



# Full wwPDB X-ray Structure Validation Report ⓘ

Sep 6, 2023 – 08:33 PM EDT

PDB ID : 4G96  
Title : Crystal structure of calcium<sup>2+</sup>-free wild-type CD23 lectin domain  
Authors : Yuan, D.; Sutton, B.J.; Dhaliwal, B.  
Deposited on : 2012-07-23  
Resolution : 2.25 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 : 1.8.5 (274361), CSD as541be (2020)  
Xtrriage (Phenix) : 1.13  
EDS : 2.35  
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) : 2.35

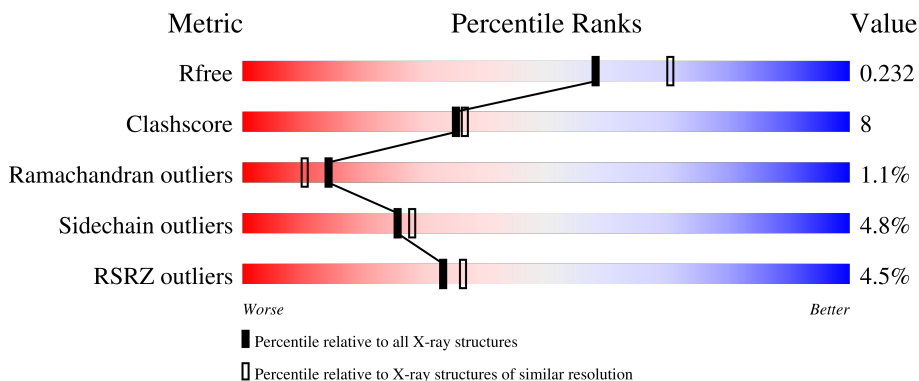
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

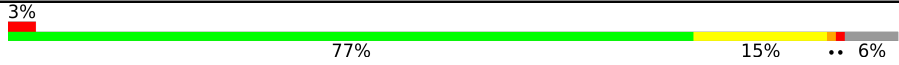



The reported resolution of this entry is 2.25 Å.

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	1377 (2.26-2.26)
Clashscore	141614	1487 (2.26-2.26)
Ramachandran outliers	138981	1449 (2.26-2.26)
Sidechain outliers	138945	1450 (2.26-2.26)
RSRZ outliers	127900	1356 (2.26-2.26)

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	143	 3% 77% 15% 6%
1	B	143	 5% 71% 20% 6%
1	C	143	 2% 70% 21% 8%
1	D	143	 6% 75% 15% 8%

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard

residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
3	EDO	B	302	-	-	X	-

## 2 Entry composition [i](#)

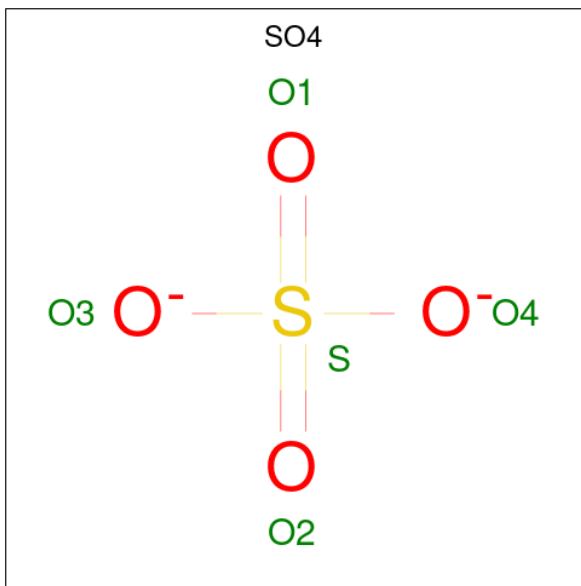
There are 4 unique types of molecules in this entry. The entry contains 4569 atoms, of which 0 are hydrogens and 0 are deuteriums.

