



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 03:55 PM GMT

PDB ID : 4DNQ
Title : Crystal Structure of DAD2 S96A mutant
Authors : Hamiaux, C.
Deposited on : 2012-02-08
Resolution : 2.80 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
<http://wwpdb.org/validation/2016/XrayValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

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

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

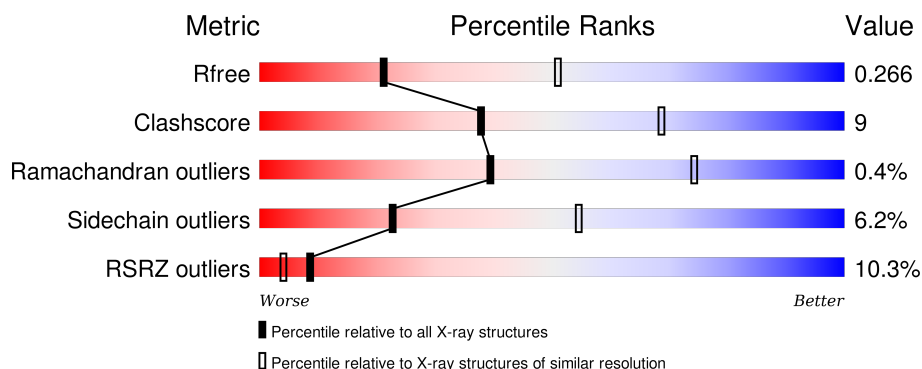
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.80 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	91344	2393 (2.80-2.80)
Clashscore	102246	2827 (2.80-2.80)
Ramachandran outliers	100387	2782 (2.80-2.80)
Sidechain outliers	100360	2784 (2.80-2.80)
RSRZ outliers	91569	2404 (2.80-2.80)

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

Mol	Chain	Length	Quality of chain
1	A	269	<div> <div>4%</div> <div>78%</div> <div>17%</div> <div>• •</div> </div>
1	B	269	<div> <div>4%</div> <div>78%</div> <div>17%</div> <div>• •</div> </div>
1	C	269	<div> <div>7%</div> <div>78%</div> <div>19%</div> <div>• •</div> </div>
1	D	269	<div> <div>6%</div> <div>79%</div> <div>18%</div> <div>• •</div> </div>
1	E	269	<div> <div>9%</div> <div>80%</div> <div>16%</div> <div>• •</div> </div>

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Mol	Chain	Length	Quality of chain
1	F	269	
1	G	269	
1	H	269	
1	I	269	
1	J	269	
1	K	269	
1	L	269	

2 Entry composition

There are 2 unique types of molecules in this entry. The entry contains 25042 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 DAD2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	262	Total	C	N	O	S	0	0	0
			2054	1320	359	367	8			
1	B	262	Total	C	N	O	S	0	0	0
			2054	1320	359	367	8			
1	C	263	Total	C	N	O	S	0	0	0
			2063	1325	361	369	8			
1	D	263	Total	C	N	O	S	0	0	0
			2063	1325	361	369	8			
1	E	262	Total	C	N	O	S	0	0	0
			2054	1320	359	367	8			
1	F	263	Total	C	N	O	S	0	0	0
			2063	1325	361	369	8			
1	G	263	Total	C	N	O	S	0	0	0
			2063	1325	361	369	8			
1	H	262	Total	C	N	O	S	0	0	0
			2054	1320	359	367	8			
1	I	264	Total	C	N	O	S	0	0	0
			2067	1327	362	370	8			
1	J	263	Total	C	N	O	S	0	0	0
			2063	1325	361	369	8			
1	K	262	Total	C	N	O	S	0	0	0
			2054	1320	359	367	8			
1	L	264	Total	C	N	O	S	0	0	0
			2067	1327	362	370	8			

- Molecule 2 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	A	33	Total	O	0	0
			33	33		
2	B	27	Total	O	0	0
			27	27		

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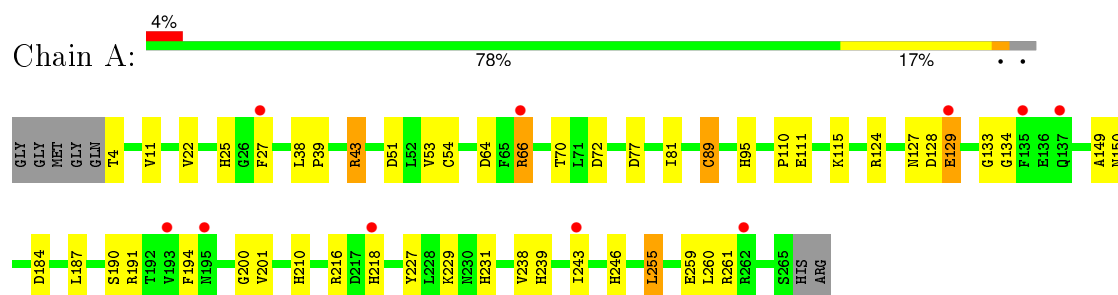
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	C	35	Total 35	O 35	0	0
2	D	32	Total 32	O 32	0	0
2	E	27	Total 27	O 27	0	0
2	F	27	Total 27	O 27	0	0
2	G	31	Total 31	O 31	0	0
2	H	24	Total 24	O 24	0	0
2	I	21	Total 21	O 21	0	0
2	J	12	Total 12	O 12	0	0
2	K	22	Total 22	O 22	0	0
2	L	32	Total 32	O 32	0	0

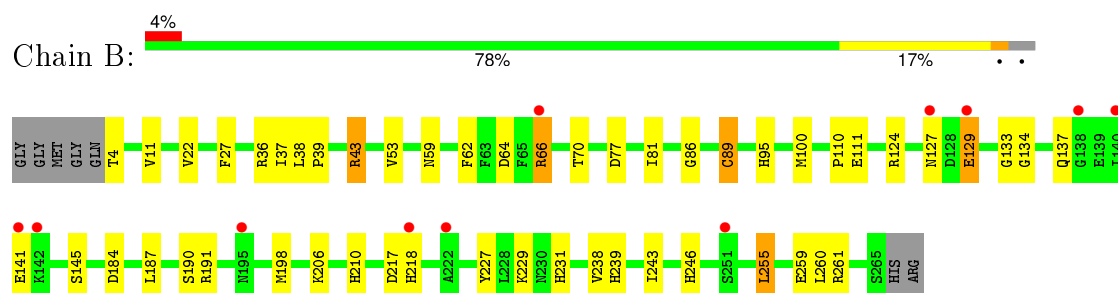
3 Residue-property plots [i](#)

These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron 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 dot above a residue indicates a poor fit to the electron density ($\text{RSRZ} > 2$). 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.

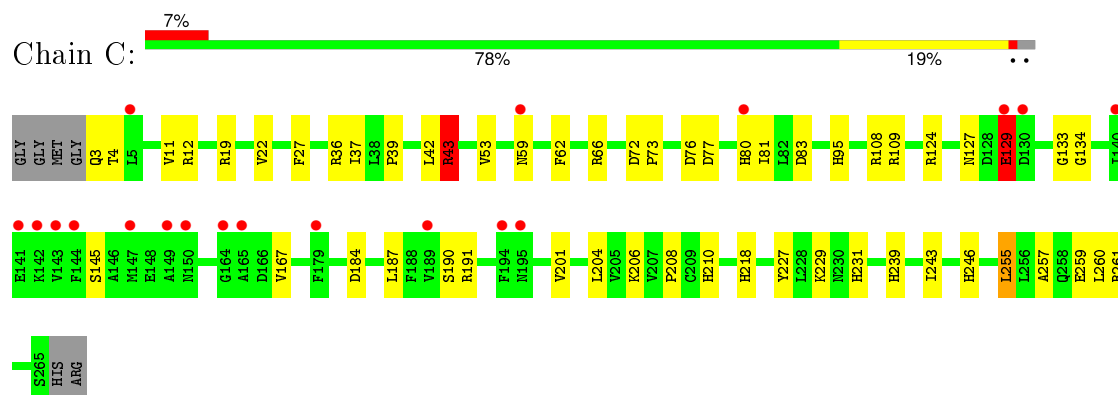
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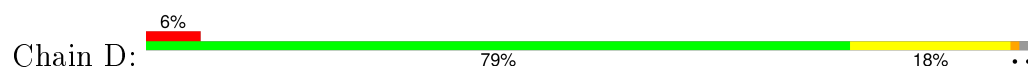
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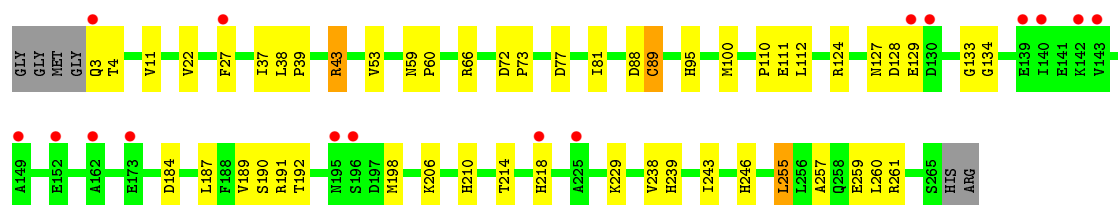


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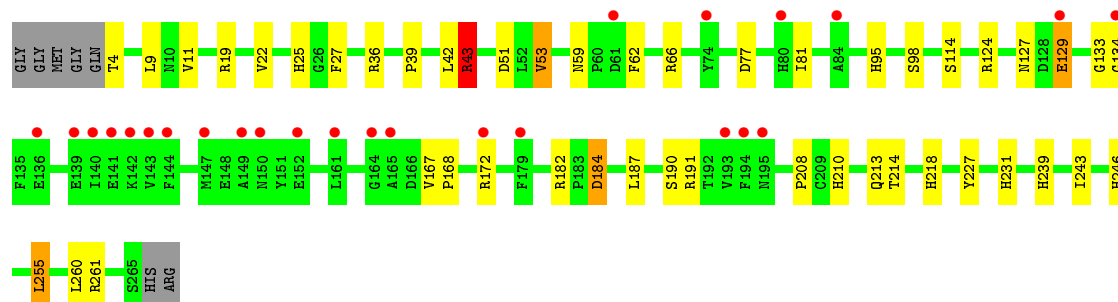
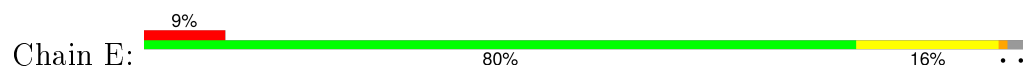


