W O R L D W I D E
wwPDB
P R O T E I N   D A T A   B A N K

Full wwPDB X-ray Structure Validation Report ⓘ

Oct 11, 2021 – 08:16 AM EDT

PDB ID	:	3B6W
Title	:	Crystal Structure of the GLUR2 Ligand Binding Core (S1S2J) T686S Mutant in Complex with Glutamate at 1.7 Resolution
Authors	:	Cho, Y.; Lolis, E.; Howe, J.R.
Deposited on	:	2007-10-29
Resolution	:	1.70 Å(reported)

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)
Xtriage (Phenix)	:	1.13
EDS	:	2.23.2
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)	:	2.23.2

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 1.70 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	Percentile Ranks	Value
Rfree		0.257
Clashscore		5
Ramachandran outliers		0.3%
Sidechain outliers		2.9%
RSRZ outliers		7.8%

Worse   *Better*

▮ Percentile relative to all X-ray structures

▯ Percentile relative to X-ray structures of similar resolution
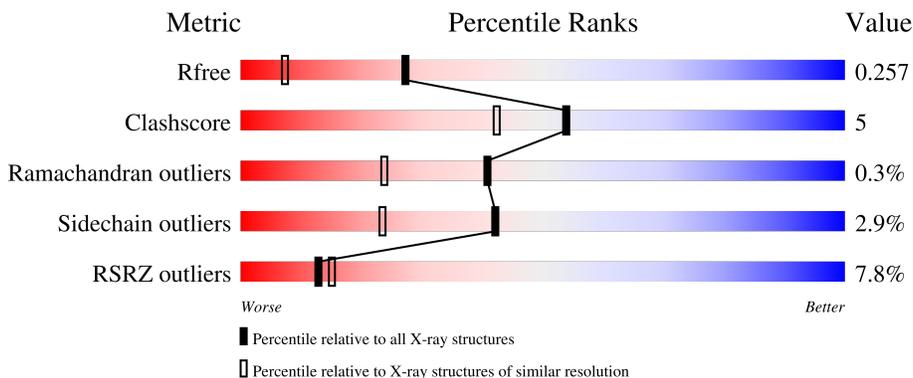
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	4298 (1.70-1.70)
Clashscore	141614	4695 (1.70-1.70)
Ramachandran outliers	138981	4610 (1.70-1.70)
Sidechain outliers	138945	4610 (1.70-1.70)
RSRZ outliers	127900	4222 (1.70-1.70)

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	263	3% / 88% / 9% ··
1	B	263	3% / 90% / 8% ·
1	C	263	90% / 8% ·
1	D	263	24% / 78% / 18% ··

2 Entry composition ⓘ

There are 4 unique types of molecules in this entry. The entry contains 8407 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 Glutamate receptor 2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	258	Total	C	N	O	S	0	1	0
			1988	1266	332	375	15			
1	B	258	Total	C	N	O	S	0	1	0
			1959	1249	326	369	15			
1	C	258	Total	C	N	O	S	0	1	0
			1967	1256	321	375	15			
1	D	258	Total	C	N	O	S	0	0	0
			1872	1188	310	361	13			

There are 20 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	390	GLY	-	expression tag	UNP P19491
A	391	ALA	-	expression tag	UNP P19491
A	630	GLY	-	linker	UNP P19491
A	631	THR	-	linker	UNP P19491
A	686	SER	THR	engineered mutation	UNP P19491
B	390	GLY	-	expression tag	UNP P19491
B	391	ALA	-	expression tag	UNP P19491
B	630	GLY	-	linker	UNP P19491
B	631	THR	-	linker	UNP P19491
B	686	SER	THR	engineered mutation	UNP P19491
C	390	GLY	-	expression tag	UNP P19491
C	391	ALA	-	expression tag	UNP P19491
C	630	GLY	-	linker	UNP P19491
C	631	THR	-	linker	UNP P19491
C	686	SER	THR	engineered mutation	UNP P19491
D	390	GLY	-	expression tag	UNP P19491
D	391	ALA	-	expression tag	UNP P19491
D	630	GLY	-	linker	UNP P19491
D	631	THR	-	linker	UNP P19491
D	686	SER	THR	engineered mutation	UNP P19491

- Molecule 2 is SULFATE ION (three-letter code: SO4) (formula: O_4S).

