Full wwPDB X-ray Structure Validation Report ⓘ

Nov 1, 2023 – 11:32 PM EDT

PDB ID	:	3NFP
Title	:	Crystal structure of the Fab fragment of therapeutic antibody daclizumab in complex with IL-2Ra (CD25) ectodomain
Authors	:	Yang, H.; Wang, J.; Du, J.; Zhong, C.; Guo, Y.; Ding, J.
Deposited on	:	2010-06-10
Resolution	:	2.86 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:

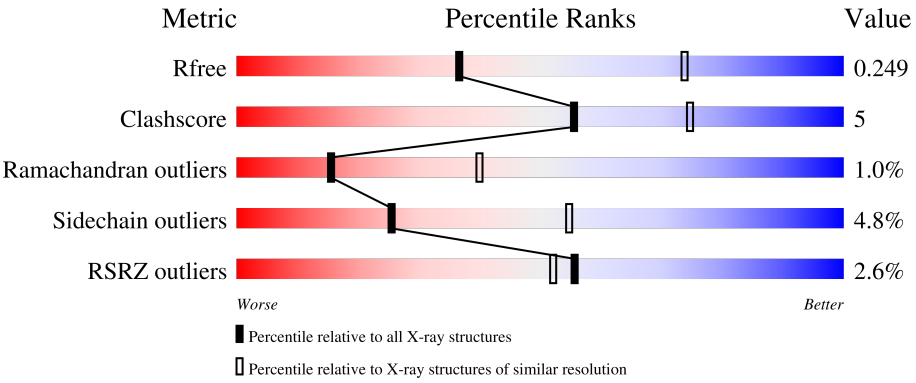
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.13
EDS	:	2.36
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation 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 2.86 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}	130704	3168 (2.90-2.82)
Clashscore	141614	3438 (2.90-2.82)
Ramachandran outliers	138981	3348 (2.90-2.82)
Sidechain outliers	138945	3351 (2.90-2.82)
RSRZ outliers	127900	3103 (2.90-2.82)

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	216	86% 12%
1	H	216	% 84% 13%
2	B	212	2% 88% 11%
2	L	212	88% 10%
3	I	223	4% 44% 10% 44%

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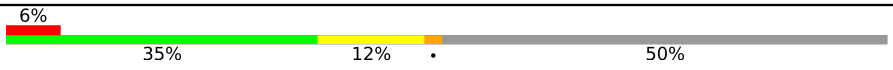
Mol	Chain	Length	Quality of chain
3	K	223	

2 Entry composition (i)

There are 4 unique types of molecules in this entry. The entry contains 8421 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 Heavy chain of Fab fragment of daclizumab.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	213	Total	C	N	O	S	0	0	0
			1600	1010	264	320	6			
1	H	214	Total	C	N	O	S	0	0	0
			1609	1016	266	321	6			

- Molecule 2 is a protein called Light chain of Fab fragment of daclizumab.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	212	Total	C	N	O	S	0	0	0
			1626	1016	272	332	6			
2	L	212	Total	C	N	O	S	0	0	0
			1626	1016	272	332	6			

- Molecule 3 is a protein called Interleukin-2 receptor subunit alpha.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	I	124	Total	C	N	O	S	0	0	0
			981	607	174	185	15			
3	K	111	Total	C	N	O	S	0	0	0
			882	545	154	170	13			

There are 12 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
I	218	HIS	-	expression tag	UNP P01589
I	219	HIS	-	expression tag	UNP P01589
I	220	HIS	-	expression tag	UNP P01589
I	221	HIS	-	expression tag	UNP P01589
I	222	HIS	-	expression tag	UNP P01589
I	223	HIS	-	expression tag	UNP P01589
K	218	HIS	-	expression tag	UNP P01589
K	219	HIS	-	expression tag	UNP P01589

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Chain	Residue	Modelled	Actual	Comment	Reference
K	220	HIS	-	expression tag	UNP P01589
K	221	HIS	-	expression tag	UNP P01589
K	222	HIS	-	expression tag	UNP P01589
K	223	HIS	-	expression tag	UNP P01589

- Molecule 4 is water.

