Full wwPDB X-ray Structure Validation Report ⓘ

Mar 6, 2026 – 01:45 AM UTC

PDB ID	:	9K1T / pdb_00009k1t
Title	:	Crystal structure of mouse granzyme A
Authors	:	Zhong, X.; Hou, Y.J.; Ding, J.
Deposited on	:	2024-10-16
Resolution	:	2.18 Å(reported)

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

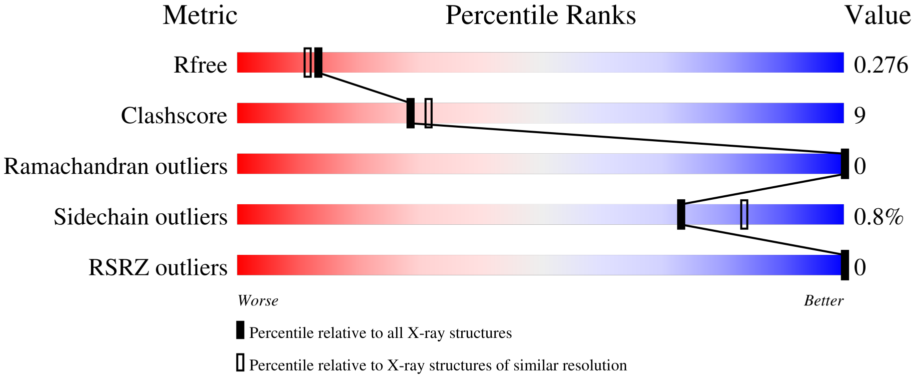
MolProbity	:	4-5-2 with Phenix2.0
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

1 Overall quality at a glance ⓘ

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

The reported resolution of this entry is 2.18 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}	180053	8975 (2.20-2.16)
Clashscore	190562	9786 (2.20-2.16)
Ramachandran outliers	187476	9664 (2.20-2.16)
Sidechain outliers	187428	9664 (2.20-2.16)
RSRZ outliers	180081	8979 (2.20-2.16)

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% 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	240	
1	B	240	
1	C	240	
1	D	240	

2 Entry composition ⓘ

There are 2 unique types of molecules in this entry. The entry contains 7650 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 Granzyme A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	229	1773	1119	327	315	12	0	0	0
1	B	228	1767	1116	326	313	12	0	0	0
1	C	229	1773	1119	327	315	12	0	0	0
1	D	229	1773	1119	327	315	12	0	0	0

There are 40 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	107	PRO	GLU	engineered mutation	UNP P11032
A	108	ALA	TYR	engineered mutation	UNP P11032
A	261	LEU	-	expression tag	UNP P11032
A	262	GLU	-	expression tag	UNP P11032
A	263	HIS	-	expression tag	UNP P11032
A	264	HIS	-	expression tag	UNP P11032
A	265	HIS	-	expression tag	UNP P11032
A	266	HIS	-	expression tag	UNP P11032
A	267	HIS	-	expression tag	UNP P11032
A	268	HIS	-	expression tag	UNP P11032
B	107	PRO	GLU	engineered mutation	UNP P11032
B	108	ALA	TYR	engineered mutation	UNP P11032
B	261	LEU	-	expression tag	UNP P11032
B	262	GLU	-	expression tag	UNP P11032
B	263	HIS	-	expression tag	UNP P11032
B	264	HIS	-	expression tag	UNP P11032
B	265	HIS	-	expression tag	UNP P11032
B	266	HIS	-	expression tag	UNP P11032
B	267	HIS	-	expression tag	UNP P11032
B	268	HIS	-	expression tag	UNP P11032
C	107	PRO	GLU	engineered mutation	UNP P11032

