Full wwPDB X-ray Structure Validation Report ⓘ

Mar 9, 2026 – 05:25 PM UTC

PDB ID	:	6UVO / pdb_00006uvo
Title	:	Structure of antibody 3G12 bound to the central conserved domain of RSV G
Authors	:	Fedechkin, S.O.; George, N.L.; Nunez Castrejon, A.M.; Dillen, J.; Kauvar, L.M.; DuBois, R.M.
Deposited on	:	2019-11-03
Resolution	:	2.90 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:

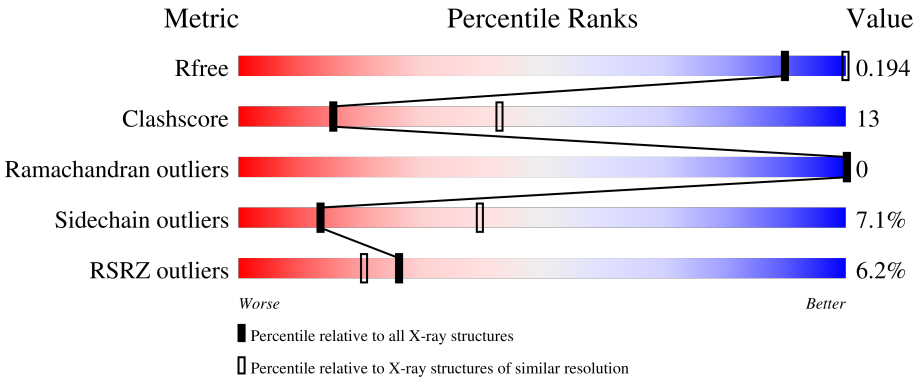
MolProbity	:	4-5-2 with Phenix2.0
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)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

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 2.90 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	2481 (2.90-2.90)
Clashscore	190562	2690 (2.90-2.90)
Ramachandran outliers	187476	2623 (2.90-2.90)
Sidechain outliers	187428	2625 (2.90-2.90)
RSRZ outliers	180081	2481 (2.90-2.90)

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	L	213	4% 68% 23% 8%
2	H	232	6% 76% 19%
3	D	49	14% 31% 18% 12% 39%

2 Entry composition

There are 3 unique types of molecules in this entry. The entry contains 3595 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 3G12 Fab light chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	L	212	Total	C	N	O	S	0	0	0
			1626	1017	278	326	5			

- Molecule 2 is a protein called 3G12 Fab Heavy chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	H	229	Total	C	N	O	S	0	0	0
			1724	1093	288	338	5			

- Molecule 3 is a protein called Major surface glycoprotein G.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	D	30	Total	C	N	O	S	0	0	0
			245	157	42	42	4			

There are 8 discrepancies between the modelled and reference sequences:

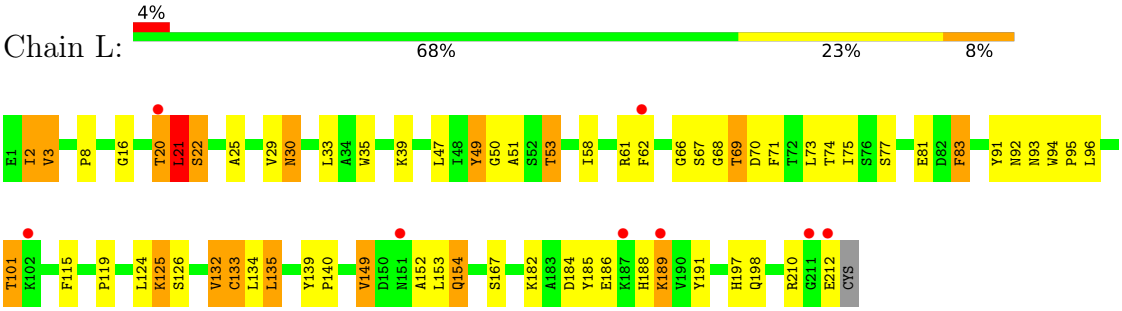
Chain	Residue	Modelled	Actual	Comment	Reference
D	155	MET	-	initiating methionine	UNP P03423
D	156	GLY	-	expression tag	UNP P03423
D	198	HIS	-	expression tag	UNP P03423
D	199	HIS	-	expression tag	UNP P03423
D	200	HIS	-	expression tag	UNP P03423
D	201	HIS	-	expression tag	UNP P03423
D	202	HIS	-	expression tag	UNP P03423
D	203	HIS	-	expression tag	UNP P03423

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.