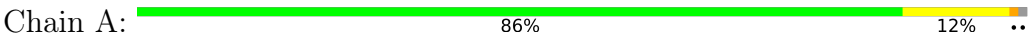
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	A	17	Total O 17 17	0	0
4	B	18	Total O 18 18	0	0
4	H	24	Total O 24 24	0	0
4	L	10	Total O 10 10	0	0
4	I	17	Total O 17 17	0	0
4	K	11	Total O 11 11	0	0

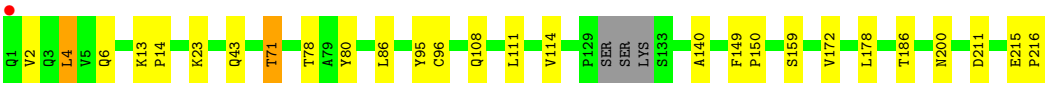
3 Residue-property plots (i)

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 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: Heavy chain of Fab fragment of daclizumab

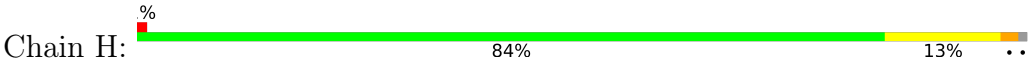
Chain A:

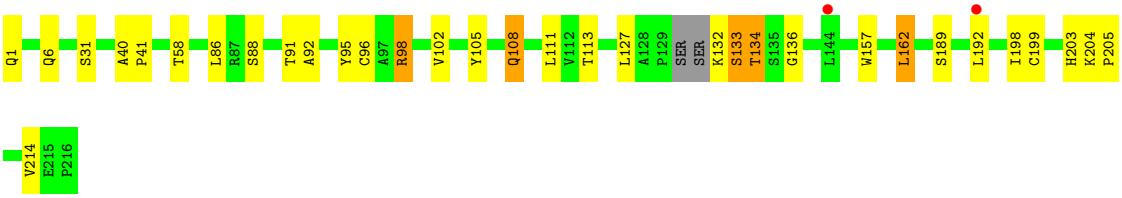




• Molecule 1: Heavy chain of Fab fragment of daclizumab

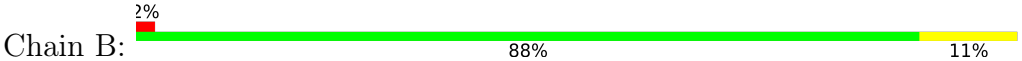
Chain H:

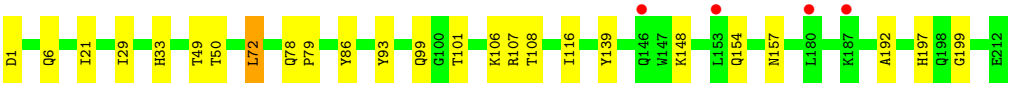




• Molecule 2: Light chain of Fab fragment of daclizumab

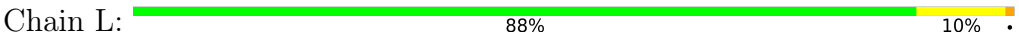
Chain B:





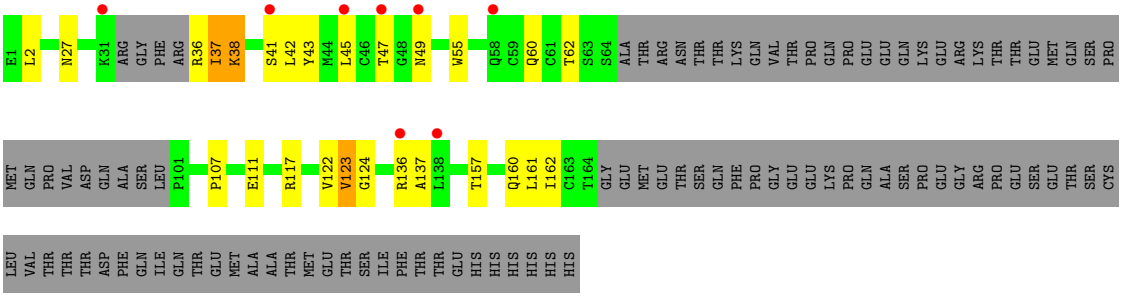
• Molecule 2: Light chain of Fab fragment of daclizumab