• Molecule 1: DAD2

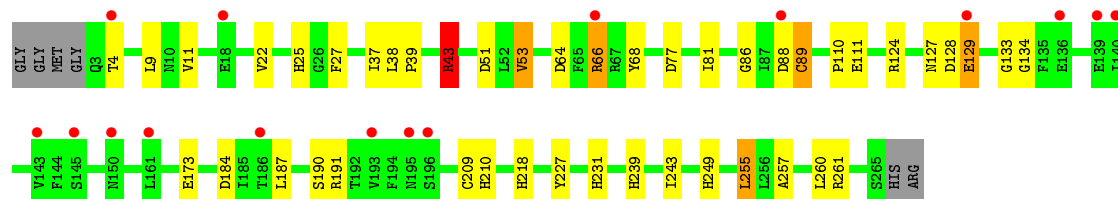
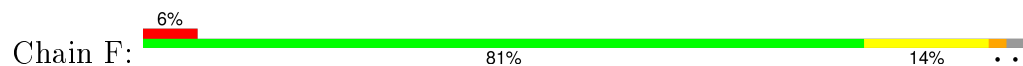




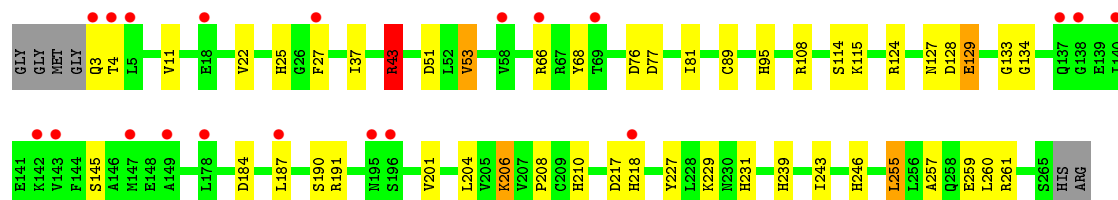
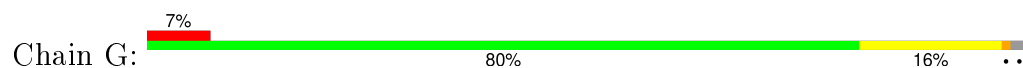
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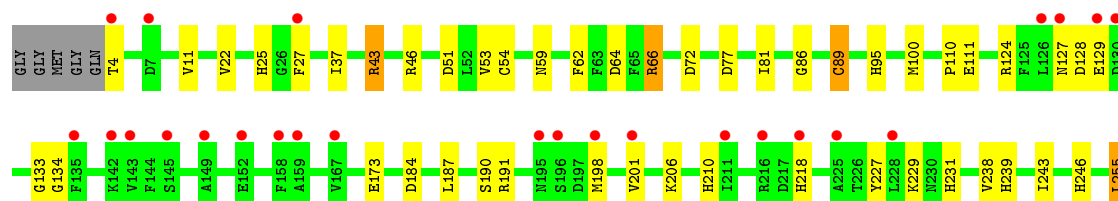
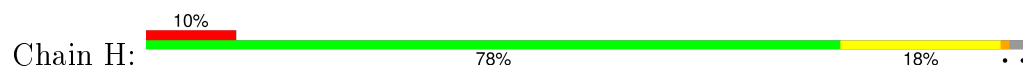
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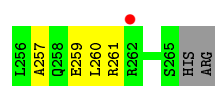


• Molecule 1: DAD2

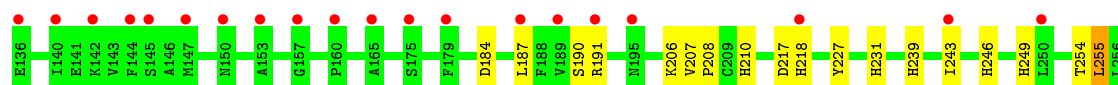
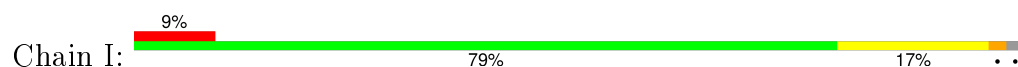


• Molecule 1: DAD2

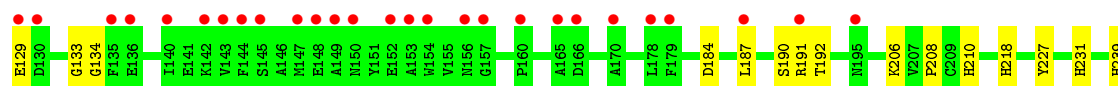
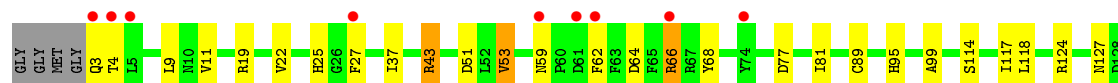




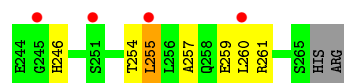
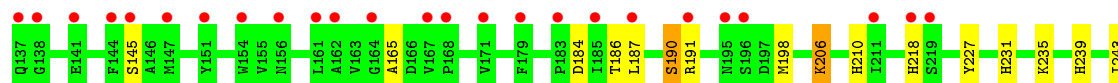
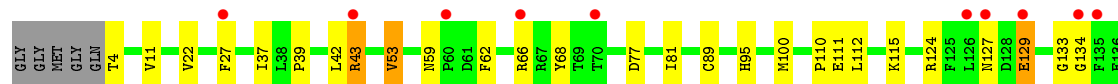
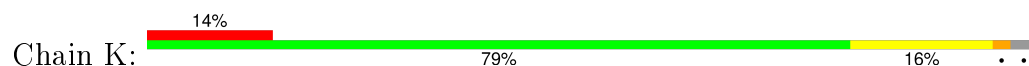
• Molecule 1: DAD2



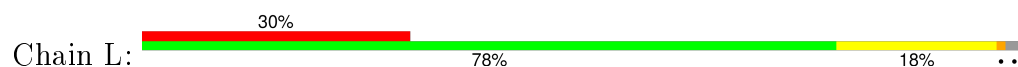
• Molecule 1: DAD2

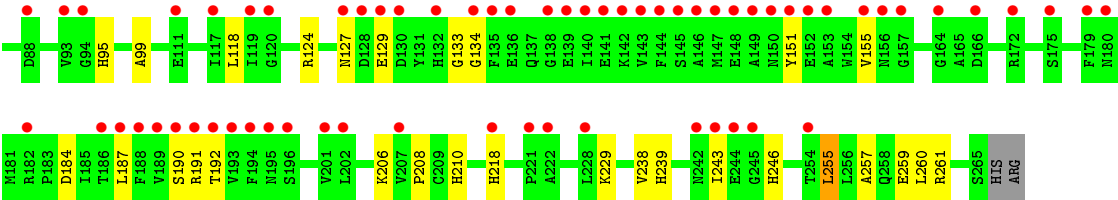


• Molecule 1: DAD2



• Molecule 1: DAD2





4 Data and refinement statistics

Property	Value	Source
Space group	P 31	Depositor
Cell constants a, b, c, α , β , γ	176.66Å 176.66Å 107.67Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	62.36 – 2.80 62.36 – 2.80	Depositor EDS
% Data completeness (in resolution range)	100.0 (62.36-2.80) 100.0 (62.36-2.80)	Depositor EDS
R_{merge}	0.18	Depositor
R_{sym}	0.18	Depositor
$\langle I/\sigma(I) \rangle$ ¹	3.86 (at 2.81Å)	Xtriage
Refinement program	REFMAC 5.5.0109	Depositor
R, R_{free}	0.242 , 0.272 0.240 , 0.266	Depositor DCC
R_{free} test set	4632 reflections (5.27%)	DCC
Wilson B-factor (Å ²)	45.9	Xtriage
Anisotropy	0.074	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.34 , 46.6	EDS
Estimated twinning fraction	0.015 for -h,-k,l 0.046 for h,-h-k,-l 0.017 for -k,-h,-l	Xtriage
L-test for twinning ²	$\langle L \rangle = 0.46$, $\langle L^2 \rangle = 0.28$	Xtriage
Outliers	0 of 92536 reflections	Xtriage
F_o, F_c correlation	0.89	EDS
Total number of atoms	25042	wwPDB-VP
Average B, all atoms (Å ²)	52.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The analyses of the Patterson function reveals a significant off-origin peak that is 39.05 % of the origin peak, indicating pseudo translational symmetry. The chance of finding a peak of this or larger height randomly in a structure without pseudo translational symmetry is equal to 3.3633e-04. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

¹ Intensities estimated from amplitudes.

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

5 Model quality [i](#)

5.1 Standard geometry [i](#)

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	0.82	2/2105 (0.1%)	0.77	1/2865 (0.0%)
1	B	0.69	0/2105	0.75	1/2865 (0.0%)
1	C	0.70	0/2114	0.75	2/2877 (0.1%)
1	D	0.75	1/2114 (0.0%)	0.77	1/2877 (0.0%)
1	E	0.74	0/2105	0.71	1/2865 (0.0%)
1	F	0.76	2/2114 (0.1%)	0.75	2/2877 (0.1%)
1	G	0.72	1/2114 (0.0%)	0.74	1/2877 (0.0%)
1	H	0.75	2/2105 (0.1%)	0.75	1/2865 (0.0%)
1	I	0.70	0/2118	0.73	0/2882
1	J	0.64	0/2114	0.70	1/2877 (0.0%)
1	K	0.70	1/2105 (0.0%)	0.74	2/2865 (0.1%)
1	L	0.68	0/2118	0.70	1/2882 (0.0%)
All	All	0.72	9/25331 (0.0%)	0.74	14/34474 (0.0%)

All (9) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	K	89	CYS	CB-SG	-12.59	1.60	1.82
1	A	89	CYS	CB-SG	-11.16	1.63	1.82
1	A	54	CYS	CB-SG	-7.76	1.69	1.82
1	G	89	CYS	CB-SG	-6.99	1.70	1.82
1	H	89	CYS	CB-SG	-6.10	1.71	1.82
1	D	89	CYS	CB-SG	-5.92	1.72	1.81
1	H	54	CYS	CB-SG	-5.81	1.72	1.81
1	F	209	CYS	CB-SG	-5.57	1.72	1.81
1	F	173	GLU	CD-OE2	5.01	1.31	1.25