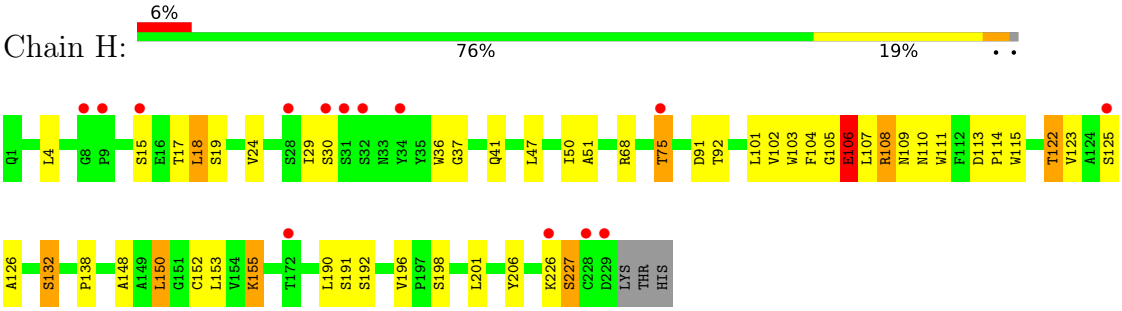
• Molecule 1: 3G12 Fab light chain

Chain L:



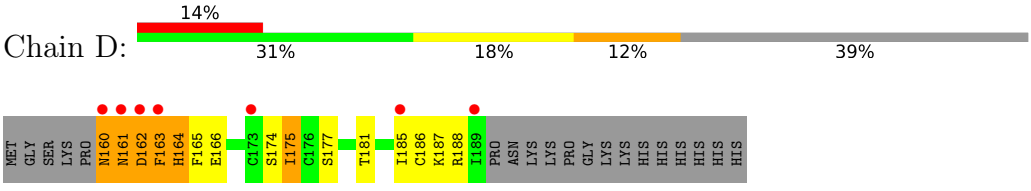
• Molecule 2: 3G12 Fab Heavy chain

Chain H:



• Molecule 3: Major surface glycoprotein G

Chain D:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 31 2 1	Depositor
Cell constants a, b, c, α, β, γ	139.33Å 139.33Å 94.77Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	74.53 – 2.90 74.53 – 2.90	Depositor EDS
% Data completeness (in resolution range)	99.2 (74.53-2.90) 94.7 (74.53-2.90)	Depositor EDS
R_{merge}	0.11	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.47 (at 2.91Å)	Xtriage
Refinement program	PHENIX 1.10.1_2155	Depositor
R, R_{free}	0.193 , 0.209 (Not available) , 0.194	Depositor DCC
R_{free} test set	1993 reflections (8.42%)	wwPDB-VP
Wilson B-factor (Å^2)	60.4	Xtriage
Anisotropy	0.145	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.37 , 53.0	EDS
L-test for twinning[2]	$< \|L\| > = 0.48$, $< L^2 > = 0.31$	Xtriage
Estimated twinning fraction	0.034 for -h,-k,l	Xtriage
F_o,F_c correlation	0.93	EDS
Total number of atoms	3595	wwPDB-VP
Average B, all atoms (Å^2)	63.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 5.98% 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	L	1.01	2/1663 (0.1%)	1.22	20/2262 (0.9%)
2	H	0.85	1/1771 (0.1%)	1.03	16/2422 (0.7%)
3	D	1.30	3/253 (1.2%)	2.43	16/344 (4.7%)
All	All	0.96	6/3687 (0.2%)	1.26	52/5028 (1.0%)

