



# wwPDB X-ray Structure Validation Summary Report i

Feb 28, 2014 – 08:16 PM GMT

PDB ID : 3D5O  
Title : Structural recognition and functional activation of FcrR by innate pentraxins  
Authors : Lu, J.; Marnell, L.L.; Marjon, K.D.; Mold, C.; Du Clos, T.W.; Sun, P.D.  
Deposited on : 2008-05-16  
Resolution : 2.80 Å(reported)

This is a wwPDB validation summary 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 <http://wwpdb.org/ValidationPDFNotes.html>

---

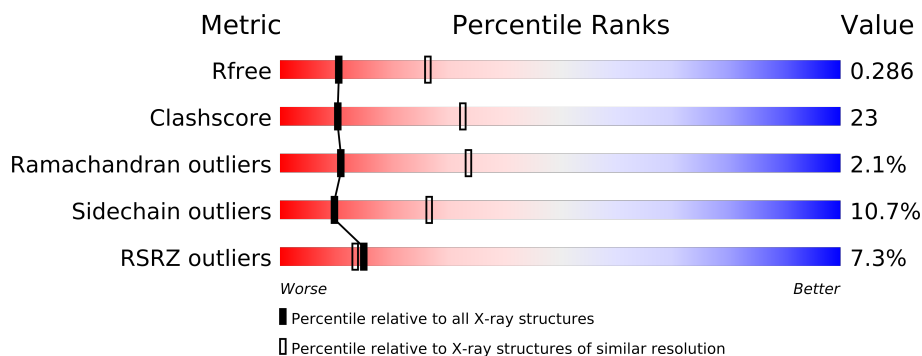
The following versions of software and data (see [references](#)) were used in the production of this report:

MolProbity	:	4.02b-467
Mogul	:	1.15 2013
Xtriage (Phenix)	:	dev-1323
EDS	:	stable22639
Percentile statistics	:	21963
Refmac	:	5.8.0049
CCP4	:	6.3.0 (Settle)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP)	:	stable22683

# 1 Overall quality at a glance

The reported resolution of this entry is 2.80 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))
$R_{free}$	66092	1799 (2.80-2.80)
Clashscore	79885	2295 (2.80-2.80)
Ramachandran outliers	78287	2252 (2.80-2.80)
Sidechain outliers	78261	2254 (2.80-2.80)
RSRZ outliers	66119	1802 (2.80-2.80)

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 on the lower bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density.

Mol	Chain	Length	Quality of chain
1	A	204	
1	B	204	
1	C	204	
1	D	204	
1	E	204	
2	F	177	

The following table lists non-polymeric compounds that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Geometry	Electron density
3	SO4	B	205	-	X
4	NAG	D	208	-	X

## 2 Entry composition

There are 6 unique types of molecules in this entry. The entry contains 9655 atoms, of which 0 are hydrogen and 0 are deuterium.

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 Serum amyloid P-component.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	204	Total	C	N	O	S	0	0	0
			1638	1064	268	303	3			
1	B	204	Total	C	N	O	S	0	0	0
			1642	1067	269	303	3			
1	C	204	Total	C	N	O	S	0	0	0
			1624	1057	263	301	3			
1	D	204	Total	C	N	O	S	0	0	0
			1620	1054	262	301	3			
1	E	204	Total	C	N	O	S	0	0	0
			1631	1060	265	303	3			

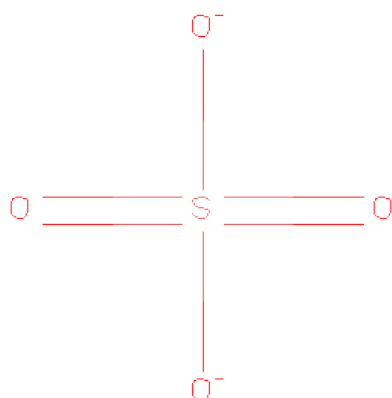
- Molecule 2 is a protein called Low affinity immunoglobulin gamma Fc region receptor II-a.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	F	171	Total	C	N	O	S	0	0	0
			1313	829	226	253	5			

