HB2	1.89	0.54
1:C:166:GLY:HA3	1:C:215:ASN:HA	1.88	0.54
1:A:149:VAL:HG21	1:A:229:HIS:CE1	2.43	0.54
1:C:126:VAL:HG12	1:C:288:ALA:CB	2.38	0.54
1:D:8:LEU:HG	1:D:9:PHE:CD1	2.43	0.54
1:D:96:ASP:HB3	1:D:99:THR:HG22	1.90	0.53
1:B:364:LYS:HB2	1:B:366:GLN:HE21	1.73	0.53
1:B:311:ARG:NH2	1:B:376:GLN:HB3	2.23	0.53
1:B:333:ASN:ND2	1:B:344:LEU:HD13	2.23	0.53
1:A:63:PHE:CD1	1:A:63:PHE:N	2.76	0.53
1:A:99:THR:HG23	1:A:100:MET:HG3	1.90	0.53
1:B:1:THR:HG22	1:B:2:VAL:H	1.73	0.53
1:A:122:LEU:HD12	1:A:291:HIS:HB3	1.90	0.52
1:B:89:LYS:HA	1:B:95:TYR:O	2.10	0.52
1:C:127:ARG:NH2	2:C:400:PO4:O1	2.41	0.52
1:C:279:PRO:O	1:C:282:LEU:HD22	2.09	0.52
1:C:364:LYS:HB2	1:C:366:GLN:HE21	1.73	0.52
1:D:207:PRO:O	1:D:210:ARG:HG2	2.09	0.52
1:C:96:ASP:HB3	1:C:99:THR:HG22	1.90	0.52
1:C:83:ILE:O	1:C:87:VAL:HG23	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:161:LYS:HE2	1:B:161:LYS:N	2.24	0.52
1:D:83:ILE:O	1:D:87:VAL:HG23	2.10	0.52
1:D:214:HIS:HD2	1:D:215:ASN:O	1.92	0.52
1:D:149:VAL:HG21	1:D:229:HIS:CE1	2.43	0.52
1:A:313:GLN:HE21	1:A:334:LEU:HD23	1.75	0.52
1:C:214:HIS:HD2	1:C:215:ASN:O	1.92	0.52
1:A:364:LYS:HB2	1:A:366:GLN:HE21	1.74	0.51
1:C:99:THR:HG23	1:C:100:MET:HG3	1.92	0.51
1:B:179:GLN:O	1:B:183:ILE:HG13	2.10	0.51
1:C:61:HIS:HB3	1:C:63:PHE:CZ	2.46	0.51
1:C:287:ARG:HD3	2:C:401:PO4:O1	2.10	0.51
1:D:296:ARG:NH2	1:D:363:GLU:HA	2.26	0.51
1:A:179:GLN:O	1:A:183:ILE:HG13	2.11	0.51
1:B:311:ARG:HG3	1:B:374:LEU:HB2	1.91	0.51
1:C:4:GLU:HB2	1:C:6:ARG:H	1.75	0.51
1:D:364:LYS:HB2	1:D:366:GLN:HE21	1.75	0.51
1:B:122:LEU:HG	1:B:291:HIS:O	2.11	0.51
1:A:161:LYS:HE2	1:A:161:LYS:N	2.24	0.51
1:A:214:HIS:HD2	1:A:215:ASN:O	1.94	0.51
1:A:3:HIS:HD2	1:A:5:LYS:CG	2.23	0.50
1:B:296:ARG:NH2	1:B:363:GLU:HA	2.26	0.50
1:C:179:GLN:O	1:C:183:ILE:HG13	2.11	0.50
1:A:61:HIS:HB3	1:A:63:PHE:CZ	2.46	0.50
1:D:125:ARG:HG3	1:D:125:ARG:NH1	2.25	0.50
1:A:116:PHE:HB3	1:A:121:VAL:HG21	1.94	0.50
1:C:124:SER:OG	1:C:290:VAL:HG12	2.12	0.50
1:C:171:LEU:HD21	1:C:212:ILE:HD12	1.93	0.50
1:D:5:LYS:O	1:D:7:LYS:N	2.44	0.50
1:D:89:LYS:HA	1:D:95:TYR:O	2.11	0.50
1:C:296:ARG:NH2	1:C:363:GLU:HA	2.25	0.50
1:D:116:PHE:HB2	1:D:239:GLY:HA3	1.93	0.50
1:D:131:SER:HA	1:D:229:HIS:HB2	1.92	0.50
1:D:133:ARG:HG3	1:D:133:ARG:NH1	2.19	0.50
1:A:232:VAL:HG11	1:A:252:LEU:HD21	1.93	0.50
1:A:292:VAL:O	1:A:328:VAL:HA	2.11	0.50
1:C:5:LYS:C	1:C:7:LYS:N	2.63	0.50
1:C:4:GLU:OE2	1:C:39:ASP:HA	2.11	0.50
1:B:106:LEU:O	1:B:249:CYS:SG	2.70	0.49
1:C:161:LYS:HA	1:C:165:SER:HB3	1.94	0.49
1:D:99:THR:HG23	1:D:100:MET:HG3	1.93	0.49
1:D:161:LYS:HA	1:D:165:SER:HB3	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:294:LEU:O	1:A:298:SER:HB2	2.12	0.49
1:A:311:ARG:HG3	1:A:374:LEU:HB2	1.93	0.49
1:B:291:HIS:HA	1:B:329:TYR:O	2.12	0.49
1:B:303:PHE:HE2	1:B:329:TYR:HE2	1.60	0.49
1:C:62:PRO:HD2	1:C:63:PHE:CE2	2.48	0.49
1:D:279:PRO:HA	1:D:282:LEU:HD22	1.95	0.49
1:A:236:GLU:HB2	1:A:244:VAL:HG22	1.93	0.49