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	L	0	1

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	L	133	CYS	C-N	-8.39	1.22	1.33
3	D	186	CYS	CA-CB	-6.50	1.43	1.53
1	L	20	THR	CA-C	-6.15	1.45	1.52
3	D	163	PHE	CA-CB	5.68	1.61	1.53
3	D	186	CYS	N-CA	-5.66	1.38	1.45
2	H	51	ALA	CA-C	-5.60	1.45	1.52

All (52) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	D	163	PHE	N-CA-C	23.49	145.15	111.56
3	D	163	PHE	CB-CA-C	-15.40	92.10	111.82
3	D	163	PHE	N-CA-CB	-14.45	89.13	112.25
1	L	126	SER	N-CA-C	13.56	129.96	112.34
2	H	50	ILE	N-CA-C	12.87	122.63	111.56
3	D	165	PHE	N-CA-C	-10.81	99.67	113.72
1	L	22	SER	N-CA-C	10.52	126.47	109.85

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	L	21	LEU	N-CA-CB	-10.43	92.53	110.99
2	H	122	THR	CA-C-N	-9.76	110.15	122.93
2	H	122	THR	C-N-CA	-9.76	110.15	122.93
3	D	164	HIS	N-CA-C	-9.46	95.87	109.96
3	D	174	SER	N-CA-C	9.44	124.20	112.87
1	L	125	LYS	N-CA-C	-9.25	100.89	110.97
3	D	187	LYS	N-CA-C	8.73	123.30	108.02
2	H	50	ILE	CB-CA-C	-8.62	103.25	111.44
2	H	126	ALA	N-CA-C	8.28	122.69	109.86
1	L	53	THR	N-CA-C	8.26	121.74	109.59
3	D	186	CYS	N-CA-C	8.22	121.20	110.43
1	L	132	VAL	CA-C-N	8.16	136.04	122.33
1	L	132	VAL	C-N-CA	8.16	136.04	122.33
1	L	20	THR	N-CA-C	-7.48	97.55	109.59
1	L	69	THR	N-CA-C	7.46	122.14	112.89
2	H	227	SER	CB-CA-C	7.44	118.95	109.80
1	L	133	CYS	O-C-N	-7.39	114.35	123.36
1	L	49	TYR	N-CA-C	-7.10	98.23	109.23
2	H	227	SER	N-CA-C	-6.62	100.84	110.64
2	H	15	SER	CB-CA-C	-6.59	101.17	111.39
1	L	189	LYS	N-CA-C	6.55	122.88	114.56
1	L	30	ASN	CB-CA-C	-6.52	109.04	116.54
3	D	187	LYS	N-CA-CB	-6.41	100.53	110.65
2	H	106	GLU	CB-CA-C	-6.16	100.52	110.74
2	H	155	LYS	N-CA-C	6.14	119.55	109.85
1	L	83	PHE	CB-CA-C	-6.10	101.40	110.67
2	H	122	THR	O-C-N	-6.06	115.97	123.36
1	L	3	VAL	O-C-N	5.99	130.06	122.57
2	H	37	GLY	N-CA-C	5.94	119.97	111.12
3	D	161	ASN	N-CA-CB	-5.92	101.32	111.21
1	L	70	ASP	N-CA-C	5.91	118.04	108.41
1	L	66	GLY	N-CA-C	5.65	118.93	111.70
1	L	3	VAL	CA-C-N	-5.60	115.28	123.00
1	L	3	VAL	C-N-CA	-5.60	115.28	123.00
2	H	132	SER	N-CA-C	-5.56	100.11	109.07
3	D	163	PHE	CA-C-N	5.55	129.23	121.02
3	D	163	PHE	C-N-CA	5.55	129.23	121.02
3	D	185	ILE	CA-C-N	-5.25	111.99	120.87
3	D	185	ILE	C-N-CA	-5.25	111.99	120.87
2	H	123	VAL	CA-C-N	-5.09	113.62	122.37
2	H	123	VAL	C-N-CA	-5.09	113.62	122.37
1	L	154	GLN	N-CA-C	5.08	117.58	109.81