Chain L:



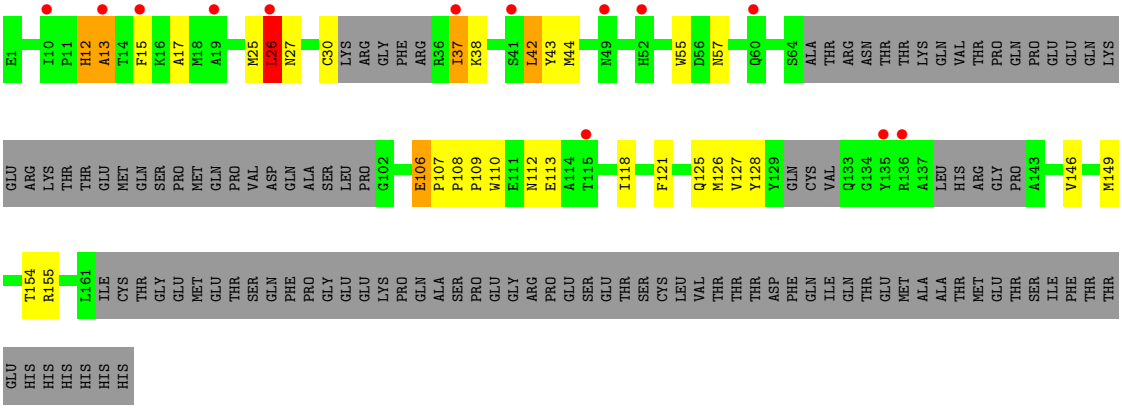
• Molecule 3: Interleukin-2 receptor subunit alpha

Chain I:



• Molecule 3: Interleukin-2 receptor subunit alpha

Chain K:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 2 2 21	Depositor
Cell constants a, b, c, α, β, γ	102.17Å 114.97Å 247.56Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	50.00 – 2.86 50.03 – 2.86	Depositor EDS
% Data completeness (in resolution range)	93.1 (50.00-2.86) 93.0 (50.03-2.86)	Depositor EDS
R_{merge}	0.16	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.06 (at 2.86Å)	Xtriage
Refinement program	REFMAC 5.5.0066	Depositor
R, R_{free}	0.253 , 0.301 0.249 , 0.249	Depositor DCC
R_{free} test set	1610 reflections (5.08%)	wwPDB-VP
Wilson B-factor (Å^2)	67.5	Xtriage
Anisotropy	0.292	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.29 , 59.4	EDS
L-test for twinning[2]	$< \|L\| > = 0.47$, $< L^2 > = 0.30$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.90	EDS
Total number of atoms	8421	wwPDB-VP
Average B, all atoms (Å^2)	69.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.43% of the height of the origin peak. No significant pseudotranslation is detected.*

[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	0.39	0/1639	0.53	1/2232 (0.0%)
1	H	0.42	0/1648	0.54	1/2243 (0.0%)
2	B	0.37	0/1662	0.53	0/2257
2	L	0.40	0/1662	0.55	1/2257 (0.0%)
3	I	0.37	0/1007	0.51	0/1361
3	K	0.33	0/903	0.51	1/1217 (0.1%)
All	All	0.39	0/8521	0.53	4/11567 (0.0%)

There are no bond length outliers.

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	4	LEU	CA-CB-CG	5.58	128.13	115.30
2	L	174	LEU	CA-CB-CG	5.28	127.44	115.30
3	K	26	LEU	CA-CB-CG	5.13	127.11	115.30
1	H	162	LEU	CA-CB-CG	5.12	127.07	115.30

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	1600	0	1556	12	0
1	H	1609	0	1569	17	0
2	B	1626	0	1579	16	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	L	1626	0	1579	11	0
3	I	981	0	916	12	0
3	K	882	0	809	19	0
4	A	17	0	0	1	0
4	B	18	0	0	0	0
4	H	24	0	0	1	0
4	I	17	0	0	1	0
4	K	11	0	0	0	0
4	L	10	0	0	0	0
All	All	8421	0	8008	84	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 5.