1:B:161:LYS:HA	1:B:165:SER:HB3	1.95	0.49
1:B:236:GLU:HB2	1:B:244:VAL:HG22	1.94	0.49
1:C:311:ARG:HG3	1:C:374:LEU:HB2	1.93	0.49
1:A:296:ARG:NH2	1:A:363:GLU:HA	2.26	0.49
1:A:333:ASN:ND2	1:A:344:LEU:HD13	2.28	0.49
1:B:214:HIS:HD2	1:B:215:ASN:O	1.95	0.49
1:B:53:GLN:HG3	1:B:57:ASP:OD2	2.12	0.49
1:C:116:PHE:CB	1:C:121:VAL:HG21	2.43	0.48
1:D:180:GLN:HA	1:D:183:ILE:HD12	1.95	0.48
1:A:161:LYS:HA	1:A:165:SER:HB3	1.95	0.48
1:C:333:ASN:ND2	1:C:344:LEU:HD13	2.28	0.48
1:B:294:LEU:O	1:B:298:SER:HB2	2.14	0.48
1:C:120:TYR:CD2	1:C:356:VAL:HG13	2.48	0.48
1:C:276:LEU:HD12	1:C:281:ASN:O	2.13	0.48
1:C:293:LYS:HA	1:C:327:ASP:O	2.11	0.48
1:C:180:GLN:HA	1:C:183:ILE:HD12	1.96	0.48
1:C:294:LEU:O	1:C:298:SER:HB2	2.13	0.48
1:A:172:THR:HG23	1:A:173:ASN:N	2.28	0.48
1:B:141:CYS:O	1:B:141:CYS:SG	2.72	0.48
1:C:117:ASP:O	1:C:121:VAL:HG22	2.14	0.48
1:D:161:LYS:HE2	1:D:161:LYS:N	2.28	0.48
1:B:180:GLN:HA	1:B:183:ILE:HD12	1.95	0.48
1:B:55:GLY:HA3	1:B:68:GLY:O	2.14	0.48
1:B:311:ARG:NH1	1:B:334:LEU:HD12	2.29	0.48
1:D:288:ALA:O	1:D:348:VAL:HG21	2.14	0.48
1:D:311:ARG:HG3	1:D:374:LEU:HB2	1.96	0.48
1:A:67:VAL:HG22	1:A:91:ARG:HG2	1.96	0.47
1:D:4:GLU:HB3	1:D:6:ARG:H	1.79	0.47
1:D:294:LEU:O	1:D:298:SER:HB2	2.14	0.47
1:A:89:LYS:HA	1:A:95:TYR:O	2.13	0.47
1:D:74:GLU:OE2	1:D:133:ARG:NH1	2.47	0.47
1:A:303:PHE:CE2	1:A:329:TYR:CE2	3.00	0.47
1:B:25:MET:SD	1:B:25:MET:C	2.93	0.47
1:D:125:ARG:HH21	2:D:401:PO4:P	2.37	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:5:LYS:C	1:D:7:LYS:H	2.16	0.47
1:C:127:ARG:NH2	2:C:400:PO4:O4	2.48	0.47
1:A:133:ARG:HG3	1:A:133:ARG:NH1	2.17	0.47
1:C:236:GLU:HB2	1:C:244:VAL:HG22	1.97	0.47
1:D:354:TYR:CE1	1:D:358:CYS:SG	3.08	0.47
1:A:4:GLU:OE1	1:A:6:ARG:HB2	2.15	0.47
1:A:180:GLN:HA	1:A:183:ILE:HD12	1.96	0.47
1:B:74:GLU:OE2	1:B:133:ARG:NH1	2.48	0.47
1:D:55:GLY:HA3	1:D:68:GLY:O	2.15	0.46
1:D:61:HIS:HE1	1:D:63:PHE:CD2	2.29	0.46
1:D:179:GLN:O	1:D:183:ILE:HG13	2.15	0.46
1:A:55:GLY:HA3	1:A:68:GLY:O	2.16	0.46
1:A:108:ALA:O	1:A:111:ILE:HG13	2.15	0.46
1:C:141:CYS:O	1:C:204:ARG:NH2	2.44	0.46
1:B:368:ILE:HD13	1:B:368:ILE:H	1.80	0.46
1:D:61:HIS:CE1	1:D:63:PHE:HB2	2.51	0.46
1:D:1:THR:HG23	1:D:3:HIS:CE1	2.51	0.46
1:A:176:GLU:HG2	1:A:177:ARG:N	2.31	0.46
1:D:287:ARG:NH1	1:D:315:ARG:NH1	2.63	0.46
1:D:64:ILE:HD13	1:D:64:ILE:HA	1.87	0.46
1:D:236:GLU:HB2	1:D:244:VAL:HG22	1.96	0.46
1:A:368:ILE:HD13	1:A:368:ILE:H	1.81	0.45
1:C:341:GLU:H	1:C:341:GLU:HG2	1.45	0.45
1:B:171:LEU:HD23	1:B:171:LEU:HA	1.65	0.45
1:B:318:GLY:HA3	1:B:322:THR:HG23	1.97	0.45
1:C:161:LYS:HE2	1:C:161:LYS:N	2.31	0.45
1:A:311:ARG:CZ	1:A:376:GLN:HA	2.46	0.45
1:C:126:VAL:HG12	1:C:288:ALA:HB2	1.99	0.45
1:D:9:PHE:O	1:D:38:ARG:NH2	2.50	0.45
1:D:116:PHE:HB3	1:D:121:VAL:HG21	1.99	0.45
1:A:287:ARG:HH12	1:A:315:ARG:CZ	2.29	0.45
1:B:31:PRO:HB3	1:D:263:GLY:O	2.17	0.45
1:B:204:ARG:O	1:B:210:ARG:NH2	2.49	0.45