All (14) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	K	89	CYS	CA-CB-SG	12.01	135.62	114.00
1	B	89	CYS	CA-CB-SG	10.46	132.83	114.00
1	D	89	CYS	CA-CB-SG	8.35	129.03	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	K	89	CYS	CB-CA-C	-8.08	94.23	110.40
1	H	89	CYS	CA-CB-SG	7.47	127.45	114.00
1	C	109	ARG	NE-CZ-NH2	-6.14	117.23	120.30
1	G	43	ARG	NE-CZ-NH1	6.09	123.34	120.30
1	C	43	ARG	NE-CZ-NH1	5.93	123.27	120.30
1	F	89	CYS	CA-CB-SG	5.87	124.56	114.00
1	A	89	CYS	CA-CB-SG	5.75	124.36	114.00
1	E	43	ARG	NE-CZ-NH1	5.43	123.01	120.30
1	J	89	CYS	CA-CB-SG	5.41	123.74	114.00
1	L	43	ARG	NE-CZ-NH1	5.11	122.86	120.30
1	F	43	ARG	NE-CZ-NH1	5.03	122.81	120.30

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2054	0	2034	44	0
1	B	2054	0	2034	43	0
1	C	2063	0	2042	61	0
1	D	2063	0	2042	35	0
1	E	2054	0	2034	54	0
1	F	2063	0	2042	40	0
1	G	2063	0	2042	43	0
1	H	2054	0	2034	44	0
1	I	2067	0	2045	36	1
1	J	2063	0	2042	36	0
1	K	2054	0	2034	44	0
1	L	2067	0	2045	49	0
2	A	33	0	0	3	0
2	B	27	0	0	2	0
2	C	35	0	0	1	0
2	D	32	0	0	2	0
2	E	27	0	0	5	0
2	F	27	0	0	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	G	31	0	0	0	0
2	H	24	0	0	4	0
2	I	21	0	0	3	0
2	J	12	0	0	1	0
2	K	22	0	0	2	0
2	L	32	0	0	4	0
All	All	25042	0	24470	451	1

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 9.