There are 7 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
F	131	ARG	HIS	SEE REMARK 999	UNP P12318
F	172	HIS	-	EXPRESSION TAG	UNP P12318
F	173	HIS	-	EXPRESSION TAG	UNP P12318
F	174	HIS	-	EXPRESSION TAG	UNP P12318
F	175	HIS	-	EXPRESSION TAG	UNP P12318
F	176	HIS	-	EXPRESSION TAG	UNP P12318
F	177	HIS	-	EXPRESSION TAG	UNP P12318

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



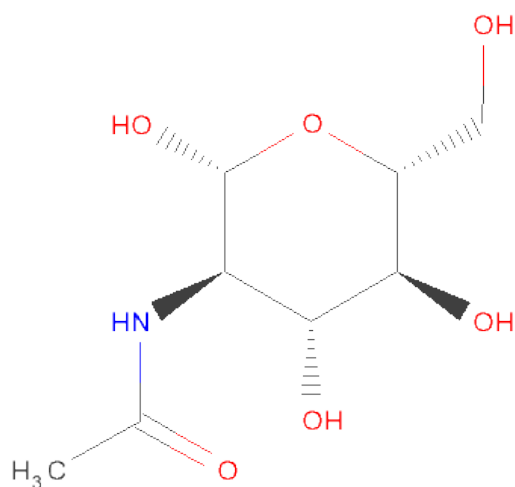
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
3	A	1	Total	O	S	0	0
			5	4	1		
3	A	1	Total	O	S	0	0
			5	4	1		
3	A	1	Total	O	S	0	0
			5	4	1		
3	B	1	Total	O	S	0	0
			5	4	1		
3	B	1	Total	O	S	0	0
			5	4	1		
3	B	1	Total	O	S	0	0
			5	4	1		
3	C	1	Total	O	S	0	0
			5	4	1		
3	C	1	Total	O	S	0	0
			5	4	1		
3	C	1	Total	O	S	0	0
			5	4	1		
3	D	1	Total	O	S	0	0
			5	4	1		
3	D	1	Total	O	S	0	0
			5	4	1		
3	D	1	Total	O	S	0	0
			5	4	1		
3	E	1	Total	O	S	0	0
			5	4	1		
3	E	1	Total	O	S	0	0
			5	4	1		

*Continued on next page...*

Continued from previous page...

Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
3	E	1	Total	O	S	0	0
			5	4	1		
3	F	1	Total	O	S	0	0
			5	4	1		

- Molecule 4 is SUGAR (N-ACETYL-D-GLUCOSAMINE) (three-letter code: NAG) (formula:  $C_8H_{15}NO_6$ ).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
4	A	1	Total	C	N	O	0	0
			14	8	1	5		
4	B	1	Total	C	N	O	0	0
			14	8	1	5		
4	C	1	Total	C	N	O	0	0
			14	8	1	5		
4	D	1	Total	C	N	O	0	0
			14	8	1	5		
4	E	1	Total	C	N	O	0	0
			14	8	1	5		

- Molecule 5 is GLYCEROL (three-letter code: GOL) (formula:  $C_3H_8O_3$ ).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
5	F	1	Total	C	O	0	0
			6	3	3		

- Molecule 6 is water.