1:C:74:GLU:OE2	1:C:133:ARG:NH1	2.49	0.45
1:D:231:ARG:HA	1:D:231:ARG:HD3	1.79	0.45
1:A:170:SER:OG	1:A:172:THR:HG22	2.17	0.45
1:D:368:ILE:HD13	1:D:368:ILE:H	1.82	0.45
1:C:288:ALA:O	1:C:348:VAL:HG21	2.16	0.45
1:D:126:VAL:HG12	1:D:248:PHE:CE1	2.52	0.45
1:D:170:SER:OG	1:D:172:THR:HG22	2.17	0.45
1:D:333:ASN:ND2	1:D:344:LEU:HD13	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:379:ARG:HD2	1:B:379:ARG:HA	1.82	0.45
1:C:74:GLU:HB2	1:C:267:MET:SD	2.57	0.45
1:C:325:VAL:HG12	1:C:326:ALA:N	2.32	0.45
1:D:102:HIS:HD2	1:D:337:MET:O	2.00	0.45
1:D:379:ARG:HD2	1:D:379:ARG:HA	1.83	0.45
1:A:141:CYS:O	1:A:141:CYS:SG	2.75	0.44
1:A:74:GLU:OE2	1:A:133:ARG:NH1	2.49	0.44
1:C:204:ARG:O	1:C:210:ARG:NH2	2.49	0.44
1:D:300:ASP:OD1	1:D:302:ARG:HD3	2.17	0.44
1:B:237:LYS:HE3	1:B:237:LYS:HB2	1.85	0.44
1:A:119:ARG:HB2	1:A:119:ARG:NH1	2.32	0.44
1:A:311:ARG:HD2	1:A:374:LEU:HB3	1.99	0.44
1:A:379:ARG:HD2	1:A:379:ARG:HA	1.81	0.44
1:D:74:GLU:HB2	1:D:267:MET:SD	2.58	0.44
1:A:3:HIS:HD2	1:A:5:LYS:HG3	1.83	0.44
1:C:25:MET:SD	1:C:25:MET:C	2.96	0.43
1:C:354:TYR:CE1	1:C:358:CYS:SG	3.09	0.43
1:D:189:PHE:CD1	1:D:226:GLU:HG3	2.53	0.43
1:B:61:HIS:CD2	1:B:62:PRO:HD2	2.54	0.43
1:D:53:GLN:HG3	1:D:57:ASP:OD2	2.17	0.43
1:A:300:ASP:OD1	1:A:302:ARG:HD3	2.18	0.43
1:C:53:GLN:HG3	1:C:57:ASP:OD2	2.18	0.43
1:C:303:PHE:HB3	1:C:304:PRO:CD	2.44	0.43
1:D:287:ARG:HG3	1:D:336:ARG:HH22	1.81	0.43
1:A:62:PRO:HD2	1:A:63:PHE:CE1	2.54	0.43
1:B:116:PHE:CE2	1:B:241:MET:HB2	2.53	0.43
1:C:120:TYR:HD2	1:C:356:VAL:HG13	1.83	0.43
1:D:141:CYS:O	1:D:204:ARG:NH2	2.42	0.43
1:C:106:LEU:HB3	1:C:249:CYS:SG	2.58	0.43
1:C:237:LYS:HE3	1:C:237:LYS:HB2	1.85	0.43
1:A:53:GLN:HG3	1:A:57:ASP:OD1	2.18	0.43
1:C:133:ARG:HG3	1:C:133:ARG:NH1	2.14	0.43
1:A:311:ARG:NH2	1:A:376:GLN:HB3	2.34	0.43
1:B:124:SER:OG	1:B:239:GLY:HA2	2.19	0.43
1:B:316:GLY:HA2	1:B:329:TYR:HA	2.00	0.43
1:C:368:ILE:HD13	1:C:368:ILE:H	1.83	0.43
1:D:4:GLU:HB2	1:D:39:ASP:HA	2.00	0.43
1:A:128:THR:HA	1:A:285:GLY:O	2.19	0.43
1:B:300:ASP:OD1	1:B:302:ARG:HD3	2.19	0.43
1:D:70:VAL:HG13	1:D:139:PRO:HG2	2.01	0.43
1:A:74:GLU:HB2	1:A:267:MET:SD	2.59	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:123:SER:O	1:A:290:VAL:HA	2.19	0.42
1:C:120:TYR:HE2	1:C:360:LYS:HE3	1.83	0.42
1:C:127:ARG:HE	2:C:401:PO4:P	2.42	0.42
1:D:157:LEU:HD11	1:D:222:VAL:HG11	2.01	0.42
1:A:25:MET:SD	1:A:25:MET:C	2.98	0.42
1:B:282:LEU:HD12	1:B:282:LEU:HA	1.90	0.42
1:D:293:LYS:HG3	1:D:327:ASP:HB2	2.01	0.42
1:C:70:VAL:HG13	1:C:139:PRO:HG2	2.01	0.42
1:D:307:LEU:HD12	1:D:307:LEU:HA	1.85	0.42
1:C:287:ARG:HD2	2:C:400:PO4:O4	2.18	0.42
1:C:379:ARG:HD2	1:C:379:ARG:HA	1.83	0.42
1:D:85:ASP:HB2	1:D:86:PRO:HD3	2.02	0.42
1:A:228:ASP:OD1	1:A:277:THR:HG22	2.20	0.42
1:C:157:LEU:HD11	1:C:222:VAL:HG11	2.02	0.42
1:B:70:VAL:HG13	1:B:139:PRO:HG2	2.02	0.42
1:A:70:VAL:HG13	1:A:139:PRO:HG2	2.01	0.42
1:D:311:ARG:NH2	1:D:376:GLN:HB3	2.35	0.42