All (451) 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:F:88:ASP:OD2	1:L:19:ARG:HD3	1.42	1.16
1:C:36:ARG:HD3	1:G:108:ARG:HD2	1.34	1.09
1:E:36:ARG:HG3	2:E:306:HOH:O	1.50	1.09
1:A:70:THR:HG21	1:K:254:THR:HG21	1.10	1.05
1:F:88:ASP:OD2	1:L:19:ARG:CD	2.06	1.03
1:A:70:THR:CG2	1:K:254:THR:HG21	1.94	0.98
1:I:210:HIS:HD2	1:I:239:HIS:HE1	1.11	0.98
1:J:210:HIS:HD2	1:J:239:HIS:HE1	1.12	0.97
1:A:70:THR:HG21	1:K:254:THR:CG2	1.95	0.96
1:C:210:HIS:HD2	1:C:239:HIS:HE1	1.12	0.96
1:L:210:HIS:HD2	1:L:239:HIS:HE1	1.14	0.95
1:E:210:HIS:HD2	1:E:239:HIS:HE1	1.15	0.94
1:L:127:ASN:HD22	1:L:133:GLY:H	1.17	0.93
1:H:210:HIS:HD2	1:H:239:HIS:HE1	1.13	0.92
1:G:210:HIS:HD2	1:G:239:HIS:HE1	1.14	0.92
1:D:210:HIS:HD2	1:D:239:HIS:HE1	1.19	0.90
1:A:111:GLU:HB2	1:I:114:SER:O	1.71	0.90
1:K:210:HIS:HD2	1:K:239:HIS:HE1	1.18	0.90
1:D:127:ASN:HD22	1:D:133:GLY:H	1.19	0.89
1:A:210:HIS:HD2	1:A:239:HIS:HE1	1.20	0.88
1:B:111:GLU:HB3	1:J:208:PRO:HG2	1.52	0.87
1:C:36:ARG:CD	1:G:108:ARG:HD2	2.04	0.87
1:H:127:ASN:HD22	1:H:133:GLY:H	1.20	0.87
1:F:210:HIS:HD2	1:F:239:HIS:HE1	1.17	0.86
1:G:114:SER:O	1:K:111:GLU:HB2	1.74	0.86
1:A:127:ASN:HD22	1:A:133:GLY:H	1.19	0.85
1:C:12:ARG:NH1	2:C:311:HOH:O	2.08	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:127:ASN:HD22	1:E:133:GLY:H	1.24	0.84
1:J:127:ASN:HD22	1:J:133:GLY:H	1.26	0.84
1:B:210:HIS:HD2	1:B:239:HIS:HE1	1.20	0.83
1:G:127:ASN:HD22	1:G:133:GLY:H	1.24	0.83
1:C:108:ARG:HD2	1:E:36:ARG:HD3	1.61	0.82
1:I:127:ASN:HD22	1:I:133:GLY:H	1.23	0.81
1:F:88:ASP:HB3	1:L:19:ARG:NH1	1.96	0.81
1:C:127:ASN:HD22	1:C:133:GLY:H	1.28	0.81
1:B:127:ASN:HD22	1:B:133:GLY:H	1.26	0.80
1:A:201:VAL:HG12	1:K:39:PRO:HB3	1.62	0.80
1:I:43:ARG:HH11	1:I:43:ARG:HG2	1.47	0.80
1:L:127:ASN:ND2	1:L:133:GLY:H	1.81	0.79
1:F:127:ASN:HD22	1:F:133:GLY:H	1.27	0.78
1:H:43:ARG:HH11	1:H:43:ARG:CG	1.97	0.78
1:K:43:ARG:HH11	1:K:43:ARG:CG	1.97	0.77
1:H:127:ASN:ND2	1:H:133:GLY:H	1.81	0.77
1:K:127:ASN:HD22	1:K:133:GLY:H	1.32	0.77
1:L:210:HIS:CD2	1:L:239:HIS:HE1	2.03	0.77
1:D:127:ASN:ND2	1:D:133:GLY:H	1.82	0.77
1:E:210:HIS:CD2	1:E:239:HIS:HE1	2.03	0.77
1:A:43:ARG:HH11	1:A:43:ARG:CG	1.98	0.77
1:C:42:LEU:HD11	1:G:204:LEU:HD21	1.67	0.76
1:D:43:ARG:HH11	1:D:43:ARG:CG	1.98	0.76
1:C:108:ARG:HD2	1:E:36:ARG:CD	2.14	0.76
1:B:95:HIS:CD2	2:B:322:HOH:O	2.38	0.76
1:C:108:ARG:HD2	1:E:36:ARG:NE	2.01	0.76
1:H:210:HIS:CD2	1:H:239:HIS:HE1	2.00	0.76
1:B:43:ARG:CG	1:B:43:ARG:HH11	1.98	0.75
1:L:127:ASN:HD21	1:L:134:GLY:H	1.34	0.75
1:B:111:GLU:HB2	1:J:114:SER:O	1.87	0.75
1:I:127:ASN:ND2	1:I:133:GLY:H	1.85	0.75
1:J:43:ARG:CG	1:J:43:ARG:HH11	2.00	0.75
1:F:43:ARG:CG	1:F:43:ARG:HH11	2.00	0.75
1:J:210:HIS:CD2	1:J:239:HIS:HE1	2.01	0.74
1:G:127:ASN:HD21	1:G:134:GLY:H	1.33	0.74
1:C:127:ASN:HD21	1:C:134:GLY:H	1.36	0.74
1:F:127:ASN:HD21	1:F:134:GLY:H	1.35	0.74
1:G:210:HIS:CD2	1:G:239:HIS:HE1	2.02	0.74
1:H:127:ASN:HD21	1:H:134:GLY:H	1.33	0.74
1:E:127:ASN:HD21	1:E:134:GLY:H	1.36	0.74
1:A:127:ASN:ND2	1:A:133:GLY:H	1.85	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:127:ASN:HD21	1:J:134:GLY:H	1.36	0.74
1:I:210:HIS:CD2	1:I:239:HIS:HE1	2.01	0.73
1:I:127:ASN:HD21	1:I:134:GLY:H	1.33	0.73
1:C:204:LEU:HD12	1:E:39:PRO:HG3	1.69	0.73
1:C:210:HIS:HD2	1:C:239:HIS:CE1	2.03	0.73
1:B:43:ARG:HH11	1:B:43:ARG:HG2	1.53	0.73
1:L:43:ARG:HH11	1:L:43:ARG:HG2	1.53	0.72
1:H:43:ARG:HH11	1:H:43:ARG:HG2	1.55	0.72
1:C:36:ARG:CZ	1:G:108:ARG:NH1	2.52	0.72
1:C:210:HIS:CD2	1:C:239:HIS:HE1	2.02	0.72
1:I:43:ARG:HH11	1:I:43:ARG:CG	2.02	0.72
1:L:43:ARG:HH11	1:L:43:ARG:CG	2.01	0.72
1:F:210:HIS:CD2	1:F:239:HIS:HE1	2.04	0.71
1:E:210:HIS:HD2	1:E:239:HIS:CE1	2.05	0.71
1:D:127:ASN:HD21	1:D:134:GLY:H	1.36	0.71
1:D:210:HIS:HD2	1:D:239:HIS:CE1	2.08	0.71
1:A:127:ASN:HD21	1:A:134:GLY:H	1.36	0.71
1:A:43:ARG:HH11	1:A:43:ARG:HG2	1.55	0.70
1:C:43:ARG:CG	1:C:43:ARG:HH11	2.04	0.70
1:K:127:ASN:HD21	1:K:134:GLY:H	1.39	0.70
1:B:77:ASP:O	1:B:81:ILE:HG12	1.91	0.70
1:C:36:ARG:HD3	1:G:108:ARG:CD	2.18	0.70
1:C:39:PRO:HG3	1:G:204:LEU:HD12	1.73	0.70
1:G:43:ARG:HH11	1:G:43:ARG:CG	2.05	0.70
1:E:127:ASN:ND2	1:E:133:GLY:H	1.90	0.69
1:E:43:ARG:HH11	1:E:43:ARG:CG	2.05	0.69
1:I:210:HIS:HD2	1:I:239:HIS:CE1	2.01	0.69
1:G:208:PRO:HG2	1:K:111:GLU:HB3	1.74	0.69
1:F:77:ASP:O	1:F:81:ILE:HG12	1.93	0.69
1:J:127:ASN:ND2	1:J:133:GLY:H	1.90	0.69
1:F:43:ARG:HH11	1:F:43:ARG:HG2	1.57	0.68
1:A:149:ALA:HA	1:B:191:ARG:NH2	2.08	0.68
1:G:77:ASP:O	1:G:81:ILE:HG12	1.93	0.68
1:G:127:ASN:ND2	1:G:133:GLY:H	1.91	0.68
1:L:77:ASP:O	1:L:81:ILE:HG12	1.94	0.68
1:A:216:ARG:NH2	2:A:312:HOH:O	2.21	0.68
1:H:77:ASP:O	1:H:81:ILE:HG12	1.94	0.67
1:C:127:ASN:ND2	1:C:133:GLY:H	1.92	0.67
1:D:43:ARG:HH11	1:D:43:ARG:HG2	1.59	0.67
1:C:43:ARG:HG2	1:C:43:ARG:HH11	1.59	0.67
1:L:31:GLN:HA	2:L:324:HOH:O	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:210:HIS:CD2	1:K:239:HIS:HE1	2.07	0.67
1:B:127:ASN:ND2	1:B:133:GLY:H	1.93	0.67
1:H:95:HIS:CD2	2:H:302:HOH:O	2.49	0.66
1:B:127:ASN:HD21	1:B:134:GLY:H	1.41	0.66
1:A:111:GLU:HB3	1:I:208:PRO:HG2	1.78	0.66
1:E:43:ARG:HG2	1:E:43:ARG:HH11	1.58	0.66
1:F:127:ASN:ND2	1:F:133:GLY:H	1.92	0.66
1:C:77:ASP:O	1:C:81:ILE:HG12	1.96	0.66
1:B:210:HIS:CD2	1:B:239:HIS:HE1	2.10	0.66
1:J:43:ARG:HG2	1:J:43:ARG:HH11	1.60	0.65
1:D:95:HIS:CD2	2:D:315:HOH:O	2.49	0.65
1:F:86:GLY:O	1:L:19:ARG:NH2	2.30	0.64
1:A:210:HIS:CD2	1:A:239:HIS:HE1	2.08	0.64
1:C:39:PRO:HG3	1:G:204:LEU:CD1	2.28	0.64
1:H:210:HIS:HD2	1:H:239:HIS:CE1	2.06	0.63
1:A:194:PHE:HE2	2:A:332:HOH:O	1.80	0.63
1:K:43:ARG:HH11	1:K:43:ARG:HG2	1.64	0.63
1:D:210:HIS:CD2	1:D:239:HIS:HE1	2.10	0.63
1:A:111:GLU:CB	1:I:114:SER:O	2.47	0.62
1:H:95:HIS:HD2	2:H:302:HOH:O	1.84	0.61
1:E:36:ARG:HB2	2:E:306:HOH:O	2.00	0.61
1:D:261:ARG:HH11	1:D:261:ARG:HG2	1.66	0.61
1:C:108:ARG:NH1	1:E:36:ARG:NH2	2.49	0.61
1:B:95:HIS:HD2	2:B:322:HOH:O	1.80	0.61
1:K:77:ASP:O	1:K:81:ILE:HG12	2.00	0.61
1:E:187:LEU:HD11	1:E:191:ARG:NH1	2.15	0.61
1:J:210:HIS:HD2	1:J:239:HIS:CE1	2.04	0.60
1:G:210:HIS:HD2	1:G:239:HIS:CE1	2.06	0.60
1:B:210:HIS:HD2	1:B:239:HIS:CE1	2.12	0.60
1:G:43:ARG:HH11	1:G:43:ARG:HG2	1.65	0.60
1:C:108:ARG:NH1	1:E:36:ARG:CZ	2.65	0.60
1:G:208:PRO:HG3	1:K:110:PRO:HG2	1.82	0.60
1:F:210:HIS:HD2	1:F:239:HIS:CE1	2.09	0.60
1:F:187:LEU:HD11	1:F:191:ARG:NH1	2.17	0.60
1:B:100:MET:SD	1:B:198:MET:HE2	2.42	0.59
1:L:210:HIS:HD2	1:L:239:HIS:CE1	2.06	0.59
1:K:127:ASN:ND2	1:K:133:GLY:H	1.99	0.59
1:F:37:ILE:HD12	1:F:257:ALA:HB2	1.83	0.59
1:E:36:ARG:CB	2:E:306:HOH:O	2.49	0.59
1:I:261:ARG:HG2	1:I:261:ARG:HH11	1.68	0.59