All (84) 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)
3:K:30:CYS:HA	3:K:112:ASN:O	1.61	0.97
1:H:6:GLN:H	1:H:108:GLN:HE22	0.93	0.91
1:H:6:GLN:N	1:H:108:GLN:HE22	1.78	0.77
1:H:6:GLN:H	1:H:108:GLN:NE2	1.77	0.77
1:A:71:THR:HG23	1:A:80:TYR:HB2	1.71	0.73
3:I:37:ILE:O	3:I:38:LYS:HB2	1.91	0.68
1:H:6:GLN:HE22	1:H:95:TYR:HA	1.60	0.67
2:B:107:ARG:HG2	2:B:108:THR:H	1.61	0.65
3:K:109:PRO:HA	3:K:113:GLU:OE2	1.97	0.65
3:I:45:LEU:HD12	3:I:47:THR:HG22	1.79	0.63
1:H:1:GLN:HB2	4:H:220:HOH:O	1.98	0.63
3:K:121:PHE:CD2	3:K:125:GLN:HG2	2.34	0.61
3:K:106:GLU:HG2	3:K:107:PRO:HD2	1.83	0.60
2:L:197:HIS:CD2	2:L:199:GLY:H	2.19	0.59
2:B:21:ILE:HD12	2:B:101:THR:HG21	1.82	0.59
3:I:123:VAL:HG13	3:I:124:GLY:H	1.68	0.59
1:H:40:ALA:HB2	1:H:92:ALA:HB2	1.84	0.58
1:H:91:THR:HG23	1:H:113:THR:HA	1.87	0.56
3:I:136:ARG:HG3	3:I:137:ALA:H	1.70	0.56
3:I:27:ASN:ND2	3:I:43:TYR:CE1	2.74	0.56
2:B:106:LYS:HA	2:B:139:TYR:OH	2.06	0.56
1:A:23:LYS:HG3	1:A:78:THR:HG22	1.88	0.55
1:H:204:LYS:HB2	1:H:205:PRO:HD3	1.88	0.54
2:B:93:TYR:HB2	3:K:25:MET:HE1	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:133:SER:O	1:H:134:THR:HB	2.08	0.53
2:B:148:LYS:HB2	2:B:192:ALA:HB3	1.90	0.53
3:K:37:ILE:H	3:K:37:ILE:HD13	1.72	0.53
3:K:27:ASN:HD21	3:K:118:ILE:HD11	1.73	0.53
3:K:110:TRP:CE2	3:K:113:GLU:HG2	2.45	0.52
3:I:38:LYS:HG3	3:I:60:GLN:HG3	1.90	0.51
3:K:44:MET:HG2	3:K:57:ASN:O	2.11	0.51
1:A:159:SER:H	1:A:200:ASN:HD21	1.58	0.51
1:H:133:SER:O	1:H:134:THR:CB	2.58	0.51
3:K:17:ALA:HB2	3:K:127:VAL:HG12	1.92	0.51
2:L:6:GLN:HG2	2:L:99:GLN:HG3	1.92	0.50
2:B:78:GLN:HB3	2:B:79:PRO:HD2	1.93	0.50
3:I:55:TRP:CE2	3:I:107:PRO:HG3	2.46	0.50
2:L:2:ILE:HG21	2:L:29:ILE:HD11	1.93	0.49
2:L:121:ASP:HA	2:L:124:LEU:HD12	1.95	0.48
3:I:137:ALA:HB2	3:I:161:LEU:HD12	1.95	0.48
1:A:6:GLN:HE22	1:A:95:TYR:HA	1.77	0.48
3:I:137:ALA:HA	3:I:162:ILE:O	2.14	0.48
2:L:12:SER:HB2	2:L:106:LYS:HB3	1.95	0.47
2:B:93:TYR:HD2	3:K:25:MET:CE	2.27	0.47
3:K:26:LEU:HD11	3:K:55:TRP:CZ3	2.50	0.46