1:B:228:ASP:OD1	1:B:277:THR:HG22	2.20	0.41
1:C:55:GLY:HA3	1:C:68:GLY:O	2.20	0.41
1:C:127:ARG:NH2	2:C:400:PO4:P	2.93	0.41
1:C:141:CYS:O	1:C:141:CYS:SG	2.77	0.41
1:C:300:ASP:OD1	1:C:302:ARG:HD3	2.19	0.41
1:D:116:PHE:CE2	1:D:290:VAL:HG11	2.55	0.41
1:A:8:LEU:HD23	1:A:8:LEU:HA	1.76	0.41
1:C:85:ASP:HB2	1:C:86:PRO:HD3	2.03	0.41
1:A:288:ALA:O	1:A:348:VAL:HG21	2.20	0.41
1:B:354:TYR:CE1	1:B:358:CYS:SG	3.11	0.41
1:D:314:LYS:O	1:D:314:LYS:HG3	2.20	0.41
1:A:287:ARG:NH1	1:A:315:ARG:NH1	2.68	0.41
1:B:10:PRO:HG2	1:D:135:LEU:HD21	2.03	0.41
1:B:127:ARG:NH2	2:B:400:PO4:O3	2.53	0.41
1:B:379:ARG:HA	1:B:379:ARG:NH1	2.35	0.41
1:A:379:ARG:HA	1:A:379:ARG:NH1	2.35	0.41
1:B:6:ARG:HB3	1:B:39:ASP:OD1	2.20	0.41
1:B:157:LEU:HD11	1:B:222:VAL:HG11	2.02	0.41
1:B:341:GLU:H	1:B:341:GLU:HG2	1.44	0.41
1:A:282:LEU:HD12	1:A:282:LEU:HA	1.88	0.41
1:C:116:PHE:CE2	1:C:290:VAL:HG11	2.54	0.41
1:D:120:TYR:CD1	1:D:120:TYR:N	2.88	0.41
1:D:279:PRO:O	1:D:282:LEU:HD22	2.20	0.41
1:C:329:TYR:HD1	1:C:329:TYR:HA	1.77	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:102:HIS:HD2	1:A:337:MET:O	2.04	0.41
1:A:127:ARG:HB3	1:A:233:ILE:HG12	2.03	0.41
1:A:221:LEU:HD23	1:A:221:LEU:HA	1.92	0.41
1:B:2:VAL:HG12	1:B:41:LEU:H	1.85	0.41
1:B:108:ALA:C	1:B:110:LYS:H	2.24	0.41
1:B:288:ALA:O	1:B:348:VAL:HG21	2.20	0.41
1:C:189:PHE:CD1	1:C:226:GLU:HG3	2.55	0.41
1:B:112:THR:HG1	1:B:113:HIS:CE1	2.39	0.41
1:C:108:ALA:O	1:C:111:ILE:HB	2.21	0.41
1:C:325:VAL:O	1:C:328:VAL:HG22	2.21	0.41
1:D:106:LEU:HD23	1:D:106:LEU:HA	1.70	0.41
1:D:228:ASP:OD1	1:D:277:THR:HG22	2.21	0.41
1:A:106:LEU:HA	1:A:106:LEU:HD23	1.71	0.41
1:A:125:ARG:HH21	1:A:233:ILE:HD13	1.86	0.41
1:C:295:PRO:HB3	1:C:327:ASP:CG	2.41	0.41
1:C:379:ARG:HA	1:C:379:ARG:NH1	2.36	0.41
1:B:138:PRO:N	1:B:139:PRO:CD	2.84	0.40
1:B:141:CYS:O	1:B:204:ARG:NH2	2.46	0.40
1:D:192:PRO:HD3	1:D:206:TRP:CZ3	2.56	0.40
1:A:204:ARG:O	1:A:210:ARG:NH2	2.51	0.40
1:B:106:LEU:HD23	1:B:106:LEU:HA	1.79	0.40
1:B:303:PHE:HE2	1:B:329:TYR:CE2	2.38	0.40
1:C:69:MET:SD	1:C:87:VAL:HG21	2.62	0.40
1:C:125:ARG:CB	1:C:235:MET:HB2	2.51	0.40
1:A:105:ASP:O	1:A:342:VAL:HG23	2.21	0.40
1:B:279:PRO:HA	1:B:282:LEU:CD2	2.52	0.40
1:C:37:LEU:HB2	1:C:48:LEU:HD22	2.04	0.40
1:C:303:PHE:CE2	1:C:329:TYR:HE2	2.39	0.40
1:D:127:ARG:HB2	1:D:233:ILE:HG12	2.03	0.40
1:D:138:PRO:N	1:D:139:PRO:CD	2.85	0.40
1:A:125:ARG:HB3	1:A:235:MET:HB2	2.04	0.40
1:A:138:PRO:N	1:A:139:PRO:CD	2.84	0.40
1:A:354:TYR:CE1	1:A:358:CYS:SG	3.11	0.40
1:D:5:LYS:C	1:D:7:LYS:N	2.75	0.40
1:D:311:ARG:CZ	1:D:376:GLN:HA	2.51	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 X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	A	378/380 (100%)	338 (89%)	37 (10%)	3 (1%)	19 57
1	B	378/380 (100%)	343 (91%)	29 (8%)	6 (2%)	9 40
1	C	378/380 (100%)	345 (91%)	28 (7%)	5 (1%)	12 45
1	D	378/380 (100%)	351 (93%)	22 (6%)	5 (1%)	12 45
All	All	1512/1520 (100%)	1377 (91%)	116 (8%)	19 (1%)	12 45