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 Low affinity immunoglobulin epsilon Fc receptor.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	135	1082	679	193	199	11	0	0	0
1	B	135	1076	673	193	199	11	0	0	0
1	C	132	1060	663	190	196	11	0	0	0
1	D	131	1053	658	189	195	11	0	0	0

- Molecule 2 is SULFATE ION (three-letter code: SO4) (formula: O<sub>4</sub>S).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
			Total	O	S		
2	A	1	5	4	1	0	0
2	B	1	5	4	1	0	0

- Molecule 3 is 1,2-ETHANEDIOL (three-letter code: EDO) (formula: C<sub>2</sub>H<sub>6</sub>O<sub>2</sub>).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
3	B	1	Total	C	O	0	0
			4	2	2		

- Molecule 4 is water.

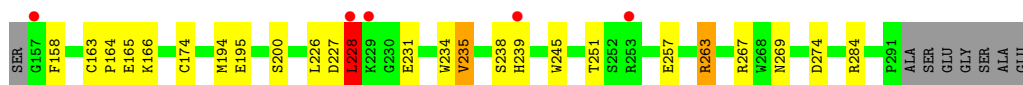
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	97	Total	O	0	0
			97	97		
4	B	76	Total	O	0	0
			76	76		
4	C	59	Total	O	0	0
			59	59		
4	D	52	Total	O	0	0
			52	52		

### 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.

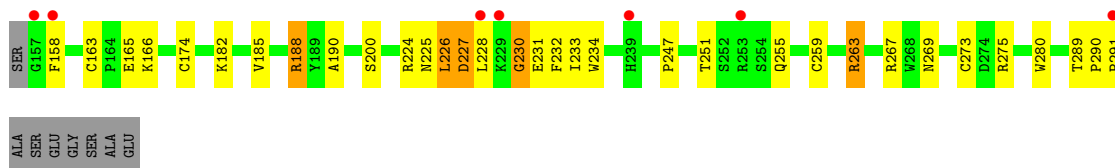
- Molecule 1: Low affinity immunoglobulin epsilon Fc receptor

Chain A: 



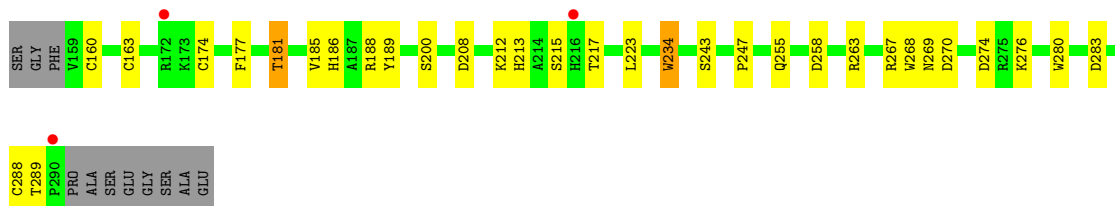
- Molecule 1: Low affinity immunoglobulin epsilon Fc receptor

Chain B: 




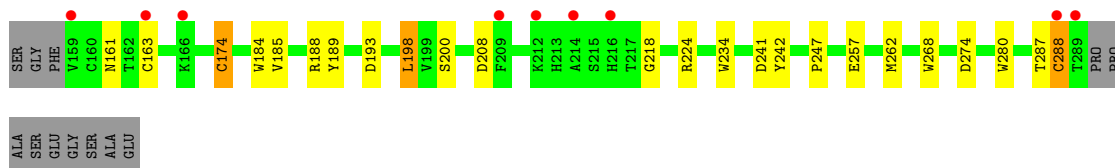
- Molecule 1: Low affinity immunoglobulin epsilon Fc receptor

Chain C: 



- Molecule 1: Low affinity immunoglobulin epsilon Fc receptor

Chain D: 