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Chain	Residue	Modelled	Actual	Comment	Reference
C	108	ALA	TYR	engineered mutation	UNP P11032
C	261	LEU	-	expression tag	UNP P11032
C	262	GLU	-	expression tag	UNP P11032
C	263	HIS	-	expression tag	UNP P11032
C	264	HIS	-	expression tag	UNP P11032
C	265	HIS	-	expression tag	UNP P11032
C	266	HIS	-	expression tag	UNP P11032
C	267	HIS	-	expression tag	UNP P11032
C	268	HIS	-	expression tag	UNP P11032
D	107	PRO	GLU	engineered mutation	UNP P11032
D	108	ALA	TYR	engineered mutation	UNP P11032
D	261	LEU	-	expression tag	UNP P11032
D	262	GLU	-	expression tag	UNP P11032
D	263	HIS	-	expression tag	UNP P11032
D	264	HIS	-	expression tag	UNP P11032
D	265	HIS	-	expression tag	UNP P11032
D	266	HIS	-	expression tag	UNP P11032
D	267	HIS	-	expression tag	UNP P11032
D	268	HIS	-	expression tag	UNP P11032

- Molecule 2 is water.

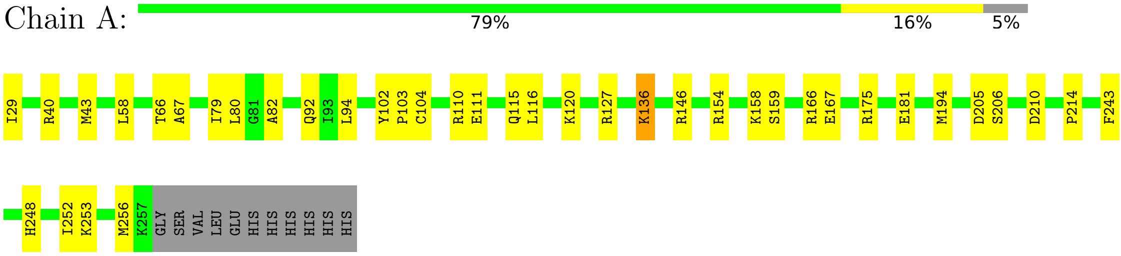
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	A	154	Total 154	O 154	0	0
2	B	125	Total 125	O 125	0	0
2	C	141	Total 141	O 141	0	0
2	D	144	Total 144	O 144	0	0

3 Residue-property plots ⓘ

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and 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 (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.

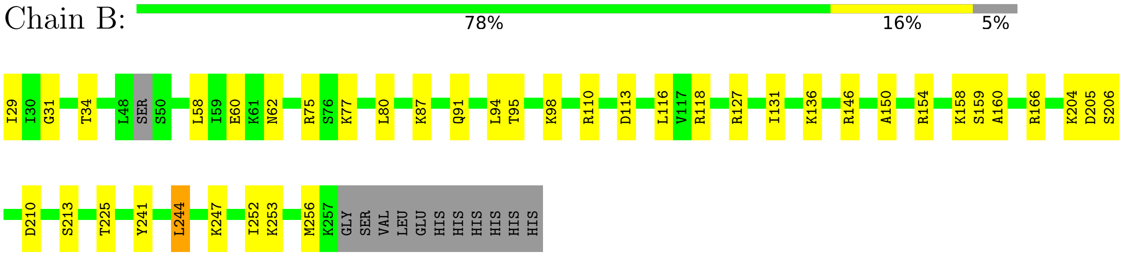
- Molecule 1: Granzyme A

Chain A:



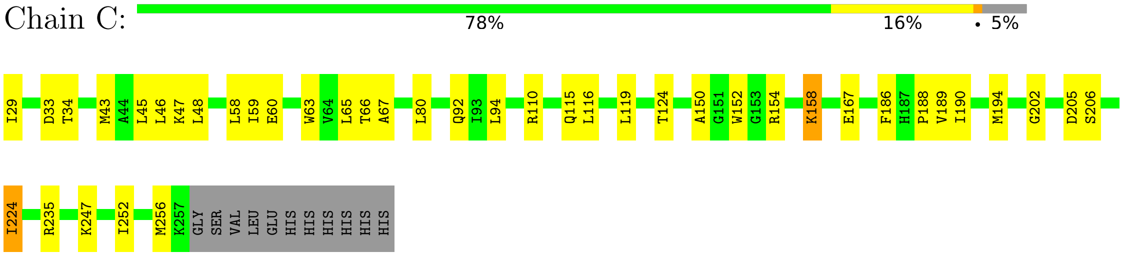
- Molecule 1: Granzyme A

Chain B:



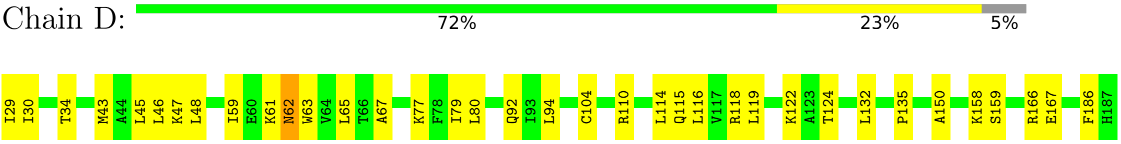
- Molecule 1: Granzyme A

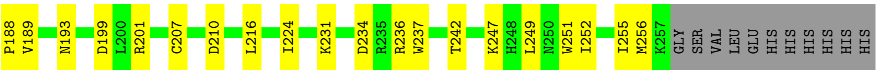
Chain C:



- Molecule 1: Granzyme A

Chain D:




P188
V189
N193
D199
L200
R201
C207
D210
L216
I224
K231
D234
R235
R236
W237
T242
K247
H248
L249
N250
W251
I252
I255
M256
K257
GLY
SER
VAL
LEU
GLU
HIS
HIS
HIS
HIS
HIS
HIS

4 Data and refinement statistics ⓘ

Property	**Value**	**Source**
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	51.90Å 102.92Å 118.80Å 90.00° 90.10° 90.00°	Depositor
Resolution (Å)	47.59 – 2.18 47.59 – 2.18	Depositor EDS
% Data completeness (in resolution range)	98.1 (47.59-2.18) 90.4 (47.59-2.18)	Depositor EDS
R_{merge}	0.11	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.26 (at 2.18Å)	Xtriage
Refinement program	PHENIX 1.20.1_4487	Depositor
R, R_{free}	0.257 , 0.278 0.254 , 0.276	Depositor DCC
R_{free} test set	2000 reflections (3.13%)	wwPDB-VP
Wilson B-factor (Å^2)	31.4	Xtriage
Anisotropy	0.749	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.36 , 29.9	EDS
L-test for twinning[2]	$< \|L\| > = 0.56$, $< L^2 > = 0.40$	Xtriage
Estimated twinning fraction	0.440 for h,-k,-l	Xtriage
F_o,F_c correlation	0.95	EDS
Total number of atoms	7650	wwPDB-VP
Average B, all atoms (Å^2)	34.0	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 35.41 % 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 5.8641e-04. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

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[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	A	0.11	0/1810	0.28	0/2441
1	B	0.10	0/1803	0.28	0/2430
1	C	0.10	0/1810	0.27	0/2441
1	D	0.10	0/1810	0.26	0/2441
All	All	0.10	0/7233	0.27	0/9753

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 ⓘ

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	1773	0	1808	28	0
1	B	1767	0	1802	32	0
1	C	1773	0	1809	28	0
1	D	1773	0	1809	39	0
2	A	154	0	0	8	0
2	B	125	0	0	11	0
2	C	141	0	0	5	0
2	D	144	0	0	9	0
All	All	7650	0	7228	126	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 9.