1:C:201:VAL:HG12	1:E:39:PRO:CB	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:111:GLU:HB3	1:L:208:PRO:HG2	1.86	0.58
1:G:187:LEU:HD11	1:G:191:ARG:NH1	2.18	0.58
1:E:114:SER:O	1:H:111:GLU:HB2	2.04	0.58
1:C:12:ARG:NH1	1:K:235:LYS:HG3	2.18	0.58
1:B:36:ARG:HH12	1:H:72:ASP:CG	2.07	0.58
1:G:37:ILE:HD12	1:G:257:ALA:HB2	1.86	0.58
1:J:77:ASP:O	1:J:81:ILE:HG12	2.03	0.58
1:E:77:ASP:O	1:E:81:ILE:HG12	2.04	0.57
1:I:2:GLY:O	1:I:3:GLN:HB2	2.03	0.57
1:I:100:MET:HG2	2:I:302:HOH:O	2.04	0.57
1:D:77:ASP:O	1:D:81:ILE:HG12	2.05	0.57
1:C:204:LEU:CD1	1:E:39:PRO:HG3	2.34	0.56
1:K:261:ARG:HH11	1:K:261:ARG:HG2	1.71	0.56
1:D:37:ILE:HD12	1:D:257:ALA:HB2	1.88	0.56
1:D:187:LEU:HD11	1:D:191:ARG:NH1	2.21	0.56
1:J:187:LEU:HD11	1:J:191:ARG:NH1	2.20	0.56
1:B:187:LEU:HD11	1:B:191:ARG:NH1	2.21	0.56
1:C:19:ARG:HG2	1:D:88:ASP:OD2	2.06	0.56
1:L:187:LEU:HD11	1:L:191:ARG:NH1	2.20	0.56
1:B:39:PRO:HB3	1:H:201:VAL:HG12	1.88	0.56
1:I:187:LEU:HD11	1:I:191:ARG:NH1	2.21	0.56
1:G:127:ASN:ND2	1:G:134:GLY:H	2.03	0.55
1:A:150:ASN:HB2	1:B:141:GLU:OE2	2.06	0.55
1:C:129:GLU:HA	1:C:129:GLU:OE2	2.05	0.55
1:C:83:ASP:OD2	1:E:172:ARG:NE	2.39	0.55
1:E:208:PRO:HG2	1:H:111:GLU:HB3	1.88	0.55
1:G:114:SER:O	1:K:111:GLU:CB	2.51	0.55
1:B:36:ARG:NH1	1:H:72:ASP:CG	2.60	0.55
1:C:187:LEU:HD11	1:C:191:ARG:NH1	2.21	0.55
1:I:77:ASP:O	1:I:81:ILE:HG12	2.06	0.55
1:A:77:ASP:O	1:A:81:ILE:HG12	2.06	0.54
1:L:2:GLY:N	1:L:84:ALA:CB	2.70	0.54
1:H:173:GLU:OE2	2:H:312:HOH:O	2.18	0.54
1:C:36:ARG:NH2	1:G:108:ARG:NH1	2.55	0.54
1:I:129:GLU:HA	1:I:129:GLU:OE2	2.07	0.54
1:E:129:GLU:OE2	1:E:129:GLU:HA	2.08	0.54
1:A:110:PRO:HG2	1:I:208:PRO:HG3	1.88	0.54
1:A:210:HIS:HD2	1:A:239:HIS:CE1	2.12	0.54
1:K:43:ARG:HH11	1:K:43:ARG:HG3	1.72	0.54
1:H:46:ARG:HD2	2:H:321:HOH:O	2.08	0.54
1:C:36:ARG:NE	1:G:108:ARG:HD2	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:261:ARG:HG2	1:J:261:ARG:HH11	1.73	0.53
1:L:95:HIS:HE1	1:L:246:HIS:O	1.91	0.53
1:L:37:ILE:HD12	1:L:257:ALA:HB2	1.90	0.53
1:C:37:ILE:HD12	1:C:257:ALA:HB2	1.90	0.53
1:D:127:ASN:ND2	1:D:134:GLY:H	2.06	0.53
1:I:127:ASN:ND2	1:I:134:GLY:H	2.05	0.53
1:C:108:ARG:CD	1:E:36:ARG:HD3	2.36	0.53
1:K:210:HIS:HD2	1:K:239:HIS:CE1	2.10	0.53
1:B:39:PRO:CB	1:H:201:VAL:HG12	2.38	0.53
1:K:165:ALA:HB2	2:K:305:HOH:O	2.08	0.53
1:K:187:LEU:HD11	1:K:191:ARG:NH1	2.24	0.53
1:A:129:GLU:HA	1:A:129:GLU:OE2	2.08	0.53
1:L:60:PRO:HA	2:L:305:HOH:O	2.08	0.53
1:H:261:ARG:HH11	1:H:261:ARG:HG2	1.73	0.53
1:H:227:TYR:O	1:H:231:HIS:HD2	1.92	0.52
1:A:261:ARG:HH11	1:A:261:ARG:HG2	1.74	0.52
1:G:129:GLU:HA	1:G:129:GLU:OE2	2.10	0.52
1:F:88:ASP:OD2	1:L:19:ARG:CG	2.57	0.52
1:F:127:ASN:ND2	1:F:134:GLY:H	2.06	0.52
1:K:95:HIS:HE1	1:K:246:HIS:O	1.93	0.52
1:A:187:LEU:HD11	1:A:191:ARG:NH1	2.25	0.51
1:I:37:ILE:HD12	1:I:257:ALA:HB2	1.92	0.51
1:C:227:TYR:O	1:C:231:HIS:HD2	1.94	0.51
1:L:239:HIS:HD2	1:L:259:GLU:OE1	1.93	0.51
1:L:127:ASN:ND2	1:L:134:GLY:H	2.06	0.51
1:F:129:GLU:HA	1:F:129:GLU:OE2	2.11	0.51
1:C:59:ASN:HB3	1:C:62:PHE:HD2	1.76	0.51
1:F:128:ASP:HA	2:F:318:HOH:O	2.10	0.51
1:B:127:ASN:ND2	1:B:134:GLY:H	2.09	0.51
1:B:261:ARG:HG2	1:B:261:ARG:HH11	1.75	0.51
1:E:208:PRO:HG3	1:H:110:PRO:HG2	1.93	0.50
1:J:9:LEU:HD21	1:J:53:VAL:HG13	1.93	0.50
1:K:129:GLU:OE2	1:K:129:GLU:HA	2.11	0.50
1:A:243:ILE:HD11	1:A:255:LEU:HB3	1.93	0.50
1:H:210:HIS:CD2	1:H:239:HIS:CE1	2.91	0.50
1:J:127:ASN:ND2	1:J:134:GLY:H	2.07	0.50
1:G:261:ARG:HG2	1:G:261:ARG:HH11	1.77	0.50
1:A:115:LYS:HZ3	1:A:210:HIS:HE1	1.60	0.50
1:L:192:THR:HA	2:L:323:HOH:O	2.11	0.50
1:D:243:ILE:HD11	1:D:255:LEU:HB3	1.93	0.50
1:J:59:ASN:HB3	1:J:62:PHE:HD2	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:127:ASN:ND2	1:D:133:GLY:N	2.56	0.50
1:L:2:GLY:O	1:L:6:LEU:HG	2.12	0.50
1:H:100:MET:SD	1:H:198:MET:HE2	2.52	0.50
1:K:165:ALA:CB	2:K:305:HOH:O	2.60	0.50
1:I:95:HIS:HE1	1:I:246:HIS:O	1.95	0.50
1:H:243:ILE:HD11	1:H:255:LEU:HB3	1.92	0.50
1:G:11:VAL:CG2	1:G:81:ILE:HD12	2.42	0.49
1:H:127:ASN:ND2	1:H:134:GLY:H	2.04	0.49
1:E:59:ASN:HB3	1:E:62:PHE:HD2	1.77	0.49
1:J:37:ILE:HD12	1:J:257:ALA:HB2	1.93	0.49
1:B:129:GLU:OE2	1:B:129:GLU:HA	2.12	0.49
1:B:36:ARG:HH12	1:H:72:ASP:HB3	1.77	0.49
1:B:243:ILE:HD11	1:B:255:LEU:HB3	1.94	0.49
1:L:261:ARG:HH11	1:L:261:ARG:HG2	1.75	0.49
1:I:243:ILE:HD11	1:I:255:LEU:HB3	1.94	0.49
1:C:201:VAL:HG12	1:E:39:PRO:HB3	1.93	0.49
1:B:86:GLY:HA2	1:J:19:ARG:NH2	2.27	0.49
1:H:37:ILE:HD12	1:H:257:ALA:HB2	1.94	0.49
1:E:261:ARG:HH11	1:E:261:ARG:HG2	1.78	0.48
1:E:95:HIS:HE1	1:E:246:HIS:O	1.95	0.48
1:C:76:ASP:OD2	1:E:167:VAL:HG13	2.12	0.48
1:F:88:ASP:OD2	1:L:19:ARG:NE	2.46	0.48
1:I:239:HIS:HD2	1:I:259:GLU:OE1	1.96	0.48
1:A:111:GLU:HA	2:I:305:HOH:O	2.14	0.48
1:H:95:HIS:HE1	1:H:246:HIS:O	1.96	0.48
1:F:53:VAL:HG21	1:F:68:TYR:CZ	2.49	0.48
1:J:129:GLU:HA	1:J:129:GLU:OE2	2.13	0.48
1:G:227:TYR:O	1:G:231:HIS:HD2	1.96	0.48
1:B:36:ARG:HH12	1:H:72:ASP:CB	2.27	0.48
1:C:108:ARG:CZ	1:E:36:ARG:NH2	2.76	0.48
1:E:43:ARG:NH1	1:E:43:ARG:CG	2.73	0.48
1:H:206:LYS:HD3	1:H:206:LYS:HA	1.64	0.48
1:E:127:ASN:ND2	1:E:134:GLY:H	2.07	0.48
1:D:95:HIS:HE1	1:D:246:HIS:O	1.96	0.48
1:L:67:ARG:NH2	2:L:307:HOH:O	2.47	0.48
1:A:127:ASN:ND2	1:A:133:GLY:N	2.58	0.47
1:C:167:VAL:HG13	1:G:76:ASP:OD2	2.13	0.47
1:E:36:ARG:CG	2:E:306:HOH:O	2.26	0.47
1:L:2:GLY:N	1:L:84:ALA:HB2	2.29	0.47
1:D:129:GLU:HA	1:D:129:GLU:OE2	2.13	0.47
1:D:100:MET:SD	1:D:198:MET:HE2	2.53	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:72:ASP:OD2	1:K:254:THR:OG1	2.32	0.47
1:F:25:HIS:NE2	1:F:51:ASP:HA	2.28	0.47
1:C:80:HIS:ND1	1:E:168:PRO:HB2	2.29	0.47
1:I:25:HIS:NE2	1:I:51:ASP:HA	2.30	0.47
1:C:12:ARG:HH11	1:K:235:LYS:HG3	1.79	0.47
1:A:127:ASN:ND2	1:A:134:GLY:H	2.09	0.47
1:K:127:ASN:ND2	1:K:134:GLY:H	2.09	0.47
1:J:11:VAL:CG2	1:J:81:ILE:HD12	2.45	0.47
1:B:206:LYS:HD3	1:B:206:LYS:HA	1.62	0.47
1:B:110:PRO:HG2	1:J:208:PRO:HG3	1.97	0.47
1:C:11:VAL:CG2	1:C:81:ILE:HD12	2.45	0.47
1:K:11:VAL:CG2	1:K:81:ILE:HD12	2.45	0.47
1:C:243:ILE:HD11	1:C:255:LEU:HB3	1.97	0.47
1:G:53:VAL:HG21	1:G:68:TYR:CE1	2.50	0.47
1:C:201:VAL:HA	1:E:39:PRO:HB3	1.96	0.47
1:I:43:ARG:HG2	1:I:43:ARG:NH1	2.23	0.46
1:J:206:LYS:HD3	1:J:206:LYS:HA	1.65	0.46
1:L:11:VAL:CG2	1:L:81:ILE:HD12	2.45	0.46
1:D:11:VAL:CG2	1:D:81:ILE:HD12	2.44	0.46
1:H:127:ASN:ND2	1:H:133:GLY:N	2.59	0.46
1:K:243:ILE:HD11	1:K:255:LEU:HB3	1.98	0.46
1:E:25:HIS:NE2	1:E:51:ASP:HA	2.30	0.46
1:H:59:ASN:HB3	1:H:62:PHE:HD2	1.79	0.46
1:G:95:HIS:HE1	1:G:246:HIS:O	1.98	0.46
1:J:239:HIS:HD2	1:J:259:GLU:OE1	1.98	0.46
1:K:206:LYS:HA	1:K:206:LYS:HD3	1.62	0.46
1:G:243:ILE:HD11	1:G:255:LEU:HB3	1.97	0.46
1:F:9:LEU:HD21	1:F:53:VAL:HG13	1.98	0.46