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	H	17	THR	N-CA-C	5.08	117.76	109.59
3	D	161	ASN	N-CA-C	-5.05	101.78	108.74
3	D	163	PHE	CA-CB-CG	5.05	118.85	113.80

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	L	133	CYS	Mainchain

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	L	1626	0	1577	57	0
2	H	1724	0	1690	34	0
3	D	245	0	221	12	0
All	All	3595	0	3488	95	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 13.

All (95) 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)
2:H:103:TRP:HB3	2:H:109:ASN:HB2	1.36	1.08
3:D:162:ASP:O	3:D:163:PHE:HB2	1.19	1.00
3:D:162:ASP:O	3:D:163:PHE:CB	2.12	0.96
1:L:149:VAL:HG23	1:L:154:GLN:NE2	1.85	0.92
2:H:101:LEU:HD22	2:H:111:TRP:HE1	1.37	0.89
1:L:25:ALA:O	1:L:69:THR:HG23	1.77	0.84
1:L:49:TYR:O	1:L:53:THR:HB	1.80	0.80
2:H:106:GLU:OE1	2:H:106:GLU:N	2.12	0.78
2:H:138:PRO:HG3	2:H:150:LEU:HB3	1.67	0.77
1:L:62:PHE:HE2	1:L:75:ILE:HD13	1.49	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:62:PHE:CE2	1:L:75:ILE:HG23	2.22	0.75
2:H:30:SER:OG	2:H:75:THR:OG1	2.03	0.72
2:H:103:TRP:CB	2:H:109:ASN:HB2	2.16	0.72
2:H:106:GLU:H	2:H:106:GLU:CD	1.97	0.72
1:L:62:PHE:CE2	1:L:75:ILE:HD13	2.27	0.70
2:H:18:LEU:C	2:H:18:LEU:HD23	2.17	0.69
1:L:92:ASN:O	2:H:108:ARG:NH1	2.26	0.68
2:H:101:LEU:HD22	2:H:111:TRP:NE1	2.08	0.67
1:L:91:TYR:HB2	2:H:110:ASN:HB3	1.75	0.67
1:L:93:ASN:ND2	3:D:160:ASN:O	2.30	0.64
1:L:8:PRO:O	1:L:101:THR:HB	1.98	0.64
1:L:62:PHE:CE2	1:L:75:ILE:CG2	2.80	0.63
2:H:103:TRP:HB3	2:H:109:ASN:CB	2.22	0.61
2:H:226:LYS:O	2:H:227:SER:C	2.47	0.58
1:L:2:ILE:C	1:L:3:VAL:HG23	2.29	0.57
1:L:93:ASN:OD1	1:L:94:TRP:N	2.36	0.57
1:L:149:VAL:HG23	1:L:154:GLN:CD	2.30	0.56
1:L:185:TYR:O	1:L:191:TYR:OH	2.23	0.56
1:L:50:GLY:O	1:L:51:ALA:HB3	2.06	0.55
1:L:61:ARG:HG3	1:L:62:PHE:CD1	2.42	0.54
2:H:103:TRP:CZ2	3:D:177:SER:HB2	2.41	0.54
2:H:148:ALA:HB2	2:H:198:SER:HB3	1.90	0.53
1:L:149:VAL:CG2	1:L:154:GLN:NE2	2.68	0.52
1:L:62:PHE:CD2	1:L:75:ILE:HG23	2.46	0.51
1:L:69:THR:HG22	1:L:69:THR:O	2.10	0.50
1:L:149:VAL:HG13	1:L:191:TYR:CD1	2.47	0.50
3:D:163:PHE:O	3:D:164:HIS:C	2.56	0.49
1:L:83:PHE:CD1	1:L:83:PHE:O	2.66	0.49
2:H:102:VAL:HA	2:H:109:ASN:O	2.13	0.49
2:H:104:PHE:CD2	3:D:175:ILE:HD12	2.48	0.48
1:L:29:VAL:O	1:L:30:ASN:C	2.56	0.48
1:L:91:TYR:CB	2:H:110:ASN:HB3	2.40	0.48
1:L:2:ILE:HG22	1:L:3:VAL:H	1.78	0.47
1:L:185:TYR:CD1	1:L:191:TYR:CZ	3.02	0.47
1:L:33:LEU:HD22	1:L:71:PHE:CG	2.50	0.47