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	52.40Å 56.73Å 62.20Å 68.49° 88.16° 73.40°	Depositor
Resolution (Å)	39.40 – 2.25 39.42 – 2.25	Depositor EDS
% Data completeness (in resolution range)	93.6 (39.40-2.25) 93.6 (39.42-2.25)	Depositor EDS
$R_{merge}$	(Not available)	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	2.32 (at 2.24Å)	Xtrriage
Refinement program	REFMAC 5.6.0117	Depositor
R, $R_{free}$	0.173 , 0.236 0.170 , 0.232	Depositor DCC
$R_{free}$ test set	1423 reflections (5.03%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	35.1	Xtrriage
Anisotropy	0.453	Xtrriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.34 , 47.3	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.49$ , $\langle L^2 \rangle = 0.32$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
$F_o, F_c$ correlation	0.96	EDS
Total number of atoms	4569	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	41.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 8.55% 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: EDO, 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	1.08	1/1116 (0.1%)	1.03	5/1512 (0.3%)
1	B	0.99	0/1109	1.01	4/1503 (0.3%)
1	C	0.97	2/1092 (0.2%)	0.95	2/1479 (0.1%)
1	D	0.99	0/1084	0.95	2/1467 (0.1%)
All	All	1.01	3/4401 (0.1%)	0.99	13/5961 (0.2%)

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	B	0	2

All (3) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	C	280	TRP	CD2-CE2	5.74	1.48	1.41
1	C	234	TRP	CD2-CE2	5.49	1.48	1.41
1	A	245	TRP	CD2-CE2	5.25	1.47	1.41

All (13) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	D	193	ASP	CB-CG-OD2	7.23	124.81	118.30
1	A	228	LEU	CA-CB-CG	6.71	130.72	115.30
1	A	284	ARG	NE-CZ-NH2	-6.62	116.99	120.30
1	C	188	ARG	NE-CZ-NH2	-6.59	117.01	120.30
1	C	274	ASP	CB-CG-OD1	6.10	123.79	118.30
1	B	275	ARG	NE-CZ-NH2	-6.06	117.27	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	263	ARG	NE-CZ-NH1	-5.94	117.33	120.30
1	B	275	ARG	NE-CZ-NH1	5.71	123.15	120.30
1	A	274	ASP	CB-CG-OD1	5.53	123.28	118.30
1	B	263	ARG	NE-CZ-NH1	-5.24	117.68	120.30
1	D	274	ASP	CB-CG-OD1	5.20	122.98	118.30
1	A	235	VAL	CB-CA-C	-5.08	101.74	111.40
1	B	188	ARG	NE-CZ-NH2	-5.04	117.78	120.30

There are no chirality outliers.

All (2) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	B	226	LEU	Peptide
1	B	290	PRO	Peptide

## 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	1082	0	996	16	0
1	B	1076	0	991	25	0
1	C	1060	0	975	17	0
1	D	1053	0	970	11	0
2	A	5	0	0	0	0
2	B	5	0	0	0	0
3	B	4	0	6	4	0
4	A	97	0	0	4	0
4	B	76	0	0	4	0
4	C	59	0	0	4	0
4	D	52	0	0	0	0
All	All	4569	0	3938	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 8.