All (19) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	93	ASN
1	B	7	LYS
1	B	93	ASN
1	C	93	ASN
1	D	93	ASN
1	B	63	PHE
1	B	320	VAL
1	C	7	LYS
1	D	6	ARG
1	D	7	LYS
1	D	321	ASP
1	A	226	GLU
1	B	226	GLU
1	B	317	THR
1	C	226	GLU
1	D	226	GLU
1	A	7	LYS
1	C	319	GLY
1	C	317	THR

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 X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	332/332 (100%)	293 (88%)	39 (12%)	5	22
1	B	332/332 (100%)	295 (89%)	37 (11%)	6	25
1	C	332/332 (100%)	292 (88%)	40 (12%)	5	22
1	D	332/332 (100%)	299 (90%)	33 (10%)	8	30
All	All	1328/1328 (100%)	1179 (89%)	149 (11%)	6	24

All (149) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	1	THR
1	A	5	LYS
1	A	8	LEU
1	A	22	ASN
1	A	63	PHE
1	A	91	ARG
1	A	93	ASN
1	A	101	LYS
1	A	111	ILE
1	A	113	HIS
1	A	115	GLN
1	A	119	ARG
1	A	161	LYS
1	A	176	GLU
1	A	210	ARG
1	A	221	LEU
1	A	226	GLU
1	A	227	GLU
1	A	228	ASP
1	A	231	ARG
1	A	235	MET
1	A	277	THR
1	A	282	LEU
1	A	286	LEU