1:H:187:LEU:HD11	1:H:191:ARG:NH1	2.30	0.46
1:D:95:HIS:HD2	2:D:315:HOH:O	1.90	0.46
1:H:129:GLU:OE2	1:H:129:GLU:HA	2.16	0.46
1:I:59:ASN:HB3	1:I:62:PHE:HD2	1.79	0.46
1:L:127:ASN:ND2	1:L:133:GLY:N	2.57	0.46
1:J:192:THR:HA	2:J:301:HOH:O	2.15	0.46
1:B:43:ARG:HG2	1:B:43:ARG:NH1	2.27	0.46
1:I:210:HIS:CD2	1:I:239:HIS:CE1	2.89	0.45
1:B:59:ASN:HB3	1:B:62:PHE:HD2	1.79	0.45
1:B:64:ASP:OD1	1:B:66:ARG:HG3	2.16	0.45
1:H:11:VAL:CG2	1:H:81:ILE:HD12	2.46	0.45
1:C:95:HIS:HE1	1:C:246:HIS:O	1.99	0.45
1:L:59:ASN:HB3	1:L:62:PHE:HD2	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:239:HIS:HD2	1:D:259:GLU:OE1	1.99	0.45
1:G:25:HIS:NE2	1:G:51:ASP:HA	2.32	0.45
1:C:229:LYS:HB3	1:C:229:LYS:HE3	1.87	0.45
1:F:88:ASP:OD2	1:L:19:ARG:NH1	2.50	0.45
1:J:210:HIS:CD2	1:J:239:HIS:CE1	2.91	0.45
1:H:229:LYS:HG3	1:H:238:VAL:HG23	1.98	0.45
1:B:239:HIS:HD2	1:B:259:GLU:OE1	2.00	0.45
1:C:204:LEU:HD21	1:E:42:LEU:HD11	1.99	0.44
1:I:43:ARG:CG	1:I:43:ARG:NH1	2.71	0.44
1:F:53:VAL:HG21	1:F:68:TYR:CE1	2.52	0.44
1:L:129:GLU:HA	1:L:129:GLU:OE2	2.16	0.44
1:A:95:HIS:HE1	1:A:246:HIS:O	2.00	0.44
1:E:227:TYR:O	1:E:231:HIS:HD2	2.00	0.44
1:L:43:ARG:HG2	1:L:43:ARG:NH1	2.28	0.44
1:C:208:PRO:HG3	1:D:110:PRO:HG2	1.98	0.44
1:I:96:ALA:HB1	2:I:321:HOH:O	2.17	0.44
1:J:243:ILE:HD11	1:J:255:LEU:HB3	1.99	0.44
1:K:59:ASN:HB3	1:K:62:PHE:HD2	1.83	0.44
1:C:19:ARG:CG	1:D:88:ASP:OD2	2.65	0.44
1:I:217:ASP:OD1	1:I:217:ASP:C	2.56	0.44
1:B:37:ILE:HD13	1:B:37:ILE:HA	1.77	0.44
1:A:229:LYS:HG3	1:A:238:VAL:HG23	1.99	0.44
1:C:108:ARG:CD	1:E:36:ARG:NE	2.78	0.44
1:K:43:ARG:NH1	1:K:43:ARG:CG	2.67	0.44
1:F:64:ASP:OD1	1:F:66:ARG:HG3	2.18	0.44
1:C:261:ARG:HG2	1:C:261:ARG:HH11	1.83	0.44
1:B:11:VAL:CG2	1:B:81:ILE:HD12	2.48	0.44
1:J:25:HIS:NE2	1:J:51:ASP:HA	2.33	0.44
1:C:210:HIS:CD2	1:C:239:HIS:CE1	2.92	0.44
1:D:187:LEU:HD11	1:D:191:ARG:HH11	1.82	0.44
1:G:210:HIS:CD2	1:G:239:HIS:CE1	2.92	0.43
1:G:217:ASP:OD1	1:G:217:ASP:C	2.56	0.43
1:E:127:ASN:ND2	1:E:133:GLY:N	2.63	0.43
1:K:227:TYR:O	1:K:231:HIS:HD2	2.00	0.43
1:D:206:LYS:HA	1:D:206:LYS:HD3	1.61	0.43
1:I:53:VAL:HG21	1:I:68:TYR:CZ	2.52	0.43
1:E:182:ARG:NH1	1:E:184:ASP:OD2	2.48	0.43
1:C:108:ARG:HD2	1:E:36:ARG:CZ	2.47	0.43
1:K:210:HIS:CD2	1:K:239:HIS:CE1	2.96	0.43
1:F:11:VAL:CG2	1:F:81:ILE:HD12	2.48	0.43
1:A:150:ASN:ND2	1:B:137:GLN:OE1	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:2:GLY:N	1:L:84:ALA:HB1	2.33	0.43
1:E:213:GLN:NE2	2:E:318:HOH:O	2.51	0.43
1:A:25:HIS:NE2	1:A:51:ASP:HA	2.34	0.43
1:G:206:LYS:HD3	1:G:206:LYS:HA	1.65	0.43
1:J:99:ALA:HB1	1:J:118:LEU:HD22	2.00	0.43
1:K:37:ILE:HD12	1:K:257:ALA:HB2	1.99	0.43
1:E:187:LEU:HD11	1:E:191:ARG:HH11	1.82	0.43
1:A:11:VAL:CG2	1:A:81:ILE:HD12	2.48	0.43
1:C:208:PRO:HG2	1:D:111:GLU:HB3	1.99	0.43
1:L:9:LEU:HD21	1:L:53:VAL:HG13	2.01	0.43
1:D:189:VAL:O	1:D:192:THR:HB	2.19	0.43
1:E:9:LEU:HD21	1:E:53:VAL:HG13	2.01	0.43
1:F:43:ARG:HG2	1:F:43:ARG:NH1	2.31	0.43
1:E:43:ARG:NH1	1:E:43:ARG:HG2	2.30	0.43
1:L:151:TYR:O	1:L:155:VAL:HG23	2.19	0.43
2:A:333:HOH:O	1:I:111:GLU:HB3	2.18	0.43
1:D:59:ASN:HA	1:D:60:PRO:HD3	1.91	0.43
1:F:127:ASN:ND2	1:F:133:GLY:N	2.65	0.43
1:F:37:ILE:HD13	1:F:37:ILE:HA	1.75	0.43
1:F:128:ASP:O	1:F:129:GLU:C	2.58	0.43
1:F:261:ARG:HH11	1:F:261:ARG:HG2	1.83	0.43
1:G:239:HIS:HD2	1:G:259:GLU:OE1	2.02	0.42
1:J:37:ILE:HA	1:J:37:ILE:HD13	1.83	0.42
1:A:200:GLY:O	1:K:42:LEU:HD12	2.19	0.42
1:A:38:LEU:N	1:A:39:PRO:CD	2.83	0.42
1:J:95:HIS:HE1	1:J:246:HIS:O	2.01	0.42
1:F:243:ILE:HD11	1:F:255:LEU:HB3	2.00	0.42
1:L:206:LYS:HA	1:L:206:LYS:HD3	1.65	0.42
1:D:38:LEU:HB3	1:D:39:PRO:HD3	2.01	0.42
1:F:110:PRO:HG2	1:L:208:PRO:HG3	2.02	0.42
1:I:206:LYS:HD3	1:I:206:LYS:HA	1.57	0.42
1:L:229:LYS:HG3	1:L:238:VAL:HG23	2.01	0.42
1:L:210:HIS:CD2	1:L:239:HIS:CE1	2.93	0.42
1:A:227:TYR:O	1:A:231:HIS:HD2	2.03	0.42
1:G:115:LYS:HZ3	1:G:210:HIS:HE1	1.68	0.42
1:C:127:ASN:ND2	1:C:134:GLY:H	2.11	0.42
1:C:239:HIS:HD2	1:C:259:GLU:OE1	2.03	0.42
1:F:210:HIS:CD2	1:F:239:HIS:CE1	2.96	0.42
1:D:214:THR:HB	1:D:243:ILE:O	2.20	0.42
1:A:64:ASP:OD1	1:A:66:ARG:HG3	2.20	0.42
1:L:243:ILE:HD11	1:L:255:LEU:HB3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:25:HIS:NE2	1:L:51:ASP:HA	2.34	0.42
1:H:43:ARG:HG2	1:H:43:ARG:NH1	2.30	0.41
1:H:25:HIS:NE2	1:H:51:ASP:HA	2.35	0.41
1:K:53:VAL:HG21	1:K:68:TYR:CE1	2.55	0.41
1:J:227:TYR:O	1:J:231:HIS:HD2	2.02	0.41
1:L:64:ASP:OD1	1:L:66:ARG:HG3	2.20	0.41
1:E:19:ARG:HH21	1:H:86:GLY:HA2	1.84	0.41
1:K:100:MET:SD	1:K:198:MET:HE2	2.60	0.41
1:B:229:LYS:HG3	1:B:238:VAL:HG23	2.01	0.41
1:D:72:ASP:HB2	1:D:73:PRO:CD	2.51	0.41
1:F:88:ASP:OD2	1:L:19:ARG:CZ	2.68	0.41
1:B:95:HIS:HE1	1:B:246:HIS:O	2.02	0.41
1:B:39:PRO:CG	1:H:201:VAL:HG12	2.51	0.41
1:J:53:VAL:HG21	1:J:68:TYR:CZ	2.55	0.41
1:E:214:THR:HB	1:E:243:ILE:O	2.20	0.41
1:D:229:LYS:HG3	1:D:238:VAL:HG23	2.02	0.41
1:F:227:TYR:O	1:F:231:HIS:HD2	2.03	0.41
1:G:127:ASN:ND2	1:G:133:GLY:N	2.64	0.41
1:J:43:ARG:HG3	1:J:43:ARG:HH11	1.81	0.41
1:H:64:ASP:OD1	1:H:66:ARG:HG3	2.20	0.41
1:K:112:LEU:HA	1:K:112:LEU:HD12	1.92	0.41
1:K:115:LYS:HZ3	1:K:210:HIS:HE1	1.68	0.41
1:K:53:VAL:HG21	1:K:68:TYR:CZ	2.56	0.41
1:K:239:HIS:HD2	1:K:259:GLU:OE1	2.03	0.41
1:A:115:LYS:NZ	1:A:210:HIS:CE1	2.89	0.41
1:A:239:HIS:HD2	1:A:259:GLU:OE1	2.03	0.41
1:E:243:ILE:HD11	1:E:255:LEU:HB3	2.02	0.41
1:J:117:ILE:HD13	1:J:260:LEU:HD12	2.01	0.41
1:F:86:GLY:C	1:L:19:ARG:NH2	2.73	0.41
1:A:115:LYS:NZ	1:A:210:HIS:HE1	2.17	0.41
1:C:43:ARG:NH1	1:C:43:ARG:CG	2.73	0.41
1:A:128:ASP:O	1:A:129:GLU:C	2.60	0.41
1:G:128:ASP:O	1:G:129:GLU:C	2.58	0.41
1:G:53:VAL:HG21	1:G:68:TYR:CZ	2.55	0.41
1:J:127:ASN:ND2	1:J:133:GLY:N	2.64	0.41
1:D:128:ASP:O	1:D:129:GLU:C	2.58	0.41
1:H:128:ASP:O	1:H:129:GLU:C	2.59	0.41
1:K:186:THR:O	1:K:190:SER:HB2	2.20	0.41
1:C:206:LYS:HA	1:C:206:LYS:HD3	1.61	0.41
1:H:239:HIS:HD2	1:H:259:GLU:OE1	2.04	0.41
1:I:187:LEU:HD11	1:I:191:ARG:HH11	1.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:72:ASP:HB2	1:C:73:PRO:HD3	2.03	0.41
1:F:38:LEU:HB3	1:F:39:PRO:HD3	2.03	0.41
1:L:53:VAL:HG21	1:L:68:TYR:CE1	2.56	0.40
1:B:217:ASP:C	1:B:217:ASP:OD1	2.59	0.40
1:B:38:LEU:HB3	1:B:39:PRO:HD3	2.03	0.40
1:I:9:LEU:HD21	1:I:53:VAL:HG13	2.02	0.40
1:J:64:ASP:OD1	1:J:66:ARG:HG3	2.20	0.40
1:A:43:ARG:HH11	1:A:43:ARG:HG3	1.83	0.40
1:G:37:ILE:HA	1:G:37:ILE:HD13	1.85	0.40
1:E:11:VAL:CG2	1:E:81:ILE:HD12	2.52	0.40
1:C:80:HIS:ND1	1:E:168:PRO:CB	2.84	0.40
1:L:99:ALA:HB1	1:L:118:LEU:HD22	2.03	0.40
1:B:227:TYR:O	1:B:231:HIS:HD2	2.05	0.40
1:I:227:TYR:O	1:I:231:HIS:HD2	2.04	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:72:ASP:OD2	1:I:254:THR:OG1[2_545]	1.83	0.37