1:L:115:PHE:CD2	1:L:134:LEU:HD23	2.49	0.47
2:H:196:VAL:HG11	2:H:206:TYR:CE1	2.49	0.47
2:H:18:LEU:C	2:H:18:LEU:CD2	2.86	0.47
2:H:103:TRP:NE1	2:H:105:GLY:HA3	2.30	0.47
2:H:201:LEU:HD23	2:H:201:LEU:HA	1.69	0.47
3:D:161:ASN:OD1	3:D:161:ASN:C	2.57	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:61:ARG:HG3	1:L:62:PHE:CE1	2.50	0.47
1:L:92:ASN:ND2	3:D:161:ASN:HB2	2.30	0.47
1:L:21:LEU:HB3	1:L:73:LEU:O	2.14	0.46
3:D:164:HIS:HB3	3:D:166:GLU:CD	2.40	0.46
1:L:115:PHE:HD2	1:L:134:LEU:HD23	1.81	0.46
3:D:160:ASN:N	3:D:160:ASN:OD1	2.50	0.45
1:L:96:LEU:HD23	1:L:96:LEU:HA	1.78	0.45
2:H:103:TRP:CD1	2:H:105:GLY:H	2.35	0.45
3:D:161:ASN:OD1	3:D:161:ASN:N	2.50	0.44
3:D:161:ASN:OD1	3:D:161:ASN:O	2.35	0.44
2:H:68:ARG:HH12	2:H:91:ASP:CG	2.26	0.44
2:H:153:LEU:HD12	2:H:190:LEU:O	2.17	0.44
1:L:49:TYR:C	1:L:49:TYR:CD1	2.95	0.44
2:H:68:ARG:NH1	2:H:91:ASP:OD2	2.51	0.44
1:L:182:LYS:O	1:L:186:GLU:HG2	2.18	0.43
1:L:184:ASP:OD2	1:L:184:ASP:N	2.51	0.43
1:L:124:LEU:O	1:L:125:LYS:C	2.61	0.43
1:L:153:LEU:HG	1:L:154:GLN:N	2.34	0.43
1:L:2:ILE:HG22	1:L:3:VAL:N	2.34	0.43
2:H:190:LEU:HD23	2:H:191:SER:N	2.33	0.43
1:L:197:HIS:CG	1:L:198:GLN:N	2.86	0.43
1:L:149:VAL:HG13	1:L:191:TYR:CE1	2.54	0.42
1:L:94:TRP:HB2	1:L:95:PRO:HD2	2.01	0.42
1:L:47:LEU:HA	1:L:58:ILE:HD12	2.01	0.42
1:L:39:LYS:NZ	1:L:81:GLU:O	2.52	0.42
2:H:113:ASP:HA	2:H:114:PRO:HA	1.80	0.42
1:L:149:VAL:O	1:L:152:ALA:HB3	2.20	0.42
1:L:149:VAL:CG2	1:L:154:GLN:CD	2.93	0.42
1:L:2:ILE:C	1:L:3:VAL:CG2	2.93	0.41
2:H:92:THR:HG23	2:H:122:THR:HA	2.02	0.41
2:H:115:TRP:CD1	2:H:115:TRP:N	2.88	0.41
1:L:188:HIS:O	1:L:210:ARG:NH2	2.24	0.41
1:L:16:GLY:O	1:L:77:SER:HA	2.21	0.41
2:H:4:LEU:HG	2:H:24:VAL:HG22	2.02	0.41
1:L:2:ILE:O	1:L:3:VAL:HG23	2.21	0.41
1:L:119:PRO:O	2:H:226:LYS:HE3	2.21	0.41
2:H:29:ILE:HG23	2:H:36:TRP:NE1	2.36	0.41
1:L:61:ARG:HH21	1:L:61:ARG:HG2	1.86	0.41
1:L:67:SER:O	1:L:68:GLY:C	2.64	0.40
1:L:139:TYR:CG	1:L:140:PRO:HA	2.56	0.40
2:H:41:GLN:HB2	2:H:47:LEU:HD23	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:62:PHE:CE2	1:L:75:ILE:HG21	2.56	0.40
1:L:35:TRP:CE2	1:L:73:LEU:HB2	2.57	0.40
1:L:135:LEU:N	1:L:135:LEU:HD23	2.37	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	L	210/213 (99%)	203 (97%)	7 (3%)	0	100	100
2	H	227/232 (98%)	218 (96%)	9 (4%)	0	100	100
3	D	28/49 (57%)	24 (86%)	4 (14%)	0	100	100
All	All	465/494 (94%)	445 (96%)	20 (4%)	0	100	100