All (126) 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:61:LYS:HB3	1:D:122:LYS:HG2	1.59	0.85
1:C:58:LEU:HD13	1:C:80:LEU:HD11	1.65	0.77
1:D:67:ALA:O	1:D:115:GLN:NE2	2.20	0.73
1:D:43:MET:HE3	1:D:150:ALA:HB3	1.71	0.72
1:D:234:ASP:OD2	1:D:236:ARG:NH2	2.22	0.72
1:B:31:GLY:O	1:B:204:LYS:NZ	2.21	0.71
1:B:118:ARG:HB3	2:B:309:HOH:O	1.90	0.70
1:C:158:LYS:NZ	2:C:301:HOH:O	2.24	0.69
1:B:110:ARG:NH1	2:B:303:HOH:O	2.26	0.68
1:D:47:LYS:NZ	2:D:303:HOH:O	2.28	0.66
1:C:29:ILE:N	2:C:308:HOH:O	2.28	0.66
1:A:120:LYS:NZ	2:A:303:HOH:O	2.27	0.66
1:D:104:CYS:SG	2:D:405:HOH:O	2.53	0.66
1:C:59:ILE:HD13	1:C:65:LEU:HB2	1.79	0.65
1:C:110:ARG:HG3	1:C:188:PRO:HG3	1.78	0.64
1:C:205:ASP:OD1	1:C:206:SER:N	2.31	0.64
1:B:29:ILE:N	1:B:210:ASP:OD2	2.31	0.64
1:A:29:ILE:N	1:A:210:ASP:OD2	2.33	0.62
1:C:92:GLN:NE2	1:C:124:THR:O	2.32	0.61
1:B:154:ARG:HD3	1:B:159:SER:HA	1.84	0.59
1:C:202:GLY:HA3	1:C:235:ARG:HG2	1.84	0.59
1:D:116:LEU:HD11	1:D:252:ILE:HG23	1.84	0.58
1:D:251:TRP:O	1:D:255:ILE:HG12	2.03	0.57
1:B:146:ARG:NH1	2:B:315:HOH:O	2.37	0.57
1:C:59:ILE:HD11	1:C:116:LEU:HD21	1.87	0.57
1:D:30:ILE:HG13	1:D:207:CYS:SG	2.45	0.56
1:D:150:ALA:HB2	1:D:167:GLU:HG3	1.88	0.56
1:B:98:LYS:HB3	2:B:309:HOH:O	2.06	0.56
1:A:58:LEU:HD13	1:A:80:LEU:HD11	1.87	0.56
1:D:59:ILE:HD11	1:D:116:LEU:HD21	1.88	0.55
1:D:80:LEU:HD23	1:D:94:LEU:HD12	1.86	0.55
1:B:116:LEU:HD11	1:B:252:ILE:HG23	1.87	0.55
1:C:94:LEU:HD13	1:C:119:LEU:HD13	1.89	0.55
1:D:59:ILE:HD13	1:D:65:LEU:HB2	1.87	0.55
1:C:47:LYS:NZ	2:C:321:HOH:O	2.40	0.54
1:C:247:LYS:NZ	2:C:314:HOH:O	2.35	0.54
1:C:154:ARG:HH21	1:C:158:LYS:HA	1.73	0.54
1:B:77:LYS:HE2	1:B:95:THR:HG22	1.88	0.54
1:D:110:ARG:NH2	2:D:318:HOH:O	2.42	0.53
1:A:253:LYS:HA	1:A:256:MET:HE2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:231:LYS:HG3	1:D:237:TRP:HZ3	1.74	0.52
1:B:75:ARG:NH2	2:B:317:HOH:O	2.38	0.52
1:C:43:MET:HE3	1:C:150:ALA:HB3	1.90	0.52
1:D:46:LEU:HD23	1:D:48:LEU:HD21	1.91	0.52
1:B:247:LYS:NZ	2:B:321:HOH:O	2.43	0.52
1:C:116:LEU:HD11	1:C:252:ILE:HG23	1.90	0.52
1:D:29:ILE:N	1:D:210:ASP:OD2	2.43	0.52
1:B:60:GLU:HA	1:B:131:ILE:HD13	1.91	0.51
1:B:58:LEU:HD13	1:B:80:LEU:HD11	1.92	0.51
1:A:205:ASP:OD1	1:A:206:SER:N	2.42	0.51
1:D:132:LEU:HD11	1:D:216:LEU:HD11	1.92	0.51
1:D:251:TRP:NE1	1:D:255:ILE:HD11	2.25	0.51
1:B:118:ARG:NH1	2:B:322:HOH:O	2.45	0.50
1:C:60:GLU:HB3	1:C:63:TRP:HB2	1.93	0.49
1:D:193:ASN:ND2	2:D:320:HOH:O	2.43	0.49
1:A:146:ARG:HG2	2:A:304:HOH:O	2.12	0.49
1:B:150:ALA:O	1:B:213:SER:OG	2.29	0.49
1:A:175:ARG:NH1	2:A:312:HOH:O	2.35	0.49
1:A:110:ARG:NH2	2:A:308:HOH:O	2.31	0.48
1:D:47:LYS:HB2	1:D:77:LYS:HB2	1.95	0.48
1:D:247:LYS:NZ	2:D:310:HOH:O	2.33	0.48
1:D:224:ILE:HB	1:D:242:THR:HB	1.95	0.48
1:A:40:ARG:HE	1:A:167:GLU:CD	2.22	0.48