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Mol	Chain	Res	Type
1	A	292	VAL
1	A	296	ARG
1	A	307	LEU
1	A	311	ARG
1	A	321	ASP
1	A	325	VAL
1	A	327	ASP
1	A	336	ARG
1	A	341	GLU
1	A	355	LEU
1	A	367	ASP
1	A	368	ILE
1	A	369	LYS
1	A	376	GLN
1	A	380	LYS
1	B	7	LYS
1	B	8	LEU
1	B	22	ASN
1	B	65	LYS
1	B	93	ASN
1	B	101	LYS
1	B	109	SER
1	B	119	ARG
1	B	122	LEU
1	B	161	LYS
1	B	170	SER
1	B	176	GLU
1	B	210	ARG
1	B	221	LEU
1	B	226	GLU
1	B	227	GLU
1	B	228	ASP
1	B	232	VAL
1	B	235	MET
1	B	277	THR
1	B	282	LEU
1	B	286	LEU
1	B	287	ARG
1	B	292	VAL
1	B	296	ARG
1	B	307	LEU
1	B	311	ARG

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Mol	Chain	Res	Type
1	B	314	LYS
1	B	317	THR
1	B	322	THR
1	B	341	GLU
1	B	355	LEU
1	B	367	ASP
1	B	368	ILE
1	B	369	LYS
1	B	376	GLN
1	B	380	LYS
1	C	3	HIS
1	C	4	GLU
1	C	7	LYS
1	C	8	LEU
1	C	22	ASN
1	C	93	ASN
1	C	101	LYS
1	C	115	GLN
1	C	119	ARG
1	C	122	LEU
1	C	127	ARG
1	C	161	LYS
1	C	175	SER
1	C	176	GLU
1	C	210	ARG
1	C	221	LEU
1	C	226	GLU
1	C	227	GLU
1	C	228	ASP
1	C	235	MET
1	C	277	THR
1	C	282	LEU
1	C	286	LEU
1	C	287	ARG
1	C	292	VAL
1	C	296	ARG
1	C	307	LEU
1	C	311	ARG
1	C	313	GLN
1	C	321	ASP
1	C	322	THR
1	C	329	TYR