2:B:154:GLN:HG2	2:B:157:ASN:HD21	1.80	0.46
3:K:149:MET:HB2	3:K:154:THR:HG22	1.98	0.46
1:A:6:GLN:NE2	1:A:96:CYS:H	2.13	0.46
3:K:126:MET:HG3	3:K:146:VAL:HG22	1.96	0.46
2:L:131:VAL:HG13	2:L:178:LEU:HB3	1.98	0.46
3:K:15:PHE:HA	3:K:128:TYR:O	2.16	0.46
2:B:6:GLN:HE22	2:B:86:TYR:HA	1.81	0.45
1:A:13:LYS:HG3	1:A:14:PRO:HD2	1.98	0.45
1:H:133:SER:HA	1:H:189:SER:HB2	1.99	0.45
2:B:107:ARG:NH1	2:B:108:THR:O	2.50	0.45
1:H:98:ARG:HG2	1:H:105:TYR:HD1	1.82	0.45
2:B:21:ILE:HB	2:B:72:LEU:HD23	1.99	0.44
2:B:197:HIS:CD2	2:B:199:GLY:H	2.36	0.44
3:I:37:ILE:O	3:I:38:LYS:CB	2.65	0.44
3:I:41:SER:HA	4:I:228:HOH:O	2.17	0.43
2:B:49:THR:O	2:B:50:THR:HG22	2.18	0.43
2:B:49:THR:C	2:B:50:THR:HG22	2.39	0.43
1:H:6:GLN:NE2	1:H:96:CYS:H	2.17	0.43
2:B:93:TYR:HD2	3:K:25:MET:HE1	1.84	0.43
3:K:42:LEU:HG	3:K:43:TYR:H	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:140:ALA:HB2	1:A:186:THR:HG22	2.01	0.42
2:L:116:ILE:HD13	2:L:117:PHE:H	1.84	0.42
2:L:197:HIS:HD2	2:L:199:GLY:H	1.63	0.42
3:K:12:HIS:O	3:K:13:ALA:HB2	2.18	0.42
3:K:108:PRO:HA	3:K:109:PRO:HD2	1.81	0.42
2:L:135:LEU:HB2	2:L:174:LEU:HB3	2.01	0.42
2:B:33:HIS:CD2	2:B:49:THR:H	2.37	0.42
1:A:215:GLU:HB2	1:A:216:PRO:HD2	2.02	0.42
1:H:133:SER:HB2	1:H:192:LEU:CB	2.50	0.41
2:L:33:HIS:CD2	2:L:49:THR:H	2.38	0.41
1:H:203:HIS:ND1	1:H:205:PRO:HD2	2.34	0.41
1:A:159:SER:H	1:A:200:ASN:ND2	2.19	0.41
2:L:112:PRO:HB3	2:L:138:PHE:HB3	2.02	0.41
1:A:43:GLN:NE2	4:A:227:HOH:O	2.54	0.41
1:H:132:LYS:NZ	1:H:136:GLY:O	2.54	0.41
3:I:123:VAL:HG13	3:I:124:GLY:N	2.35	0.41
1:A:86:LEU:HB3	1:A:114:VAL:HG11	2.03	0.40
1:A:149:PHE:HA	1:A:150:PRO:HA	1.94	0.40
1:H:157:TRP:CH2	1:H:199:CYS:HB3	2.57	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	209/216 (97%)	196 (94%)	13 (6%)	0	100 100
1	H	210/216 (97%)	198 (94%)	9 (4%)	3 (1%)	11 31
2	B	210/212 (99%)	191 (91%)	19 (9%)	0	100 100
2	L	210/212 (99%)	201 (96%)	9 (4%)	0	100 100
3	I	118/223 (53%)	97 (82%)	15 (13%)	6 (5%)	2 5