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	260/269 (97%)	251 (96%)	8 (3%)	1 (0%)	39 74
1	B	260/269 (97%)	247 (95%)	12 (5%)	1 (0%)	39 74
1	C	261/269 (97%)	252 (97%)	7 (3%)	2 (1%)	24 58
1	D	261/269 (97%)	250 (96%)	10 (4%)	1 (0%)	39 74
1	E	260/269 (97%)	249 (96%)	10 (4%)	1 (0%)	39 74

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	F	261/269 (97%)	251 (96%)	9 (3%)	1 (0%)	39	74
1	G	261/269 (97%)	251 (96%)	9 (3%)	1 (0%)	39	74
1	H	260/269 (97%)	252 (97%)	7 (3%)	1 (0%)	39	74
1	I	262/269 (97%)	252 (96%)	8 (3%)	2 (1%)	24	58
1	J	261/269 (97%)	253 (97%)	7 (3%)	1 (0%)	39	74
1	K	260/269 (97%)	250 (96%)	9 (4%)	1 (0%)	39	74
1	L	262/269 (97%)	250 (95%)	11 (4%)	1 (0%)	39	74
All	All	3129/3228 (97%)	3008 (96%)	107 (3%)	14 (0%)	39	74

All (14) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	I	3	GLN
1	I	184	ASP
1	A	184	ASP
1	B	184	ASP
1	C	184	ASP
1	D	184	ASP
1	E	184	ASP
1	F	184	ASP
1	G	184	ASP
1	J	184	ASP
1	L	184	ASP
1	H	184	ASP
1	K	184	ASP
1	C	129	GLU

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	219/223 (98%)	206 (94%)	13 (6%)	24	57
1	B	219/223 (98%)	204 (93%)	15 (7%)	20	49

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	C	220/223 (99%)	206 (94%)	14 (6%)	22	52
1	D	220/223 (99%)	206 (94%)	14 (6%)	22	52
1	E	219/223 (98%)	206 (94%)	13 (6%)	24	57
1	F	220/223 (99%)	206 (94%)	14 (6%)	22	52
1	G	220/223 (99%)	203 (92%)	17 (8%)	16	41
1	H	219/223 (98%)	207 (94%)	12 (6%)	27	59
1	I	220/223 (99%)	205 (93%)	15 (7%)	20	49
1	J	220/223 (99%)	208 (94%)	12 (6%)	27	59
1	K	219/223 (98%)	205 (94%)	14 (6%)	22	52
1	L	220/223 (99%)	209 (95%)	11 (5%)	30	64
All	All	2635/2676 (98%)	2471 (94%)	164 (6%)	23	54

All (164) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	4	THR
1	A	22	VAL
1	A	27	PHE
1	A	43	ARG
1	A	53	VAL
1	A	66	ARG
1	A	89	CYS
1	A	124	ARG
1	A	129	GLU
1	A	190	SER
1	A	218	HIS
1	A	255	LEU
1	A	260	LEU
1	B	4	THR
1	B	22	VAL
1	B	27	PHE
1	B	43	ARG
1	B	53	VAL
1	B	66	ARG
1	B	70	THR
1	B	89	CYS
1	B	124	ARG
1	B	129	GLU

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Mol	Chain	Res	Type
1	B	145	SER
1	B	190	SER
1	B	218	HIS
1	B	255	LEU
1	B	260	LEU
1	C	3	GLN
1	C	4	THR
1	C	22	VAL
1	C	27	PHE
1	C	43	ARG
1	C	53	VAL
1	C	66	ARG
1	C	124	ARG
1	C	129	GLU
1	C	145	SER
1	C	190	SER
1	C	218	HIS
1	C	255	LEU
1	C	260	LEU
1	D	3	GLN
1	D	4	THR
1	D	22	VAL
1	D	27	PHE
1	D	43	ARG
1	D	53	VAL
1	D	66	ARG
1	D	89	CYS
1	D	112	LEU
1	D	124	ARG
1	D	190	SER
1	D	218	HIS
1	D	255	LEU
1	D	260	LEU
1	E	4	THR
1	E	22	VAL
1	E	27	PHE
1	E	43	ARG
1	E	53	VAL
1	E	66	ARG
1	E	98	SER
1	E	124	ARG
1	E	129	GLU

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Mol	Chain	Res	Type
1	E	190	SER
1	E	218	HIS
1	E	255	LEU
1	E	260	LEU
1	F	4	THR
1	F	22	VAL
1	F	27	PHE
1	F	43	ARG
1	F	53	VAL
1	F	66	ARG
1	F	89	CYS
1	F	124	ARG
1	F	129	GLU
1	F	190	SER
1	F	218	HIS
1	F	249	HIS
1	F	255	LEU
1	F	260	LEU
1	G	3	GLN
1	G	4	THR
1	G	22	VAL
1	G	27	PHE
1	G	43	ARG
1	G	53	VAL
1	G	66	ARG
1	G	124	ARG
1	G	129	GLU
1	G	145	SER
1	G	190	SER
1	G	201	VAL
1	G	206	LYS
1	G	218	HIS
1	G	229	LYS
1	G	255	LEU
1	G	260	LEU
1	H	4	THR
1	H	22	VAL
1	H	27	PHE
1	H	43	ARG
1	H	53	VAL
1	H	66	ARG
1	H	89	CYS

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Mol	Chain	Res	Type
1	H	124	ARG
1	H	190	SER
1	H	218	HIS
1	H	255	LEU
1	H	260	LEU
1	I	4	THR
1	I	22	VAL
1	I	27	PHE
1	I	43	ARG
1	I	53	VAL
1	I	66	ARG
1	I	88	ASP
1	I	124	ARG
1	I	129	GLU
1	I	190	SER
1	I	207	VAL
1	I	218	HIS
1	I	249	HIS
1	I	255	LEU
1	I	260	LEU
1	J	3	GLN
1	J	4	THR
1	J	22	VAL
1	J	27	PHE
1	J	43	ARG
1	J	53	VAL
1	J	66	ARG
1	J	124	ARG
1	J	190	SER
1	J	218	HIS
1	J	255	LEU
1	J	260	LEU
1	K	4	THR
1	K	22	VAL
1	K	27	PHE
1	K	43	ARG
1	K	53	VAL
1	K	66	ARG
1	K	124	ARG
1	K	129	GLU
1	K	145	SER
1	K	190	SER

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Mol	Chain	Res	Type
1	K	206	LYS
1	K	218	HIS
1	K	255	LEU
1	K	260	LEU
1	L	4	THR
1	L	22	VAL
1	L	27	PHE
1	L	43	ARG
1	L	53	VAL
1	L	66	ARG
1	L	124	ARG
1	L	190	SER
1	L	218	HIS
1	L	255	LEU
1	L	260	LEU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (90) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	10	ASN
1	A	80	HIS
1	A	95	HIS
1	A	127	ASN
1	A	180	ASN
1	A	210	HIS
1	A	213	GLN
1	A	231	HIS
1	A	236	ASN
1	A	239	HIS
1	B	10	ASN
1	B	95	HIS
1	B	127	ASN
1	B	210	HIS
1	B	213	GLN
1	B	231	HIS
1	B	236	ASN
1	B	239	HIS
1	C	95	HIS
1	C	127	ASN
1	C	210	HIS
1	C	213	GLN
1	C	231	HIS

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Mol	Chain	Res	Type
1	C	239	HIS
1	D	31	GLN
1	D	95	HIS
1	D	127	ASN
1	D	210	HIS
1	D	213	GLN
1	D	231	HIS
1	D	236	ASN
1	D	239	HIS
1	E	95	HIS
1	E	127	ASN
1	E	210	HIS
1	E	213	GLN
1	E	231	HIS
1	E	239	HIS
1	F	10	ASN
1	F	31	GLN
1	F	95	HIS
1	F	127	ASN
1	F	210	HIS
1	F	213	GLN
1	F	231	HIS
1	F	236	ASN
1	F	239	HIS
1	G	31	GLN
1	G	95	HIS
1	G	127	ASN
1	G	210	HIS
1	G	213	GLN
1	G	231	HIS
1	G	236	ASN
1	G	239	HIS
1	H	95	HIS
1	H	127	ASN
1	H	210	HIS
1	H	213	GLN
1	H	231	HIS
1	H	236	ASN
1	H	239	HIS
1	I	95	HIS
1	I	127	ASN
1	I	210	HIS

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Mol	Chain	Res	Type
1	I	213	GLN
1	I	231	HIS
1	I	236	ASN
1	I	239	HIS
1	J	95	HIS
1	J	127	ASN
1	J	210	HIS
1	J	213	GLN
1	J	231	HIS
1	J	236	ASN
1	J	239	HIS
1	K	10	ASN
1	K	95	HIS
1	K	127	ASN
1	K	210	HIS
1	K	213	GLN
1	K	231	HIS
1	K	239	HIS
1	L	95	HIS
1	L	127	ASN
1	L	210	HIS
1	L	213	GLN
1	L	231	HIS
1	L	236	ASN
1	L	239	HIS

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	262/269 (97%)	0.05	10 (3%) 44 32	21, 38, 63, 76	0
1	B	262/269 (97%)	0.21	11 (4%) 40 28	29, 47, 72, 89	0
1	C	263/269 (97%)	0.25	19 (7%) 18 10	24, 45, 75, 93	0
1	D	263/269 (97%)	0.20	16 (6%) 25 15	25, 43, 70, 85	0
1	E	262/269 (97%)	0.39	25 (9%) 10 5	27, 47, 80, 105	0
1	F	263/269 (97%)	0.33	16 (6%) 25 15	29, 43, 68, 80	0
1	G	263/269 (97%)	0.34	20 (7%) 17 9	27, 45, 69, 87	0
1	H	262/269 (97%)	0.45	26 (9%) 9 4	27, 46, 72, 97	0
1	I	264/269 (98%)	0.43	24 (9%) 11 6	26, 53, 119, 145	0
1	J	263/269 (97%)	0.64	36 (13%) 4 2	32, 60, 132, 168	0
1	K	262/269 (97%)	0.76	39 (14%) 3 2	35, 59, 102, 124	0
1	L	264/269 (98%)	1.43	82 (31%) 1 0	42, 58, 86, 100	0
All	All	3153/3228 (97%)	0.46	324 (10%) 9 4	21, 49, 90, 168	0

All (324) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	K	138	GLY	11.8
1	J	147	MET	9.2
1	L	80	HIS	7.8
1	L	189	VAL	7.7
1	J	179	PHE	7.5
1	L	195	ASN	6.9
1	L	164	GLY	6.3
1	K	218	HIS	6.2
1	L	140	ILE	5.6
1	G	149	ALA	5.5
1	J	144	PHE	5.4

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Mol	Chain	Res	Type	RSRZ
1	H	196	SER	5.3
1	I	179	PHE	5.2
1	H	195	ASN	5.2
1	L	193	VAL	5.2
1	L	74	TYR	5.1
1	L	146	ALA	5.1
1	L	152	GLU	5.1
1	K	137	GLN	5.1
1	F	143	VAL	5.0
1	K	168	PRO	4.9
1	L	71	LEU	4.9
1	L	75	VAL	4.9
1	L	244	GLU	4.8
1	F	195	ASN	4.7
1	H	159	ALA	4.6
1	I	195	ASN	4.6
1	E	143	VAL	4.5
1	L	180	ASN	4.5
1	J	149	ALA	4.5
1	K	161	LEU	4.4
1	K	135	PHE	4.4
1	L	179	PHE	4.4
1	H	129	GLU	4.4
1	L	194	PHE	4.3
1	H	143	VAL	4.3
1	L	134	GLY	4.2
1	I	147	MET	4.2
1	K	195	ASN	4.1
1	K	162	ALA	4.1
1	I	145	SER	4.1
1	D	196	SER	4.0
1	L	182	ARG	4.0
1	E	144	PHE	4.0
1	L	155	VAL	4.0
1	H	152	GLU	3.9
1	L	3	GLN	3.9
1	E	165	ALA	3.9
1	K	251	SER	3.9
1	B	129	GLU	3.9
1	L	192	THR	3.9
1	K	187	LEU	3.9
1	L	202	LEU	3.9