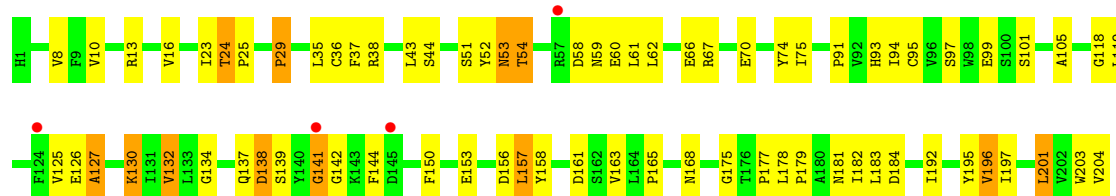
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
6	A	3	Total	O	0	0
			3	3		
6	B	13	Total	O	0	0
			13	13		
6	C	6	Total	O	0	0
			6	6		
6	D	3	Total	O	0	0
			3	3		
6	E	1	Total	O	0	0
			1	1		
6	F	5	Total	O	0	0
			5	5		

### 3 Residue-property plots

These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors 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.

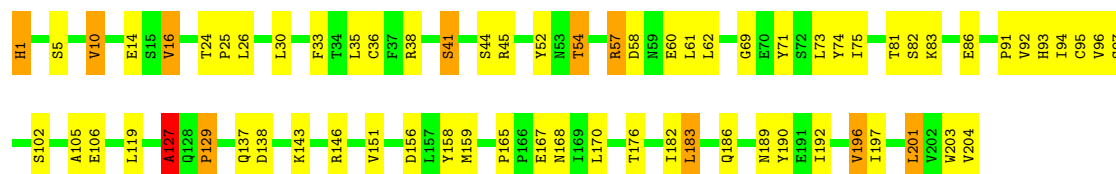
#### • Molecule 1: Serum amyloid P-component

Chain A: 



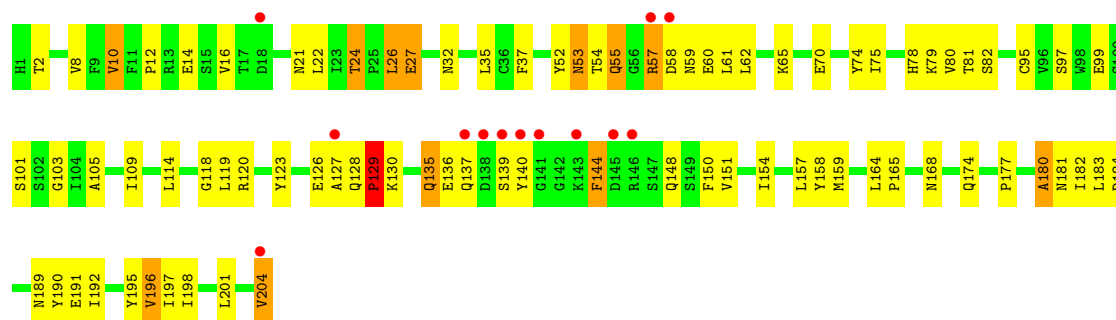
#### • Molecule 1: Serum amyloid P-component

Chain B: 



#### • Molecule 1: Serum amyloid P-component

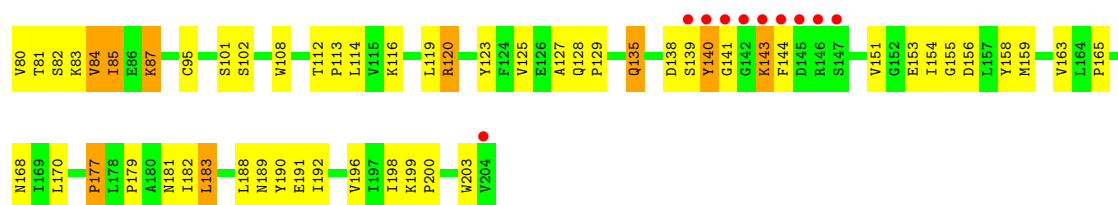
Chain C: 



