



# Full wwPDB X-ray Structure Validation Report ⓘ

Jun 19, 2024 – 02:53 PM EDT

PDB ID : 4DVB  
Title : The crystal structure of the Fab fragment of pro-uPA antibody mAb-112  
Authors : Jiang, L.; Botkjaer, K.A.; Andersen, L.M.; Yuan, C.; Andreasen, P.A.; Huang, M.  
Deposited on : 2012-02-23  
Resolution : 1.93 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](mailto: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>.

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

MolProbity : 4.02b-467  
Mogul : 2022.3.0, CSD as543be (2022)  
Xtriage (Phenix) : 1.20.1  
EDS : 2.37.1  
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) : 2.37.1

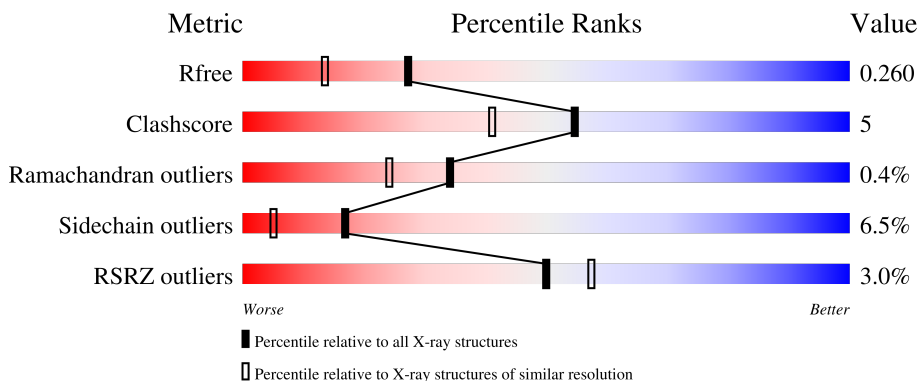
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*



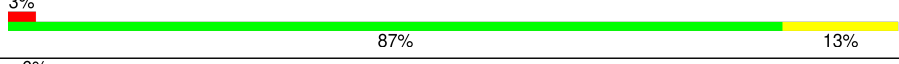

The reported resolution of this entry is 1.93 Å.

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	4310 (1.96-1.92)
Clashscore	141614	1023 (1.94-1.94)
Ramachandran outliers	138981	1007 (1.94-1.94)
Sidechain outliers	138945	1007 (1.94-1.94)
RSRZ outliers	127900	4250 (1.96-1.92)

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  $\geq 3$ , 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  $\leq 5\%$ . 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	213	
1	H	213	
2	B	215	
2	L	215	

## 2 Entry composition [i](#)

There are 5 unique types of molecules in this entry. The entry contains 7150 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 Fab fragment of pro-uPA antibody mAb-112.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	212	Total 1605	C 1012	N 267	O 317	S 9	0	0	0
1	H	212	Total 1605	C 1012	N 267	O 317	S 9	0	0	0

- Molecule 2 is a protein called Fab fragment of pro-uPA antibody mAb-112.

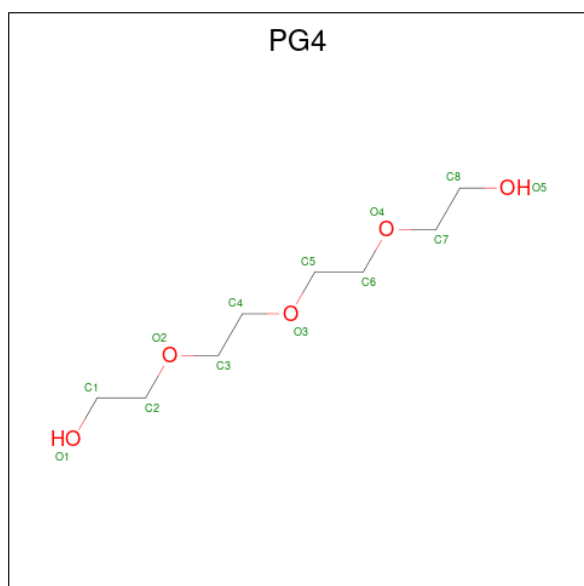
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	B	215	Total 1657	C 1032	N 278	O 339	S 8	0	0	0
2	L	215	Total 1657	C 1032	N 278	O 339	S 8	0	0	0