SO4

O1

O3 O⁻ — S — O⁻ O4

S

O2
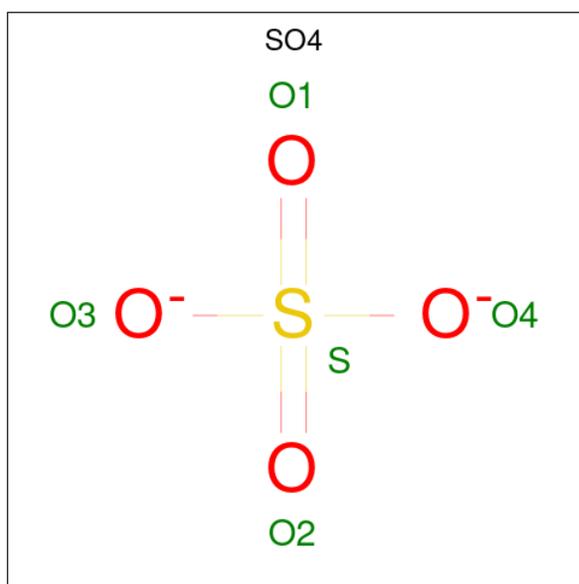
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
2	A	1	Total O S 5 4 1			0	0
2	A	1	Total O S 5 4 1			0	0
2	B	1	Total O S 5 4 1			0	0
2	C	1	Total O S 5 4 1			0	0

- Molecule 3 is GLUTAMIC ACID (three-letter code: GLU) (formula: $C_5H_9NO_4$).

GLU

OE1

O

OH OE2
CD

O CB

CG

CA(S)

C

HO NH₂
OXT N
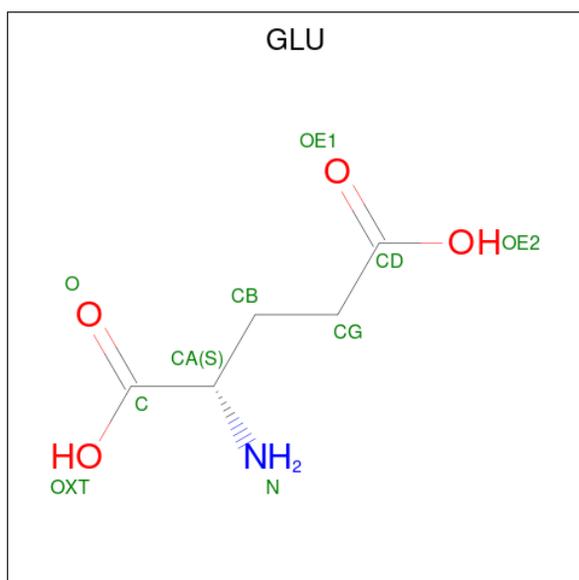
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
3	A	1	Total 10	C 5	N 1	O 4	0	0
3	B	1	Total 10	C 5	N 1	O 4	0	0

- Molecule 4 is water.

| Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	189	Total 189	O 189	0	0
4	B	117	Total 117	O 117	0	0
4	C	171	Total 171	O 171	0	0
4	D	104	Total 104	O 104	0	0

3 Residue-property plots ⓘ

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: Glutamate receptor 2
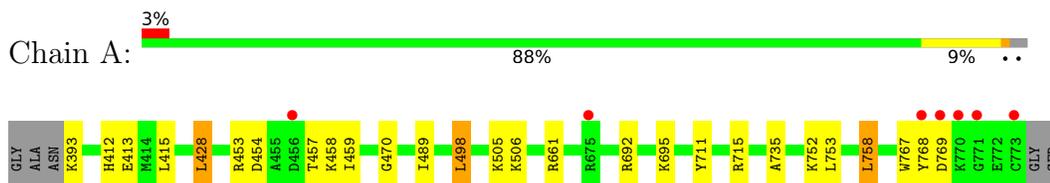
Chain A:

• Molecule 1: Glutamate receptor 2

Chain B:

• Molecule 1: Glutamate receptor 2

Chain C:

• Molecule 1: Glutamate receptor 2

Chain D:
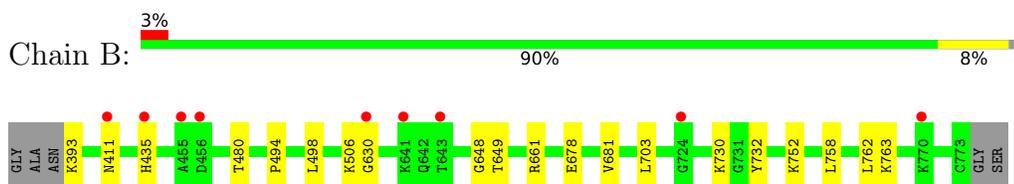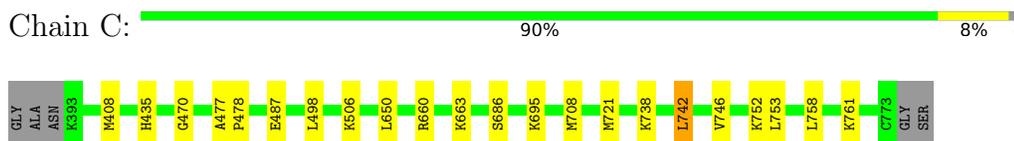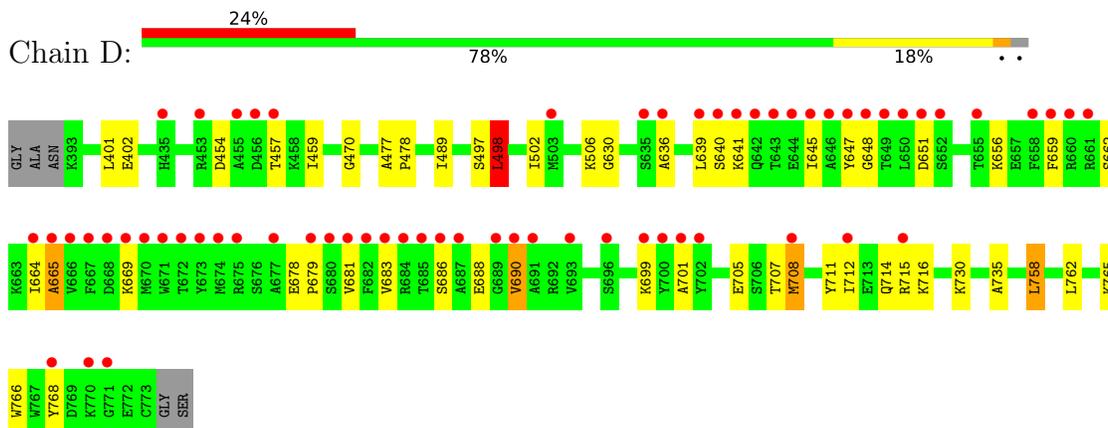
4 Data and refinement statistics ⓘ

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	47.82Å　95.84Å　122.89Å 90.00°　93.43°　90.00°	Depositor
Resolution (Å)	123.00　–　1.70 51.66　–　1.70	Depositor EDS
% Data completeness (in resolution range)	98.3 (123.00-1.70) 98.3 (51.66-1.70)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.06	Depositor
$< I/\sigma(I) >$ [1]	2.71 (at 1.70Å)	Xtriage
Refinement program	REFMAC 5.2.0005	Depositor
R, R_{free}	0.225　,　0.260 0.223　,　0.257	Depositor DCC
R_{free} test set	6005 reflections (5.03%)	wwPDB-VP
Wilson B-factor (Å²)	20.5	Xtriage
Anisotropy	0.085	Xtriage
Bulk solvent k_{sol}(e/Å³), B_{sol}(Å²)	0.36 , 46.2	EDS
L-test for twinning[2]	$< |L| > = 0.49, < L^2 > = 0.32$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.94	EDS
Total number of atoms	8407	wwPDB-VP
Average B, all atoms (Å²)	21.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The analyses of the Patterson function reveals a significant off-origin peak that is 21.52 % of the origin peak, indicating pseudo-translational symmetry. The chance of finding a peak of this or larger height randomly in a structure without pseudo-translational symmetry is equal to 6.8883e-03. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

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[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 ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: 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	0.79	1/2027 (0.0%)	0.75	1/2728 (0.0%)
1	B	0.61	0/1998	0.68	0/2693
1	C	0.77	1/2008 (0.0%)	0.72	1/2710 (0.0%)
1	D	0.59	0/1903	0.69	1/2577 (0.0%)
All	All	0.70	2/7936 (0.0%)	0.71	3/10708 (0.0%)

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	C	506	LYS	C-N	9.26	1.49	1.33
1	A	506	LYS	C-N	8.19	1.47	1.33

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	D	498	LEU	CA-CB-CG	5.44	127.82	115.30
1	C	650	LEU	CA-CB-CG	5.24	127.35	115.30
1	A	428	LEU	CB-CG-CD2	5.10	119.67	111.00