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)
1:A:163:CYS:HB3	1:A:174:CYS:SG	1.73	1.29
1:B:225:ASN:HD21	1:B:230:GLY:HA2	1.39	0.88
1:B:233:ILE:HG12	1:B:234:TRP:N	1.89	0.85
1:B:163:CYS:HB3	1:B:174:CYS:SG	2.19	0.81
1:C:208:ASP:HB3	4:C:352:HOH:O	1.85	0.74
1:D:163:CYS:HB3	1:D:174:CYS:SG	2.29	0.72
1:B:255:GLN:HB2	4:B:469:HOH:O	1.92	0.70
1:C:185:VAL:HG22	1:C:189:TYR:CE2	2.28	0.68
1:A:267:ARG:CZ	4:A:491:HOH:O	2.42	0.68
1:B:263:ARG:HD2	1:B:269:ASN:OD1	1.93	0.67
1:A:165:GLU:O	1:A:166:LYS:HB2	1.93	0.67
1:C:270:ASP:OD1	4:C:354:HOH:O	2.13	0.66
1:A:238:SER:O	4:A:471:HOH:O	2.13	0.66
1:D:185:VAL:HG22	1:D:189:TYR:CE2	2.31	0.65
1:C:181:THR:HG22	1:C:276:LYS:HB3	1.80	0.64
1:B:185:VAL:HG12	4:B:401:HOH:O	1.98	0.63
1:C:212:LYS:NZ	4:C:352:HOH:O	2.28	0.62
1:A:163:CYS:CB	1:A:174:CYS:SG	2.69	0.62
1:B:163:CYS:CB	1:B:174:CYS:SG	2.88	0.61
1:A:163:CYS:HB2	1:A:164:PRO:HD2	1.83	0.61
1:B:182:LYS:NZ	4:B:409:HOH:O	2.33	0.60
1:B:289:THR:O	1:B:291:PRO:HD2	2.02	0.59
1:B:259:CYS:SG	1:B:273:CYS:HB3	2.44	0.57
1:C:200:SER:HA	1:C:234:TRP:CE3	2.40	0.56
1:D:200:SER:HA	1:D:234:TRP:CE3	2.42	0.55
1:B:188:ARG:NE	4:B:432:HOH:O	2.37	0.55
1:B:200:SER:HA	1:B:234:TRP:CE3	2.42	0.55
1:C:263:ARG:HD2	1:C:269:ASN:HD21	1.74	0.52
1:B:233:ILE:HG12	1:B:234:TRP:H	1.73	0.51
1:A:200:SER:HA	1:A:234:TRP:CE3	2.46	0.50
1:B:190:ALA:HB2	3:B:302:EDO:H12	1.94	0.50
1:A:235:VAL:HG22	4:A:408:HOH:O	2.11	0.49
1:D:241:ASP:OD1	1:D:242:TYR:N	2.40	0.49
1:D:287:THR:C	1:D:288:CYS:SG	2.90	0.49
1:A:257:GLU:OE2	1:C:258:ASP:OD2	2.30	0.49
1:B:247:PRO:HD3	1:B:267:ARG:NH1	2.27	0.48
1:D:188:ARG:HA	1:D:198:LEU:HD22	1.96	0.48
1:C:177:PHE:CE2	1:C:213:HIS:HB2	2.48	0.48
1:C:243:SER:HA	1:C:268:TRP:CH2	2.49	0.48
3:B:302:EDO:H11	1:C:186:HIS:NE2	2.28	0.48
1:B:165:GLU:C	1:B:166:LYS:HG2	2.33	0.47
1:A:263:ARG:HD2	1:A:269:ASN:OD1	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:268:TRP:N	1:D:268:TRP:CD1	2.80	0.47
1:A:267:ARG:NE	4:A:491:HOH:O	2.46	0.47
1:B:225:ASN:OD1	1:B:227:ASP:HA	2.15	0.47
1:A:163:CYS:HB3	1:A:174:CYS:HG	1.71	0.46
1:B:225:ASN:HB2	1:B:232:PHE:CE2	2.50	0.46
1:A:228:LEU:HB2	1:B:188:ARG:NH2	2.30	0.46
1:C:163:CYS:HB2	4:C:336:HOH:O	2.15	0.46
1:C:160:CYS:HA	1:C:288:CYS:HA	1.98	0.46
1:D:184:TRP:CH2	1:D:224:ARG:HD3	2.51	0.46
1:A:231:GLU:HG2	1:A:231:GLU:O	2.17	0.45
1:D:198:LEU:HD12	1:D:198:LEU:HA	1.78	0.44
1:A:194:MET:O	1:A:195:GLU:HB2	2.17	0.44
1:C:174:CYS:O	1:C:283:ASP:HA	2.16	0.44
3:B:302:EDO:H11	1:C:186:HIS:CE1	2.53	0.43
1:C:223:LEU:HB2	1:C:234:TRP:CZ3	2.53	0.43
1:C:247:PRO:HD3	1:C:267:ARG:CZ	2.48	0.43
1:B:190:ALA:CB	3:B:302:EDO:H12	2.49	0.43
1:B:259:CYS:SG	1:B:273:CYS:CB	3.07	0.43
1:B:226:LEU:HD12	1:B:233:ILE:HG23	2.01	0.41
1:B:200:SER:HA	1:B:234:TRP:CZ3	2.56	0.41
1:B:226:LEU:HD12	1:B:233:ILE:CG2	2.49	0.41
1:A:163:CYS:HB2	1:A:164:PRO:CD	2.51	0.40
1:D:218:GLY:HA2	1:D:262:MET:O	2.22	0.40
1:D:185:VAL:HG22	1:D:189:TYR:HE2	1.81	0.40
1:B:233:ILE:CG1	1:B:234:TRP:N	2.72	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	133/143 (93%)	127 (96%)	4 (3%)	2 (2%)	<b>10</b>   <b>6</b>