- Molecule 3 is SULFATE ION (three-letter code: SO4) (formula: O<sub>4</sub>S).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	1	Total O S 5 4 1	0	0
3	A	1	Total O S 5 4 1	0	0
3	B	1	Total O S 5 4 1	0	0
3	H	1	Total O S 5 4 1	0	0
3	H	1	Total O S 5 4 1	0	0
3	H	1	Total O S 5 4 1	0	0
3	L	1	Total O S 5 4 1	0	0

- Molecule 4 is TETRAETHYLENE GLYCOL (three-letter code: PG4) (formula: C<sub>8</sub>H<sub>18</sub>O<sub>5</sub>).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	H	1	Total C O 13 8 5	0	0

- Molecule 5 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	A	133	Total O 133 133	0	0
5	B	107	Total O 107 107	0	0

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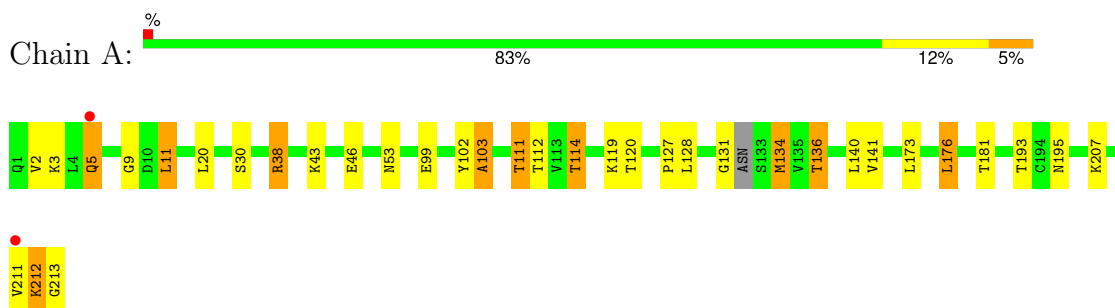
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<b>Mol</b>	<b>Chain</b>	<b>Residues</b>	<b>Atoms</b>		<b>ZeroOcc</b>	<b>AltConf</b>
5	H	185	Total 185	O 185	0	0
5	L	153	Total 153	O 153	0	0

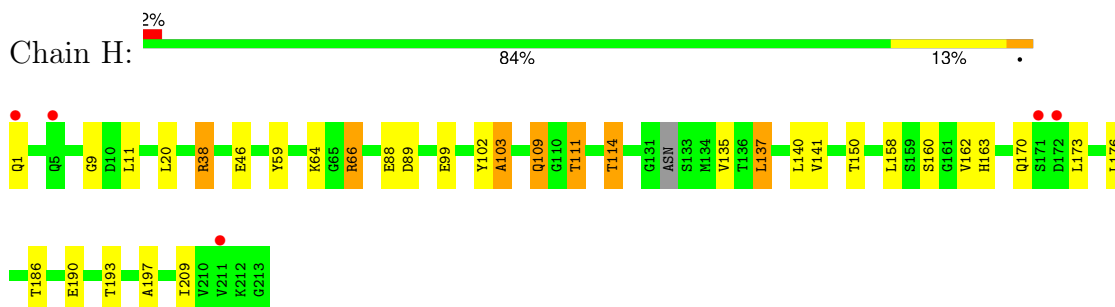
### 3 Residue-property plots [i](#)

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.