#### • Molecule 1: Serum amyloid P-component

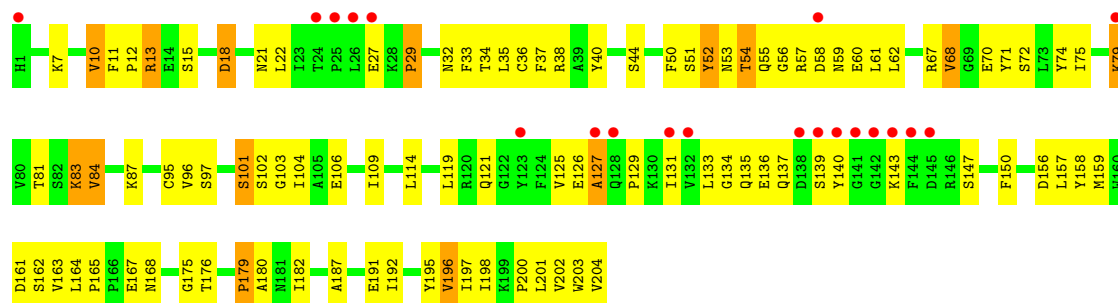
Chain D: 





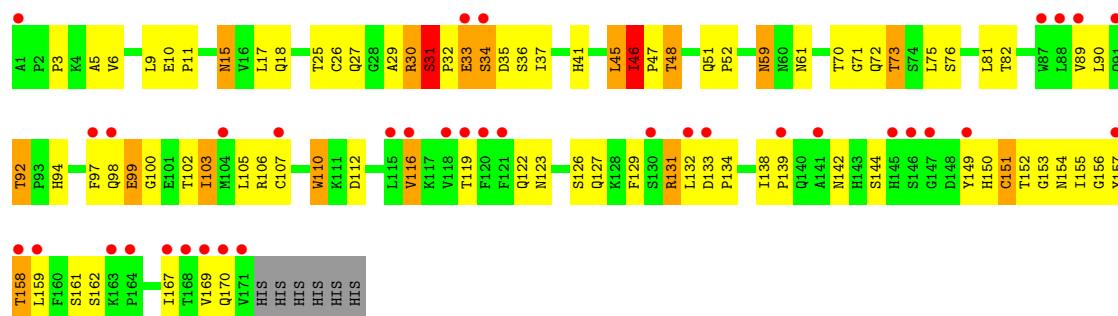
• Molecule 1: Serum amyloid P-component

Chain E: Chain E sequence bar chart showing residue ranges (e.g., V80-T81, S82-K83, V84-I85, E86-K87, C95, S101-S102, W108, T112-P113, L114-V115, K116, L119, R120, Y123-F124, V125, A127-Q128, P129, Q135, D138-S139, Y140, G141, K143, F144, D145, R146, S147, V151, E153, I154, G155, D156, L157, Y158, M159, V163, L164, P165) and outliers (red dots) at positions 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204.



• Molecule 2: Low affinity immunoglobulin gamma Fc region receptor II-a

Chain F: Chain F sequence bar chart showing residue ranges (e.g., V80-T81, S82-K83, V84-I85, E86-K87, C95, S101-S102, W108, T112-P113, L114-V115, K116, L119, R120, Y123-F124, V125, A127-Q128, P129, Q135, D138-S139, Y140, G141, K143, F144, D145, R146, S147, V151, E153, I154, G155, D156, L157, Y158, M159, V163, L164, P165) and outliers (red dots) at positions 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204.





## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	64.20Å 143.48Å 161.59Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	50.00 – 2.80 47.84 – 2.80	Depositor EDS
% Data completeness (in resolution range)	(Not available) (50.00-2.80) 97.6 (47.84-2.80)	Depositor EDS
$R_{merge}$	(Not available)	Depositor
$R_{sym}$	0.09	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	2.64 (at 2.81Å)	Xtriage
Refinement program	CNS 1.1	Depositor
R, $R_{free}$	0.207 , 0.279 0.215 , 0.286	Depositor DCC
$R_{free}$ test set	1471 reflections (4.18%)	DCC
Wilson B-factor (Å <sup>2</sup> )	56.9	Xtriage
Anisotropy	0.228	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.36 , 34.7	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning	$\langle  L  \rangle = 0.47$ , $\langle L^2 \rangle = 0.30$	Xtriage
Outliers	0 of 36697 reflections	Xtriage
$F_o, F_c$ correlation	0.92	EDS
Total number of atoms	9655	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	51.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.97% of the height of the origin peak. No significant pseudotranslation is detected.*