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	B	133/143 (93%)	123 (92%)	7 (5%)	3 (2%)	6	3
1	C	130/143 (91%)	125 (96%)	5 (4%)	0	100	100
1	D	129/143 (90%)	121 (94%)	7 (5%)	1 (1%)	19	17
All	All	525/572 (92%)	496 (94%)	23 (4%)	6 (1%)	14	10

All (6) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	228	LEU
1	B	158	PHE
1	A	227	ASP
1	B	227	ASP
1	D	161	ASN
1	B	230	GLY

### 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	115/120 (96%)	110 (96%)	5 (4%)	29	33
1	B	114/120 (95%)	109 (96%)	5 (4%)	28	32
1	C	113/120 (94%)	108 (96%)	5 (4%)	28	32
1	D	112/120 (93%)	105 (94%)	7 (6%)	18	17
All	All	454/480 (95%)	432 (95%)	22 (5%)	25	28

All (22) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	158	PHE
1	A	226	LEU
1	A	228	LEU
1	A	239	HIS
1	A	251	THR

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Mol	Chain	Res	Type
1	B	224	ARG
1	B	228	LEU
1	B	231	GLU
1	B	251	THR
1	B	280	TRP
1	C	181	THR
1	C	215	SER
1	C	217	THR
1	C	255	GLN
1	C	289	THR
1	D	174	CYS
1	D	198	LEU
1	D	208	ASP
1	D	247	PRO
1	D	257	GLU
1	D	280	TRP
1	D	288	CYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. There are no such sidechains identified.

### 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](#)

3 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	EDO	B	302	-	3,3,3	0.76	0	2,2,2	0.38	0
2	SO4	B	301	-	4,4,4	0.29	0	6,6,6	0.80	0
2	SO4	A	301	-	4,4,4	0.34	0	6,6,6	0.78	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
3	EDO	B	302	-	-	1/1/1/1	-

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (1) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	B	302	EDO	O1-C1-C2-O2

There are no ring outliers.

1 monomer is involved in 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	B	302	EDO	4	0

## 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<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	135/143 (94%)	0.08	5 (3%) 41 44	16, 31, 74, 101	0
1	B	135/143 (94%)	0.05	7 (5%) 27 30	17, 34, 76, 109	0
1	C	132/143 (92%)	0.11	3 (2%) 60 63	23, 41, 68, 99	0
1	D	131/143 (91%)	0.21	9 (6%) 16 18	20, 42, 82, 118	0
All	All	533/572 (93%)	0.11	24 (4%) 33 36	16, 38, 77, 118	0

All (24) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	D	289	THR	5.5
1	B	157	GLY	5.1
1	D	159	VAL	5.0
1	B	291	PRO	4.5
1	B	228	LEU	3.9
1	A	239	HIS	3.7
1	D	288	CYS	3.5
1	C	216	HIS	3.4
1	C	290	PRO	3.3
1	A	157	GLY	3.2
1	B	158	PHE	3.2
1	A	229	LYS	2.7
1	D	214	ALA	2.7
1	A	228	LEU	2.5
1	D	212	LYS	2.5
1	D	166	LYS	2.4
1	D	163	CYS	2.4
1	A	253	ARG	2.3
1	B	239	HIS	2.3
1	D	209	PHE	2.3
1	B	253	ARG	2.2

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Mol	Chain	Res	Type	RSRZ
1	C	172	ARG	2.2
1	D	216	HIS	2.1
1	B	229	LYS	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
3	EDO	B	302	4/4	0.87	0.13	49,53,53,63	0
2	SO4	B	301	5/5	0.99	0.13	31,32,33,33	0
2	SO4	A	301	5/5	0.99	0.14	30,32,37,40	0

## 6.5 Other polymers [i](#)

There are no such residues in this entry.