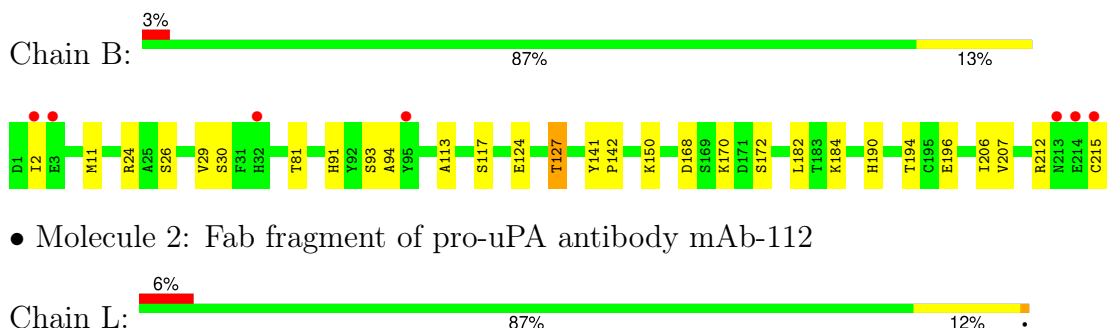
- Molecule 1: Fab fragment of pro-uPA antibody mAb-112



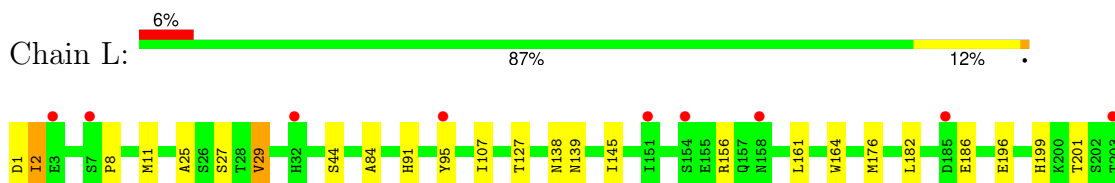
- Molecule 1: Fab fragment of pro-uPA antibody mAb-112

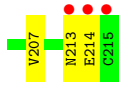


- Molecule 2: Fab fragment of pro-uPA antibody mAb-112



- Molecule 2: Fab fragment of pro-uPA antibody mAb-112





## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	71.18Å 86.63Å 155.33Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	77.67 – 1.93 44.88 – 1.93	Depositor EDS
% Data completeness (in resolution range)	98.5 (77.67-1.93) 98.5 (44.88-1.93)	Depositor EDS
$R_{merge}$	(Not available)	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	2.77 (at 1.94Å)	Xtrriage
Refinement program	REFMAC 5.5.0102	Depositor
R, $R_{free}$	0.223 , 0.259 0.223 , 0.260	Depositor DCC
$R_{free}$ test set	3598 reflections (5.03%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	28.1	Xtrriage
Anisotropy	0.515	Xtrriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.38 , 41.3	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.49$ , $\langle L^2 \rangle = 0.33$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
$F_o, F_c$ correlation	0.94	EDS
Total number of atoms	7150	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	29.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 6.41% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

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



## 5 Model quality [i](#)

### 5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: PG4, SO4

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	0.41	0/1642	0.61	2/2235 (0.1%)
1	H	0.41	0/1642	0.64	1/2235 (0.0%)
2	B	0.37	0/1698	0.50	0/2308
2	L	0.37	0/1698	0.51	0/2308
All	All	0.39	0/6680	0.57	3/9086 (0.0%)

There are no bond length outliers.

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	H	66	ARG	NE-CZ-NH2	-5.30	117.65	120.30
1	A	176	LEU	CA-CB-CG	5.29	127.48	115.30
1	A	11	LEU	CA-CB-CG	5.06	126.93	115.30

There are no chirality outliers.

There are no planarity outliers.