1:C:67:ALA:O	1:C:115:GLN:NE2	2.43	0.47
1:A:111:GLU:HG2	1:A:194:MET:HE3	1.96	0.47
1:D:45:LEU:HD23	1:D:79:ILE:HD12	1.97	0.47
1:C:186:PHE:HD2	1:C:189:VAL:HG22	1.80	0.47
1:D:236:ARG:HE	1:D:236:ARG:HB2	1.62	0.47
1:A:158:LYS:O	1:A:159:SER:OG	2.24	0.46
1:C:150:ALA:HB2	1:C:167:GLU:HG3	1.97	0.46
1:D:110:ARG:HG3	1:D:188:PRO:HG3	1.97	0.46
1:D:92:GLN:NE2	1:D:124:THR:O	2.42	0.46
1:C:46:LEU:HD23	1:C:48:LEU:HD21	1.96	0.46
1:A:116:LEU:HD11	1:A:252:ILE:HG23	1.98	0.46
1:A:80:LEU:HD12	1:A:94:LEU:HD13	1.98	0.46
1:C:45:LEU:HD13	1:C:152:TRP:CD2	2.52	0.45
1:D:186:PHE:HD2	1:D:189:VAL:HG22	1.81	0.45
1:B:127:ARG:NH2	1:D:158:LYS:O	2.49	0.45
1:D:45:LEU:HD21	1:D:47:LYS:HE2	1.97	0.45
1:C:33:ASP:OD1	1:C:34:THR:N	2.50	0.45
1:A:154:ARG:HD3	1:A:159:SER:HA	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:91:GLN:NE2	2:B:304:HOH:O	2.26	0.45
1:A:181:GLU:HG3	2:A:400:HOH:O	2.17	0.45
1:A:67:ALA:O	1:A:115:GLN:NE2	2.45	0.44
1:B:158:LYS:C	1:B:160:ALA:H	2.25	0.44
1:A:43:MET:HE1	1:A:214:PRO:HD2	1.99	0.44
1:B:34:THR:HA	1:B:166:ARG:HA	2.00	0.44
1:D:159:SER:HB2	2:D:349:HOH:O	2.17	0.44
1:D:199:ASP:OD1	1:D:201:ARG:HG2	2.17	0.44
1:C:110:ARG:NH2	2:C:328:HOH:O	2.50	0.44
1:D:94:LEU:HD13	1:D:119:LEU:HD13	1.98	0.44
1:B:113:ASP:HB2	2:B:314:HOH:O	2.18	0.44
1:C:66:THR:OG1	1:C:67:ALA:N	2.50	0.43
1:A:127:ARG:HA	1:A:127:ARG:HD2	1.86	0.43
1:B:205:ASP:OD1	1:B:206:SER:N	2.51	0.43
1:B:136:LYS:HB2	2:B:407:HOH:O	2.18	0.43
1:D:62:ASN:N	1:D:62:ASN:OD1	2.52	0.43
1:A:79:ILE:HG22	1:A:82:ALA:HB2	2.01	0.43
1:A:102:TYR:HD1	1:A:103:PRO:HD2	1.84	0.43
1:C:154:ARG:NH2	1:C:158:LYS:HA	2.33	0.42
1:D:118:ARG:NE	2:D:326:HOH:O	2.49	0.42
1:C:65:LEU:HG	1:C:224:ILE:HD11	2.01	0.42
1:A:136:LYS:NZ	2:A:325:HOH:O	2.49	0.42
1:D:77:LYS:NZ	2:D:329:HOH:O	2.52	0.42
1:B:253:LYS:HE3	1:B:253:LYS:HB2	1.81	0.42
1:A:66:THR:OG1	1:A:67:ALA:N	2.53	0.42
1:B:225:THR:HA	1:B:241:TYR:CD2	2.55	0.42
1:D:135:PRO:HG2	1:D:249:LEU:HD21	2.02	0.42
1:B:244:LEU:HD12	1:B:244:LEU:HA	1.83	0.42
1:B:62:ASN:OD1	1:B:62:ASN:N	2.53	0.42
1:C:63:TRP:CZ2	1:C:256:MET:HA	2.55	0.42
1:A:136:LYS:HD3	2:A:435:HOH:O	2.19	0.41
1:A:29:ILE:HB	1:A:166:ARG:HB2	2.01	0.41
1:C:190:ILE:HA	1:C:194:MET:SD	2.61	0.41
1:A:243:PHE:O	1:A:248:HIS:ND1	2.52	0.41
1:A:256:MET:SD	2:A:424:HOH:O	2.62	0.41
1:B:77:LYS:HE2	1:B:95:THR:CG2	2.51	0.41
1:B:80:LEU:HD12	1:B:94:LEU:HD13	2.02	0.41
1:B:127:ARG:NH2	2:B:325:HOH:O	2.54	0.41
1:B:252:ILE:HG22	1:B:256:MET:HE2	2.03	0.41
1:D:63:TRP:CZ2	1:D:256:MET:HA	2.55	0.41
1:A:102:TYR:CE2	1:A:104:CYS:HB2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:79:ILE:HA	1:A:92:GLN:O	2.21	0.40
1:B:87:LYS:HE3	1:B:87:LYS:HB2	1.84	0.40
1:B:136:LYS:HD2	2:D:301:HOH:O	2.21	0.40
1:D:34:THR:HA	1:D:166:ARG:HA	2.03	0.40