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	1988	0	2007	20	0
1	B	1959	0	1944	9	0
1	C	1967	0	1949	12	0
1	D	1872	0	1747	42	0
2	A	10	0	0	0	0
2	B	5	0	0	0	0
2	C	5	0	0	0	0
3	A	10	0	5	0	0
3	B	10	0	5	1	0
4	A	189	0	0	5	0
4	B	117	0	0	1	0
4	C	171	0	0	4	0
4	D	104	0	0	12	0
All	All	8407	0	7657	82	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 (82) 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:D:647:TYR:HB3	1:D:701:ALA:O	1.43	1.15
1:D:645:ILE:HA	1:D:699:LYS:O	1.51	1.11
1:D:659:PHE:HB2	4:D:868:HOH:O	1.61	1.00
1:D:506:LYS:C	1:D:630:GLY:N	2.17	0.97
1:D:683:VAL:HB	4:D:863:HOH:O	1.70	0.89
1:D:502:ILE:HD11	1:D:636:ALA:HA	1.55	0.89
1:C:753:LEU:HD22	1:C:758:LEU:HD23	1.55	0.88
1:A:752:LYS:HD2	4:A:1076:HOH:O	1.71	0.87
1:D:640:SER:HB3	4:D:864:HOH:O	1.73	0.87
1:D:639:LEU:HD21	1:D:701:ALA:HB3	1.55	0.85
1:B:506:LYS:C	1:B:630:GLY:N	2.31	0.83
1:A:457:THR:HG21	4:A:1057:HOH:O	1.79	0.82
1:A:453:ARG:HH21	1:A:458:LYS:HD3	1.47	0.80
1:A:505:LYS:HE2	4:A:1070:HOH:O	1.80	0.79
1:D:639:LEU:CD2	1:D:701:ALA:HB3	2.14	0.77
1:A:454:ASP:HB3	1:A:457:THR:HG22	1.66	0.76
1:D:454:ASP:HB3	1:D:457:THR:HG22	1.67	0.76
1:D:639:LEU:HD21	1:D:701:ALA:CB	2.16	0.75
1:D:659:PHE:HA	4:D:849:HOH:O	1.87	0.73
1:A:767:TRP:O	1:A:769:ASP:N	2.22	0.71
1:D:647:TYR:CB	1:D:701:ALA:O	2.33	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:457:THR:HG23	1:A:459:ILE:H	1.59	0.66
1:D:647:TYR:HB2	4:D:852:HOH:O	1.96	0.66
1:D:640:SER:HB2	1:D:669:LYS:HD2	1.79	0.64
1:A:470:GLY:HA2	4:A:1055:HOH:O	1.97	0.63
1:D:502:ILE:HD11	1:D:636:ALA:CA	2.29	0.62
1:C:470:GLY:HA2	4:C:1051:HOH:O	2.01	0.61
1:A:695:LYS:HG3	4:A:1062:HOH:O	1.99	0.60
1:D:688:GLU:CB	4:D:863:HOH:O	2.48	0.60
1:D:454:ASP:CB	1:D:457:THR:HG22	2.32	0.60
1:A:453:ARG:NH2	1:A:458:LYS:HD3	2.17	0.58
1:D:714:GLN:HE21	1:D:768:TYR:HD1	1.53	0.57
1:D:716:LYS:CB	4:D:854:HOH:O	2.53	0.56
1:D:656:LYS:HA	4:D:868:HOH:O	2.06	0.56
1:D:470:GLY:HA2	4:D:843:HOH:O	2.06	0.55
1:B:649:THR:HG22	1:B:703:LEU:HB2	1.88	0.55
1:D:690:VAL:HG13	1:D:712:ILE:HG21	1.91	0.53
1:A:412:HIS:HA	1:A:415:LEU:HD12	1.90	0.53
1:D:664:ILE:O	1:D:665:ALA:HB2	2.08	0.53
1:A:413:GLU:H	1:A:413:GLU:CD	2.13	0.52
1:C:686:SER:HB3	1:C:708[B]:MET:SD	2.49	0.52
1:A:498:LEU:C	1:A:498:LEU:HD22	2.31	0.51
1:A:453:ARG:HH21	1:A:458:LYS:CD	2.19	0.51
1:D:489:ILE:HD12	1:D:735:ALA:HB1	1.92	0.51
1:C:695:LYS:HE2	4:C:1059:HOH:O	2.11	0.50
1:B:506:LYS:C	1:B:630:GLY:CA	2.80	0.50
1:D:711:TYR:O	1:D:715:ARG:HG2	2.11	0.49
1:D:651:ASP:O	1:D:656:LYS:HD3	2.12	0.49
1:D:402:GLU:OE1	1:D:686:SER:HB2	2.13	0.49
1:A:692:ARG:HD2	1:B:678:GLU:OE1	2.13	0.48
1:B:480:THR:HG1	3:B:801:GLU:N	2.11	0.48
1:C:435:HIS:NE2	1:C:752:LYS:HD2	2.29	0.47
1:D:506:LYS:NZ	4:D:776:HOH:O	2.42	0.47
1:C:695:LYS:CE	4:C:1059:HOH:O	2.62	0.47
1:A:454:ASP:CB	1:A:457:THR:HG22	2.39	0.47
1:D:765:LYS:HE2	1:D:766:TRP:CE2	2.51	0.46
1:D:662:SER:CB	4:D:849:HOH:O	2.62	0.46
1:D:506:LYS:C	1:D:630:GLY:CA	2.85	0.46
1:A:753:LEU:HD22	1:A:758:LEU:HD23	1.97	0.46
1:D:690:VAL:CG1	1:D:712:ILE:HG21	2.46	0.45
1:A:711:TYR:O	1:A:715:ARG:HG2	2.17	0.45
1:C:435:HIS:CD2	1:C:752:LYS:HD2	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:487:GLU:O	1:C:738:LYS:HE3	2.18	0.44
1:D:678:GLU:HA	1:D:679:PRO:C	2.38	0.43
1:C:660:ARG:HH11	1:C:660:ARG:HG2	1.82	0.43
1:D:498:LEU:HB3	1:D:707:THR:HG23	2.00	0.43
1:D:477:ALA:HB1	1:D:478:PRO:HD2	2.00	0.43
1:A:661:ARG:HD3	4:C:1021:HOH:O	2.19	0.43
1:C:477:ALA:HB1	1:C:478:PRO:HD2	2.01	0.43
1:B:648:GLY:HA3	1:B:681:VAL:O	2.19	0.43
1:D:758:LEU:O	1:D:762:LEU:HD13	2.18	0.43
1:C:761:LYS:HB3	1:C:761:LYS:HE3	1.87	0.42
1:D:502:ILE:CD1	1:D:636:ALA:HA	2.38	0.42
1:C:742:LEU:HD22	1:C:746:VAL:HG13	2.00	0.42
1:A:489:ILE:HD12	1:A:735:ALA:HB1	2.02	0.42
1:D:648:GLY:HA3	1:D:681:VAL:HB	2.02	0.41
1:D:648:GLY:N	4:D:852:HOH:O	2.52	0.41
1:B:494:PRO:HA	1:B:732:TYR:O	2.20	0.41
1:D:705:GLU:OE2	1:D:708:MET:HG2	2.21	0.41
1:B:435:HIS:CD2	1:B:752:LYS:HD3	2.56	0.40
1:D:457:THR:HG23	1:D:459:ILE:H	1.85	0.40
1:B:411:ASN:CB	4:B:999:HOH:O	2.69	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	257/263 (98%)	254 (99%)	2 (1%)	1 (0%)	34	18
1	B	255/263 (97%)	249 (98%)	6 (2%)	0	100	100
1	C	257/263 (98%)	255 (99%)	2 (1%)	0	100	100
1	D	254/263 (97%)	249 (98%)	3 (1%)	2 (1%)	19	6
All	All	1023/1052 (97%)	1007 (98%)	13 (1%)	3 (0%)	41	24