There are no Ramachandran outliers to report.

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	L	183/184 (100%)	171 (93%)	12 (7%)	15	43
2	H	198/201 (98%)	186 (94%)	12 (6%)	17	46
3	D	29/46 (63%)	24 (83%)	5 (17%)	2	7

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
All	All	410/431 (95%)	381 (93%)	29 (7%)	13 40

All (29) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	L	2	ILE
1	L	20	THR
1	L	21	LEU
1	L	22	SER
1	L	74	THR
1	L	101	THR
1	L	132	VAL
1	L	135	LEU
1	L	149	VAL
1	L	167	SER
1	L	189	LYS
1	L	212	GLU
2	H	18	LEU
2	H	19	SER
2	H	75	THR
2	H	106	GLU
2	H	107	LEU
2	H	108	ARG
2	H	125	SER
2	H	132	SER
2	H	150	LEU
2	H	152	CYS
2	H	155	LYS
2	H	192	SER
3	D	160	ASN
3	D	162	ASP
3	D	175	ILE
3	D	181	THR
3	D	188	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (7) such sidechains are listed below:

Mol	Chain	Res	Type
1	L	159	GLN
2	H	5	GLN
2	H	79	GLN

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Mol	Chain	Res	Type
2	H	109	ASN
2	H	117	GLN
2	H	211	ASN
3	D	160	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, 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	L	212/213 (99%)	0.22	8 (3%) 44 36	38, 64, 92, 123	0
2	H	229/232 (98%)	0.05	14 (6%) 27 21	38, 57, 91, 132	0
3	D	30/49 (61%)	0.97	7 (23%) 2 2	51, 69, 100, 165	0
All	All	471/494 (95%)	0.18	29 (6%) 26 21	38, 60, 94, 165	0

All (29) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	L	212	GLU	5.0
1	L	62	PHE	4.9
1	L	187	LYS	4.7
3	D	160	ASN	4.5
3	D	189	ILE	4.1
3	D	161	ASN	4.0
2	H	8	GLY	3.7
2	H	228	CYS	3.4
2	H	229	ASP	3.3
2	H	172	THR	2.9
2	H	30	SER	2.8
1	L	211	GLY	2.8
2	H	125	SER	2.8
1	L	151	ASN	2.7
2	H	31	SER	2.6
1	L	189	LYS	2.5
2	H	28	SER	2.5
3	D	185	ILE	2.5
2	H	34	TYR	2.5
1	L	20	THR	2.4
3	D	162	ASP	2.3
3	D	173	CYS	2.3
2	H	32	SER	2.2

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Mol	Chain	Res	Type	RSRZ
1	L	102	LYS	2.2
2	H	226	LYS	2.2
2	H	15	SER	2.2
2	H	75	THR	2.1
2	H	9	PRO	2.1
3	D	163	PHE	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 oligosaccharides 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.