### 5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	1605	0	1584	15	0
1	H	1605	0	1584	15	0
2	B	1657	0	1573	19	0
2	L	1657	0	1573	24	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	A	10	0	0	0	0
3	B	5	0	0	0	0
3	H	15	0	0	0	0
3	L	5	0	0	0	0
4	H	13	0	18	0	0
5	A	133	0	0	3	0
5	B	107	0	0	2	0
5	H	185	0	0	2	0
5	L	153	0	0	1	0
All	All	7150	0	6332	67	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 (67) 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:L:145:ILE:HG23	2:L:176:MET:HE1	1.51	0.91
2:L:2:ILE:HD13	2:L:27:SER:H	1.36	0.89
1:H:186:THR:O	1:H:190:GLU:HG2	1.74	0.87
2:B:91:HIS:HD2	2:B:93:SER:H	1.22	0.83
1:A:211:VAL:O	1:A:212:LYS:HB2	1.79	0.82
1:H:1:GLN:HB3	5:H:480:HOH:O	1.89	0.73
1:H:163:HIS:HE1	2:L:139:ASN:HD21	1.40	0.69
2:L:164:TRP:HE1	2:L:176:MET:HE2	1.56	0.69
2:B:30:SER:O	2:B:91:HIS:HE1	1.76	0.68
1:A:114:THR:HG22	5:A:421:HOH:O	1.93	0.68
2:L:2:ILE:HD11	2:L:25:ALA:HB1	1.75	0.67
2:L:2:ILE:CD1	2:L:27:SER:H	2.08	0.67
1:A:9:GLY:H	1:A:111:THR:HG21	1.59	0.66
1:A:3:LYS:HB3	1:A:5:GLN:HE22	1.61	0.66
2:L:8:PRO:HD2	2:L:11:MET:HE2	1.78	0.65
2:L:145:ILE:CG2	2:L:176:MET:HE1	2.24	0.64
2:L:1:ASP:HA	2:L:95:TYR:CE1	2.33	0.64
2:L:2:ILE:HD13	2:L:27:SER:N	2.12	0.63
2:B:24:ARG:HD2	5:B:419:HOH:O	1.99	0.62
1:H:137:LEU:HG	1:H:209:ILE:HG21	1.82	0.62
1:H:66:ARG:NH2	1:H:89:ASP:OD2	2.26	0.60
2:L:8:PRO:HD2	2:L:11:MET:CE	2.30	0.60
2:L:164:TRP:NE1	2:L:176:MET:HE2	2.17	0.60
2:B:91:HIS:CD2	2:B:93:SER:H	2.13	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:114:THR:HG21	5:H:420:HOH:O	2.03	0.58
2:L:29:VAL:HG13	2:L:91:HIS:CD2	2.39	0.58
2:B:29:VAL:HG13	2:B:91:HIS:CE1	2.39	0.57
1:A:102:TYR:O	1:A:103:ALA:HB3	2.07	0.55
1:H:163:HIS:HE1	2:L:139:ASN:ND2	2.03	0.55
2:L:164:TRP:HE1	2:L:176:MET:CE	2.19	0.54
2:B:11:MET:HG2	5:B:455:HOH:O	2.07	0.52
1:A:114:THR:CG2	5:A:421:HOH:O	2.54	0.51