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone

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	227/240 (95%)	220 (97%)	7 (3%)	0	100	100
1	B	224/240 (93%)	216 (96%)	8 (4%)	0	100	100
1	C	227/240 (95%)	216 (95%)	11 (5%)	0	100	100
1	D	227/240 (95%)	218 (96%)	9 (4%)	0	100	100
All	All	905/960 (94%)	870 (96%)	35 (4%)	0	100	100

There are no Ramachandran outliers to report.

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	193/203 (95%)	192 (100%)	1 (0%)	81	89
1	B	192/203 (95%)	191 (100%)	1 (0%)	81	89

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	C	193/203 (95%)	191 (99%)	2 (1%)	68	79
1	D	193/203 (95%)	191 (99%)	2 (1%)	68	79
All	All	771/812 (95%)	765 (99%)	6 (1%)	73	83

All (6) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	136	LYS
1	B	244	LEU
1	C	158	LYS
1	C	224	ILE
1	D	62	ASN
1	D	114	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (9) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	51	ASN
1	A	250	ASN
1	B	51	ASN
1	B	86	ASN
1	B	208	ASN
1	C	71	ASN
1	C	128	ASN
1	D	193	ASN
1	D	208	ASN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

5.6 Ligand geometry ⓘ

There are no ligands in this entry.

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

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	229/240 (95%)	-1.08	0	100	100	22, 33, 45, 51	0
1	B	228/240 (95%)	-1.07	0	100	100	22, 33, 46, 51	0
1	C	229/240 (95%)	-1.01	0	100	100	23, 34, 47, 53	0
1	D	229/240 (95%)	-1.05	0	100	100	23, 33, 45, 56	0
All	All	915/960 (95%)	-1.05	0	100	100	22, 33, 46, 56	0

There are no RSRZ outliers to report.

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

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

6.3 Carbohydrates

There are no oligosaccharides in this entry.

6.4 Ligands

There are no ligands in this entry.

6.5 Other polymers

There are no such residues in this entry.