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Mol	Chain	Res	Type	RSRZ
1	D	143	VAL	3.9
1	H	218	HIS	3.8
1	B	195	ASN	3.8
1	H	225	ALA	3.8
1	A	129	GLU	3.8
1	L	150	ASN	3.8
1	F	136	GLU	3.7
1	L	120	GLY	3.7
1	L	129	GLU	3.7
1	E	149	ALA	3.7
1	L	149	ALA	3.7
1	I	191	ARG	3.7
1	F	140	ILE	3.7
1	J	157	GLY	3.7
1	L	191	ARG	3.7
1	D	195	ASN	3.6
1	K	127	ASN	3.6
1	L	29	THR	3.6
1	C	195	ASN	3.6
1	H	211	ILE	3.5
1	J	66	ARG	3.5
1	E	179	PHE	3.5
1	H	262	ARG	3.4
1	L	151	TYR	3.4
1	G	143	VAL	3.4
1	E	139	GLU	3.4
1	K	126	LEU	3.4
1	B	141	GLU	3.4
1	F	150	ASN	3.4
1	K	171	VAL	3.4
1	L	148	GLU	3.4
1	K	156	ASN	3.4
1	A	66	ARG	3.3
1	J	74	TYR	3.3
1	J	135	PHE	3.3
1	K	145	SER	3.3
1	L	145	SER	3.3
1	E	140	ILE	3.3
1	G	3	GLN	3.3
1	L	186	THR	3.3
1	L	243	ILE	3.3
1	J	143	VAL	3.3

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Mol	Chain	Res	Type	RSRZ
1	D	149	ALA	3.3
1	D	130	ASP	3.2
1	L	130	ASP	3.2
1	I	153	ALA	3.2
1	C	5	LEU	3.2
1	L	138	GLY	3.2
1	H	135	PHE	3.2
1	K	219	SER	3.2
1	L	153	ALA	3.2
1	K	129	GLU	3.2
1	K	141	GLU	3.2
1	L	141	GLU	3.2
1	C	165	ALA	3.2
1	F	193	VAL	3.2
1	L	201	VAL	3.2
1	H	126	LEU	3.2
1	J	5	LEU	3.2
1	E	142	LYS	3.1
1	C	141	GLU	3.1
1	L	222	ALA	3.1
1	G	137	GLN	3.1
1	J	154	TRP	3.1
1	I	165	ALA	3.1
1	K	154	TRP	3.1
1	C	144	PHE	3.1
1	E	80	HIS	3.1
1	K	151	TYR	3.1
1	F	196	SER	3.1
1	J	140	ILE	3.1
1	C	129	GLU	3.0
1	F	145	SER	3.0
1	D	3	GLN	3.0
1	L	60	PRO	3.0
1	D	129	GLU	3.0
1	L	27	PHE	3.0
1	E	147	MET	3.0
1	J	187	LEU	3.0
1	L	144	PHE	3.0
1	J	195	ASN	3.0
1	E	194	PHE	3.0
1	E	164	GLY	3.0
1	J	191	ARG	3.0

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Mol	Chain	Res	Type	RSRZ
1	I	218	HIS	3.0
1	L	59	ASN	2.9
1	B	218	HIS	2.9
1	G	178	LEU	2.9
1	K	66	ARG	2.9
1	J	153	ALA	2.9
1	L	30	ASP	2.9
1	L	135	PHE	2.9
1	L	218	HIS	2.9
1	L	94	GLY	2.9
1	K	43	ARG	2.9
1	B	127	ASN	2.9
1	L	196	SER	2.9
1	F	4	THR	2.9
1	J	150	ASN	2.9
1	K	196	SER	2.9
1	H	27	PHE	2.9
1	J	129	GLU	2.8
1	E	136	GLU	2.8
1	E	193	VAL	2.8
1	B	222	ALA	2.8
1	H	142	LYS	2.8
1	J	61	ASP	2.8
1	C	164	GLY	2.8
1	G	66	ARG	2.8
1	I	157	GLY	2.8
1	E	172	ARG	2.8
1	E	74	TYR	2.8
1	L	136	GLU	2.8
1	E	61	ASP	2.8
1	K	211	ILE	2.8
1	H	228	LEU	2.8
1	H	198	MET	2.8
1	J	130	ASP	2.7
1	H	216	ARG	2.7
1	L	93	VAL	2.7
1	J	136	GLU	2.7
1	K	27	PHE	2.7
1	C	150	ASN	2.7
1	I	140	ILE	2.7
1	C	59	ASN	2.7
1	G	195	ASN	2.7

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Mol	Chain	Res	Type	RSRZ
1	J	152	GLU	2.7
1	F	186	THR	2.7
1	C	140	ILE	2.7
1	I	130	ASP	2.7
1	L	132	HIS	2.7
1	I	142	LYS	2.7
1	L	242	ASN	2.7
1	L	190	SER	2.7
1	K	191	ARG	2.7
1	K	255	LEU	2.7
1	G	142	LYS	2.6
1	I	135	PHE	2.6
1	L	72	ASP	2.6
1	K	164	GLY	2.6
1	C	179	PHE	2.6
1	E	150	ASN	2.6
1	L	10	ASN	2.6
1	C	147	MET	2.6
1	L	119	ILE	2.6
1	J	170	ALA	2.6
1	A	27	PHE	2.6
1	J	59	ASN	2.6
1	L	77	ASP	2.6
1	L	128	ASP	2.6
1	K	134	GLY	2.6
1	H	201	VAL	2.6
1	G	27	PHE	2.6
1	F	161	LEU	2.6
1	K	260	LEU	2.6
1	L	228	LEU	2.6
1	J	148	GLU	2.6
1	E	129	GLU	2.5
1	J	145	SER	2.5
1	L	175	SER	2.5
1	L	147	MET	2.5
1	J	165	ALA	2.5
1	J	178	LEU	2.5
1	L	166	ASP	2.5
1	D	27	PHE	2.5
1	K	179	PHE	2.5
1	D	225	ALA	2.5
1	K	70	THR	2.5

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Mol	Chain	Res	Type	RSRZ
1	I	74	TYR	2.5
1	G	187	LEU	2.5
1	K	245	GLY	2.5
1	L	117	ILE	2.5
1	A	193	VAL	2.5
1	L	157	GLY	2.5
1	D	173	GLU	2.4
1	J	4	THR	2.4
1	E	152	GLU	2.4
1	H	145	SER	2.4
1	G	4	THR	2.4
1	J	156	ASN	2.4
1	L	254	THR	2.4
1	L	143	VAL	2.4
1	D	140	ILE	2.4
1	G	18	GLU	2.4
1	F	66	ARG	2.4
1	L	57	SER	2.4
1	I	144	PHE	2.4
1	C	149	ALA	2.4
1	L	188	PHE	2.4
1	F	129	GLU	2.3
1	B	140	ILE	2.3
1	G	140	ILE	2.3
1	I	189	VAL	2.3
1	L	47	VAL	2.3
1	H	127	ASN	2.3
1	L	139	GLU	2.3
1	G	218	HIS	2.3
1	A	243	ILE	2.3
1	H	158	PHE	2.3
1	J	142	LYS	2.3
1	H	7	ASP	2.3
1	G	138	GLY	2.3
1	I	175	SER	2.3
1	I	136	GLU	2.3
1	F	88	ASP	2.3
1	J	166	ASP	2.3
1	A	195	ASN	2.3
1	B	66	ARG	2.3
1	E	134	GLY	2.3
1	I	160	PRO	2.3

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Mol	Chain	Res	Type	RSRZ
1	L	88	ASP	2.2
1	L	142	LYS	2.3
1	D	218	HIS	2.2
1	L	73	PRO	2.2
1	A	262	ARG	2.2
1	I	150	ASN	2.2
1	L	111	GLU	2.2
1	C	80	HIS	2.2
1	C	142	LYS	2.2
1	B	138	GLY	2.2
1	H	130	ASP	2.2
1	A	135	PHE	2.2
1	A	218	HIS	2.2
1	J	3	GLN	2.2
1	L	156	ASN	2.2
1	L	245	GLY	2.2
1	E	161	LEU	2.2
1	G	69	THR	2.1
1	I	187	LEU	2.1
1	K	185	ILE	2.1
1	I	133	GLY	2.1
1	L	81	ILE	2.1
1	B	142	LYS	2.1
1	H	4	THR	2.1
1	E	141	GLU	2.1
1	K	144	PHE	2.1
1	G	196	SER	2.1
1	I	243	ILE	2.1
1	C	143	VAL	2.1
1	G	5	LEU	2.1
1	K	183	PRO	2.1
1	K	147	MET	2.1
1	L	127	ASN	2.1
1	C	189	VAL	2.1
1	D	142	LYS	2.1
1	H	149	ALA	2.1
1	E	195	ASN	2.1
1	B	251	SER	2.1
1	J	160	PRO	2.1
1	K	167	VAL	2.1
1	L	221	PRO	2.1
1	D	162	ALA	2.1

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Mol	Chain	Res	Type	RSRZ
1	G	147	MET	2.1
1	D	152	GLU	2.1
1	F	139	GLU	2.1
1	A	137	GLN	2.1
1	I	250	LEU	2.1
1	C	194	PHE	2.0
1	J	27	PHE	2.0
1	J	62	PHE	2.0
1	C	130	ASP	2.0
1	L	172	ARG	2.0
1	L	187	LEU	2.0
1	L	67	ARG	2.0
1	G	58	VAL	2.0
1	H	167	VAL	2.0
1	E	84	ALA	2.0
1	D	139	GLU	2.0
1	L	207	VAL	2.0
1	F	18	GLU	2.0
1	K	60	PRO	2.0

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

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

6.3 Carbohydrates [i](#)

There are no carbohydrates in this entry.

6.4 Ligands [i](#)

There are no ligands in this entry.

6.5 Other polymers [i](#)

There are no such residues in this entry.