2:B:81:THR:HG23	2:B:172:SER:OG	2.11	0.51
1:H:38:ARG:HD3	1:H:46:GLU:OE1	2.10	0.51
2:L:164:TRP:NE1	2:L:176:MET:CE	2.74	0.51
1:A:127:PRO:HD3	1:A:207:LYS:HE2	1.91	0.51
1:H:59:TYR:HB2	1:H:64:LYS:HG2	1.93	0.50
1:A:30:SER:O	1:A:53:ASN:HB2	2.11	0.50
2:B:2:ILE:HG23	2:B:94:ALA:HA	1.94	0.49
1:H:170:GLN:HB3	2:L:161:LEU:HD11	1.95	0.48
2:L:84:ALA:HB2	2:L:107:ILE:HG12	1.94	0.48
1:A:112:THR:HG22	5:A:421:HOH:O	2.12	0.48
1:A:134:MET:HG2	1:A:181:THR:HG22	1.95	0.47
2:B:196:GLU:HG2	2:B:207:VAL:HG22	1.97	0.46
2:L:196:GLU:HG2	2:L:207:VAL:HG12	1.96	0.46
2:B:190:HIS:O	2:B:212:ARG:HD3	2.14	0.46
1:H:150:THR:HG22	1:H:197:ALA:HB3	1.96	0.46
1:A:131:GLY:HA2	1:A:213:GLY:HA2	1.98	0.45
2:B:150:LYS:HB2	2:B:194:THR:HB	1.97	0.45
1:H:102:TYR:O	1:H:103:ALA:HB3	2.16	0.45
1:A:38:ARG:HD3	1:A:46:GLU:OE2	2.17	0.45
2:L:138:ASN:HB3	2:L:139:ASN:HD22	1.80	0.45
2:L:2:ILE:HG21	5:L:495:HOH:O	2.17	0.45
2:L:199:HIS:HD2	2:L:201:THR:OG1	2.01	0.44
1:A:102:TYR:O	1:A:103:ALA:CB	2.66	0.44
2:B:30:SER:O	2:B:91:HIS:CE1	2.64	0.44
2:B:124:GLU:O	2:B:127:THR:HG22	2.17	0.44
2:B:2:ILE:HG13	2:B:26:SER:HB2	2.00	0.44
2:B:113:ALA:HB1	2:B:206:ILE:HD11	1.99	0.43
2:B:141:TYR:CG	2:B:142:PRO:HA	2.54	0.43
1:A:131:GLY:C	2:B:215:CYS:HB2	2.39	0.43
1:H:88:GLU:H	1:H:88:GLU:CD	2.21	0.43
1:H:109:GLN:HA	2:L:44:SER:HG	1.84	0.43
2:B:168:ASP:OD1	2:B:170:LYS:HB3	2.19	0.42
2:L:1:ASP:HB2	2:L:95:TYR:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:136:THR:HG21	2:B:117:SER:OG	2.21	0.40
1:H:9:GLY:H	1:H:111:THR:HG21	1.85	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	208/213 (98%)	205 (99%)	1 (0%)	2 (1%)	15	6
1	H	208/213 (98%)	206 (99%)	1 (0%)	1 (0%)	29	17
2	B	213/215 (99%)	211 (99%)	2 (1%)	0	100	100
2	L	213/215 (99%)	209 (98%)	4 (2%)	0	100	100
All	All	842/856 (98%)	831 (99%)	8 (1%)	3 (0%)	34	24