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

## 5 Model quality

### 5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: GOL, NAG, 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	0/1685	0.74	1/2293 (0.0%)
1	B	0.45	0/1689	0.76	1/2297 (0.0%)
1	C	0.42	0/1671	0.74	1/2274 (0.0%)
1	D	0.40	0/1667	0.71	0/2270
1	E	0.37	0/1678	0.71	1/2284 (0.0%)
2	F	0.43	0/1351	0.79	3/1851 (0.2%)
All	All	0.41	0/9741	0.74	7/13269 (0.1%)

There are no bond length outliers.

The worst 5 of 7 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	127	ALA	N-CA-C	5.60	126.11	111.00
2	F	46	ILE	N-CA-C	-5.50	96.15	111.00
1	E	127	ALA	N-CA-C	5.23	125.11	111.00
1	A	127	ALA	N-CA-C	5.13	124.85	111.00
1	C	129	PRO	N-CA-C	5.09	125.35	112.10

There are no chirality outliers.

There are no planarity outliers.

### 5.2 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 hydrogens added by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, and the number in parentheses is this value normalized per 1000 atoms of the molecule in the chain. The Symm-Clashes column gives symmetry related clashes, in the same way as for the Clashes column.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	1638	0	1600	74	0
1	B	1642	0	1611	51	0
1	C	1624	0	1583	85	0
1	D	1620	0	1572	78	0
1	E	1631	0	1588	88	0
2	F	1313	0	1228	70	0
3	A	15	0	0	0	0
3	B	15	0	0	0	0
3	C	15	0	0	0	0
3	D	15	0	0	0	0
3	E	15	0	0	1	0
3	F	5	0	0	0	0
4	A	14	0	13	1	0
4	B	14	0	13	0	0
4	C	14	0	13	0	0
4	D	14	0	13	0	0
4	E	14	0	13	0	0
5	F	6	0	8	3	0
6	A	3	0	0	1	0
6	B	13	0	0	0	0
6	C	6	0	0	1	0
6	D	3	0	0	0	0
6	E	1	0	0	0	0
6	F	5	0	0	0	0
All	All	9655	0	9255	441	0

Clashscore is defined as the number of clashes calculated for the entry per 1000 atoms (including hydrogens) of the entry. The overall clashscore for this entry is 23.

The worst 5 of 441 close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:54:THR:CG2	1:C:57:ARG:HG3	1.55	1.35
1:C:54:THR:CG2	1:C:57:ARG:CG	2.15	1.23
2:F:30:ARG:NH2	2:F:72:GLN:HB2	1.64	1.13
1:C:54:THR:HG21	1:C:57:ARG:HG3	1.07	1.03
2:F:30:ARG:HH22	2:F:72:GLN:HB2	0.88	1.03

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	202/204 (99%)	178 (88%)	22 (11%)	2 (1%)	22	60
1	B	202/204 (99%)	187 (93%)	14 (7%)	1 (0%)	38	76
1	C	202/204 (99%)	172 (85%)	24 (12%)	6 (3%)	7	22
1	D	202/204 (99%)	179 (89%)	17 (8%)	6 (3%)	7	22
1	E	202/204 (99%)	172 (85%)	24 (12%)	6 (3%)	7	22
2	F	169/177 (96%)	142 (84%)	23 (14%)	4 (2%)	9	29
All	All	1179/1197 (98%)	1030 (87%)	124 (10%)	25 (2%)	11	33