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Mol	Chain	Res	Type
1	C	336	ARG
1	C	341	GLU
1	C	355	LEU
1	C	367	ASP
1	C	368	ILE
1	C	369	LYS
1	C	376	GLN
1	C	380	LYS
1	D	4	GLU
1	D	22	ASN
1	D	70	VAL
1	D	93	ASN
1	D	101	LYS
1	D	125	ARG
1	D	127	ARG
1	D	161	LYS
1	D	171	LEU
1	D	177	ARG
1	D	210	ARG
1	D	221	LEU
1	D	226	GLU
1	D	227	GLU
1	D	228	ASP
1	D	235	MET
1	D	277	THR
1	D	282	LEU
1	D	286	LEU
1	D	292	VAL
1	D	296	ARG
1	D	307	LEU
1	D	311	ARG
1	D	315	ARG
1	D	327	ASP
1	D	336	ARG
1	D	341	GLU
1	D	355	LEU
1	D	367	ASP
1	D	368	ILE
1	D	369	LYS
1	D	376	GLN
1	D	380	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (37)

such sidechains are listed below:

Mol	Chain	Res	Type
1	A	3	HIS
1	A	50	GLN
1	A	102	HIS
1	A	115	GLN
1	A	179	GLN
1	A	181	GLN
1	A	214	HIS
1	A	229	HIS
1	A	309	ASN
1	A	313	GLN
1	A	366	GLN
1	B	50	GLN
1	B	102	HIS
1	B	179	GLN
1	B	181	GLN
1	B	214	HIS
1	B	229	HIS
1	B	366	GLN
1	C	50	GLN
1	C	102	HIS
1	C	115	GLN
1	C	179	GLN
1	C	181	GLN
1	C	214	HIS
1	C	229	HIS
1	C	309	ASN
1	C	313	GLN
1	C	366	GLN
1	D	3	HIS
1	D	50	GLN
1	D	102	HIS
1	D	151	ASN
1	D	179	GLN
1	D	181	GLN
1	D	214	HIS
1	D	229	HIS
1	D	366	GLN

5.3.3 RNA

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)

8 ligands are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
2	PO4	B	401	-	4,4,4	1.02	0	6,6,6	0.47	0
2	PO4	C	401	-	4,4,4	1.08	0	6,6,6	0.44	0
2	PO4	B	400	-	4,4,4	1.00	0	6,6,6	0.40	0
2	PO4	D	400	-	4,4,4	1.01	0	6,6,6	0.45	0
2	PO4	A	400	-	4,4,4	1.09	0	6,6,6	0.44	0
2	PO4	D	401	-	4,4,4	1.07	0	6,6,6	0.46	0
2	PO4	A	401	-	4,4,4	1.04	0	6,6,6	0.40	0
2	PO4	C	400	-	4,4,4	1.06	0	6,6,6	0.41	0

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.

4 monomers are involved in 8 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	C	401	PO4	2	0
2	B	400	PO4	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	D	401	PO4	1	0
2	C	400	PO4	4	0

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

EDS was not executed - this section is therefore empty.

6.2 Non-standard residues in protein, DNA, RNA chains

EDS was not executed - this section is therefore empty.

6.3 Carbohydrates

EDS was not executed - this section is therefore empty.

6.4 Ligands

EDS was not executed - this section is therefore empty.

6.5 Other polymers

EDS was not executed - this section is therefore empty.