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
3	K	101/223 (45%)	84 (83%)	15 (15%)	2 (2%)	7 23
All	All	1058/1302 (81%)	967 (91%)	80 (8%)	11 (1%)	15 40

All (11) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	I	38	LYS
3	I	49	ASN
1	H	134	THR
3	I	160	GLN
3	K	38	LYS
3	I	37	ILE
3	I	123	VAL
3	K	13	ALA
1	H	133	SER
3	I	122	VAL
1	H	41	PRO

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	179/182 (98%)	171 (96%)	8 (4%)	27 57
1	H	180/182 (99%)	168 (93%)	12 (7%)	16 39
2	B	187/187 (100%)	182 (97%)	5 (3%)	44 74
2	L	187/187 (100%)	180 (96%)	7 (4%)	34 65
3	I	110/200 (55%)	103 (94%)	7 (6%)	17 41
3	K	98/200 (49%)	92 (94%)	6 (6%)	18 43
All	All	941/1138 (83%)	896 (95%)	45 (5%)	25 55

All (45) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	2	VAL
1	A	4	LEU
1	A	71	THR
1	A	108	GLN
1	A	111	LEU
1	A	172	VAL
1	A	178	LEU
1	A	211	ASP
2	B	1	ASP
2	B	29	ILE
2	B	72	LEU
2	B	99	GLN
2	B	116	ILE
1	H	31	SER
1	H	58	THR
1	H	86	LEU
1	H	88	SER
1	H	98	ARG
1	H	102	VAL
1	H	108	GLN
1	H	111	LEU
1	H	127	LEU
1	H	162	LEU
1	H	198	ILE
1	H	214	VAL
2	L	20	THR
2	L	74	ILE
2	L	99	GLN
2	L	104	GLU
2	L	105	VAL
2	L	116	ILE
2	L	168	LYS
3	I	2	LEU
3	I	36	ARG
3	I	42	LEU
3	I	62	THR
3	I	111	GLU
3	I	117	ARG
3	I	157	THR
3	K	12	HIS
3	K	26	LEU
3	K	37	ILE
3	K	42	LEU

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Mol	Chain	Res	Type
3	K	106	GLU
3	K	155	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (17) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	1	GLN
1	A	6	GLN
1	A	77	ASN
2	B	6	GLN
2	B	33	HIS
2	B	197	HIS
2	B	209	ASN
1	H	6	GLN
1	H	108	GLN
1	H	202	ASN
2	L	33	HIS
2	L	36	GLN
2	L	197	HIS
3	I	27	ASN
3	I	60	GLN
3	I	139	HIS
3	K	27	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 monosaccharides in this entry.

5.6 Ligand geometry

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, 95^{th} 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	213/216 (98%)	-0.07	1 (0%) 91 90	38, 67, 92, 115	0
1	H	214/216 (99%)	-0.05	2 (0%) 84 84	38, 59, 89, 135	0
2	B	212/212 (100%)	-0.06	4 (1%) 66 64	37, 61, 123, 141	0
2	L	212/212 (100%)	-0.19	0 100 100	33, 52, 93, 111	0
3	I	124/223 (55%)	0.37	8 (6%) 18 14	42, 70, 126, 165	0
3	K	111/223 (49%)	0.77	13 (11%) 4 3	41, 105, 153, 176	0
All	All	1086/1302 (83%)	0.05	28 (2%) 56 52	33, 63, 123, 176	0

All (28) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
3	K	135	TYR	4.6
3	K	136	ARG	4.4
3	K	13	ALA	4.1
3	K	49	ASN	4.0
2	B	180	LEU	3.9
3	K	115	THR	3.8
3	K	41	SER	3.5
3	I	49	ASN	3.4
3	I	41	SER	3.3
3	K	10	ILE	3.3
2	B	153	LEU	3.2
3	I	136	ARG	3.0
1	H	192	LEU	2.9
3	K	60	GLN	2.8
2	B	146	GLN	2.8
3	I	45	LEU	2.6
3	K	26	LEU	2.5
3	K	37	ILE	2.5
3	I	58	GLN	2.5

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Mol	Chain	Res	Type	RSRZ
1	A	1	GLN	2.5
2	B	187	LYS	2.4
1	H	144	LEU	2.4
3	K	52	HIS	2.3
3	I	47	THR	2.2
3	K	15	PHE	2.2
3	I	31	LYS	2.1
3	I	138	LEU	2.1
3	K	19	ALA	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 monosaccharides 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.