5 of 25 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	C	144	PHE
1	D	140	TYR
1	D	143	LYS
1	E	68	VAL
2	F	31	SER

### 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	179/181 (99%)	161 (90%)	18 (10%)	11	30
1	B	180/181 (99%)	165 (92%)	15 (8%)	16	42
1	C	177/181 (98%)	162 (92%)	15 (8%)	15	41
1	D	176/181 (97%)	158 (90%)	18 (10%)	11	29
1	E	178/181 (98%)	161 (90%)	17 (10%)	12	33

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	F	146/163 (90%)	118 (81%)	28 (19%)	2	6
All	All	1036/1068 (97%)	925 (89%)	111 (11%)	10	26

5 of 111 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	D	22	LEU
1	D	170	LEU
2	F	116	VAL
1	D	30	LEU
1	D	85	ILE

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 33 such sidechains are listed below:

Mol	Chain	Res	Type
1	C	59	ASN
1	D	1	HIS
2	F	123	ASN
1	C	78	HIS
1	C	135	GLN

### 5.3.3 RNA ⓘ

There are no RNA chains 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 carbohydrates in this entry.

## 5.6 Ligand geometry ⓘ

22 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	A	205	-	4,4,4	0.23	0	6,6,6	0.12	0
3	SO4	A	206	-	4,4,4	0.29	0	6,6,6	0.13	0
3	SO4	A	207	-	4,4,4	0.25	0	6,6,6	0.10	0
4	NAG	A	208	1	12,14,15	0.50	0	15,19,21	0.62	0
3	SO4	B	205	-	4,4,4	0.20	0	6,6,6	0.12	0
3	SO4	B	206	-	4,4,4	0.12	0	6,6,6	0.28	0
3	SO4	B	207	-	4,4,4	0.25	0	6,6,6	0.11	0
4	NAG	B	208	1	12,14,15	0.47	0	15,19,21	0.62	0
3	SO4	C	205	-	4,4,4	0.31	0	6,6,6	0.14	0
3	SO4	C	206	-	4,4,4	0.30	0	6,6,6	0.15	0
3	SO4	C	207	-	4,4,4	0.26	0	6,6,6	0.07	0
4	NAG	C	208	1	12,14,15	0.52	0	15,19,21	0.57	0
3	SO4	D	205	-	4,4,4	0.27	0	6,6,6	0.15	0
3	SO4	D	206	-	4,4,4	0.24	0	6,6,6	0.08	0
3	SO4	D	207	-	4,4,4	0.25	0	6,6,6	0.13	0
4	NAG	D	208	1	12,14,15	0.55	0	15,19,21	0.71	0
3	SO4	E	205	-	4,4,4	0.31	0	6,6,6	0.13	0
3	SO4	E	206	-	4,4,4	0.17	0	6,6,6	0.15	0
3	SO4	E	207	-	4,4,4	0.22	0	6,6,6	0.08	0
4	NAG	E	208	1	12,14,15	0.40	0	15,19,21	0.94	0
3	SO4	F	178	-	4,4,4	0.25	0	6,6,6	0.16	0
5	GOL	F	179	-	5,5,5	0.21	0	5,5,5	0.31	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	SO4	A	205	-	-	0/0/0/0	0/0/0/0
3	SO4	A	206	-	-	0/0/0/0	0/0/0/0
3	SO4	A	207	-	-	0/0/0/0	0/0/0/0
4	NAG	A	208	1	-	0/6/23/26	0/1/1/1
3	SO4	B	205	-	-	0/0/0/0	0/0/0/0
3	SO4	B	206	-	-	0/0/0/0	0/0/0/0
3	SO4	B	207	-	-	0/0/0/0	0/0/0/0
4	NAG	B	208	1	-	0/6/23/26	0/1/1/1