All (3) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	212	LYS
1	A	103	ALA
1	H	103	ALA

### 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	184/185 (100%)	164 (89%)	20 (11%)	6	1
1	H	184/185 (100%)	167 (91%)	17 (9%)	9	1
2	B	187/187 (100%)	184 (98%)	3 (2%)	62	52
2	L	187/187 (100%)	179 (96%)	8 (4%)	29	14
All	All	742/744 (100%)	694 (94%)	48 (6%)	17	5

All (48) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	2	VAL
1	A	5	GLN
1	A	11	LEU
1	A	20	LEU
1	A	38	ARG
1	A	43	LYS
1	A	99	GLU
1	A	111	THR
1	A	114	THR
1	A	119	LYS
1	A	120	THR
1	A	128	LEU
1	A	134	MET
1	A	136	THR
1	A	140	LEU
1	A	141	VAL
1	A	173	LEU
1	A	176	LEU
1	A	193	THR
1	A	195	ASN
2	B	127	THR
2	B	182	LEU
2	B	184	LYS
1	H	11	LEU
1	H	20	LEU
1	H	38	ARG
1	H	99	GLU
1	H	109	GLN
1	H	111	THR
1	H	114	THR
1	H	135	VAL
1	H	137	LEU
1	H	140	LEU

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Mol	Chain	Res	Type
1	H	141	VAL
1	H	158	LEU
1	H	160	SER
1	H	162	VAL
1	H	173	LEU
1	H	176	LEU
1	H	193	THR
2	L	2	ILE
2	L	29	VAL
2	L	127	THR
2	L	156	ARG
2	L	182	LEU
2	L	186	GLU
2	L	213	ASN
2	L	214	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (13) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	1	GLN
1	A	5	GLN
2	B	54	ASN
2	B	91	HIS
2	B	162	ASN
1	H	109	GLN
1	H	163	HIS
1	H	170	GLN
2	L	32	HIS
2	L	139	ASN
2	L	162	ASN
2	L	199	HIS
2	L	213	ASN

### 5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

## 5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

8 ligands are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
3	SO4	H	302	-	4,4,4	0.22	0	6,6,6	0.13	0
3	SO4	H	304	-	4,4,4	0.23	0	6,6,6	0.11	0
4	PG4	H	301	-	12,12,12	0.45	0	11,11,11	0.25	0
3	SO4	B	301	-	4,4,4	0.23	0	6,6,6	0.14	0
3	SO4	A	302	-	4,4,4	0.24	0	6,6,6	0.12	0
3	SO4	A	301	-	4,4,4	0.27	0	6,6,6	0.13	0
3	SO4	L	301	-	4,4,4	0.22	0	6,6,6	0.11	0
3	SO4	H	303	-	4,4,4	0.25	0	6,6,6	0.06	0

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	PG4	H	301	-	-	5/10/10/10	-

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (5) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	H	301	PG4	O2-C3-C4-O3
4	H	301	PG4	O3-C5-C6-O4

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Mol	Chain	Res	Type	Atoms
4	H	301	PG4	C6-C5-O3-C4
4	H	301	PG4	C5-C6-O4-C7
4	H	301	PG4	C8-C7-O4-C6

There are no ring outliers.

No monomer is involved in short contacts.

## 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<sup>th</sup> 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 <sup>2</sup> )	Q<0.9
1	A	212/213 (99%)	0.22	2 (0%) 84 87	17, 26, 37, 39	0
1	H	212/213 (99%)	0.25	5 (2%) 59 66	18, 26, 38, 42	0
2	B	215/215 (100%)	0.23	7 (3%) 46 54	20, 27, 40, 58	0
2	L	215/215 (100%)	0.58	12 (5%) 24 31	20, 30, 49, 65	0
All	All	854/856 (99%)	0.32	26 (3%) 50 57	17, 27, 42, 65	0

All (26) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	L	215	CYS	15.4
2	B	215	CYS	8.4
2	B	214	GLU	4.7
2	L	213	ASN	4.1
1	H	211	VAL	4.0
2	B	95	TYR	3.7
2	L	214	GLU	3.5
2	L	32	HIS	3.3
2	B	3	GLU	3.1
2	L	95	TYR	3.0
2	B	32	HIS	2.8
2	L	7	SER	2.8
1	A	5	GLN	2.7
1	A	211	VAL	2.7
2	L	154	SER	2.7
2	L	203	THR	2.6
2	L	185	ASP	2.5
2	L	151	ILE	2.5
2	L	3	GLU	2.5
2	B	2	ILE	2.5
2	L	158	ASN	2.4

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Mol	Chain	Res	Type	RSRZ
1	H	171	SER	2.1
1	H	172	ASP	2.1
2	B	213	ASN	2.0
1	H	1	GLN	2.0
1	H	5	GLN	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](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95<sup>th</sup> percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
4	PG4	H	301	13/13	0.74	0.21	55,56,59,59	0
3	SO4	L	301	5/5	0.89	0.17	67,67,67,67	0
3	SO4	B	301	5/5	0.90	0.18	55,55,56,56	0
3	SO4	H	304	5/5	0.90	0.18	67,68,68,68	0
3	SO4	H	303	5/5	0.91	0.19	57,58,58,58	0
3	SO4	A	302	5/5	0.97	0.12	51,51,52,52	0
3	SO4	H	302	5/5	0.97	0.10	41,43,43,43	0
3	SO4	A	301	5/5	0.99	0.08	33,33,33,33	0

## 6.5 Other polymers [i](#)

There are no such residues in this entry.