*Continued on next page...*

*Continued from previous page...*

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	SO4	C	205	-	-	0/0/0/0	0/0/0/0
3	SO4	C	206	-	-	0/0/0/0	0/0/0/0
3	SO4	C	207	-	-	0/0/0/0	0/0/0/0
4	NAG	C	208	1	-	0/6/23/26	0/1/1/1
3	SO4	D	205	-	-	0/0/0/0	0/0/0/0
3	SO4	D	206	-	-	0/0/0/0	0/0/0/0
3	SO4	D	207	-	-	0/0/0/0	0/0/0/0
4	NAG	D	208	1	-	0/6/23/26	0/1/1/1
3	SO4	E	205	-	-	0/0/0/0	0/0/0/0
3	SO4	E	206	-	-	0/0/0/0	0/0/0/0
3	SO4	E	207	-	-	0/0/0/0	0/0/0/0
4	NAG	E	208	1	-	0/6/23/26	0/1/1/1
3	SO4	F	178	-	-	0/0/0/0	0/0/0/0
5	GOL	F	179	-	-	0/4/4/4	0/0/0/0

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

## 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	204/204 (100%)	0.00	4 (1%) 62 63	19, 36, 69, 111	0
1	B	204/204 (100%)	-0.25	0 100 100	20, 34, 57, 77	0
1	C	204/204 (100%)	0.31	13 (6%) 19 17	24, 47, 93, 119	0
1	D	204/204 (100%)	0.24	15 (7%) 14 13	31, 51, 95, 120	0
1	E	204/204 (100%)	0.45	20 (9%) 8 6	27, 58, 93, 117	0
2	F	171/177 (96%)	0.91	36 (21%) 1 1	20, 68, 92, 109	0
All	All	1191/1197 (99%)	0.26	88 (7%) 15 13	19, 48, 91, 120	0

The worst 5 of 88 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	C	141	GLY	15.3
1	C	140	TYR	13.1
1	C	139	SER	10.3
1	D	145	ASP	7.7
1	D	142	GLY	7.3

### 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 carbohydrates in this entry.



## 6.4 Ligands ⓘ

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. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. 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	RSR	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
3	SO4	B	205	5/5	0.28	4.10	81,83,87,94	0
4	NAG	D	208	14/15	0.30	2.42	56,74,84,91	0
4	NAG	C	208	14/15	0.28	1.99	64,76,85,86	0
4	NAG	B	208	14/15	0.27	1.88	48,64,79,92	0
4	NAG	E	208	14/15	0.29	1.75	67,78,87,91	0
5	GOL	F	179	6/6	0.30	1.18	48,63,66,69	0
3	SO4	E	207	5/5	0.22	0.94	75,75,79,80	0
4	NAG	A	208	14/15	0.21	0.70	53,67,80,82	0
3	SO4	C	205	5/5	0.16	0.27	62,71,75,83	0
3	SO4	C	207	5/5	0.20	-0.18	72,80,85,85	0
3	SO4	A	207	5/5	0.17	-0.39	61,63,71,74	0
3	SO4	B	206	5/5	0.17	-0.62	48,57,63,68	0
3	SO4	E	206	5/5	0.17	-0.72	85,85,89,91	0
3	SO4	D	205	5/5	0.17	-0.89	82,82,94,96	0
3	SO4	D	207	5/5	0.18	-1.00	76,77,86,88	0
3	SO4	D	206	5/5	0.15	-1.11	67,76,84,85	0
3	SO4	C	206	5/5	0.18	-1.20	77,82,86,93	0
3	SO4	A	206	5/5	0.12	-1.24	66,67,74,74	0
3	SO4	B	207	5/5	0.11	-1.32	67,68,72,72	0
3	SO4	E	205	5/5	0.15	-1.35	73,75,92,95	0
3	SO4	A	205	5/5	0.12	-3.48	69,69,79,89	0
3	SO4	F	178	5/5	0.12	-6.22	73,76,80,87	0

## 6.5 Other polymers ⓘ

There are no such residues in this entry.