All (3) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	768	TYR
1	D	665	ALA
1	D	641	LYS

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	211/219 (96%)	207 (98%)	4 (2%)	57	41
1	B	203/219 (93%)	196 (97%)	7 (3%)	37	18
1	C	206/219 (94%)	201 (98%)	5 (2%)	49	31
1	D	177/219 (81%)	170 (96%)	7 (4%)	31	13
All	All	797/876 (91%)	774 (97%)	23 (3%)	42	23

All (23) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	393	LYS
1	A	428	LEU
1	A	498	LEU
1	A	758	LEU
1	B	393	LYS
1	B	498	LEU
1	B	661	ARG
1	B	730	LYS
1	B	758	LEU
1	B	762	LEU
1	B	763	LYS
1	C	408	MET
1	C	498	LEU
1	C	663	LYS
1	C	721	MET
1	C	742	LEU
1	D	401	LEU

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Mol	Chain	Res	Type
1	D	497	SER
1	D	498	LEU
1	D	690	VAL
1	D	708	MET
1	D	730	LYS
1	D	758	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (5) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	764	ASN
1	B	726	ASN
1	C	756	GLN
1	D	411	ASN
1	D	714	GLN

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 ⓘ

6 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	$\#|Z| > 2$
2	SO4	A	903	-	4,4,4	0.11	0	6,6,6	0.54	0
2	SO4	C	902	-	4,4,4	0.17	0	6,6,6	0.45	0
2	SO4	A	901	-	4,4,4	0.11	0	6,6,6	0.22	0
2	SO4	B	904	-	4,4,4	0.15	0	6,6,6	0.34	0
3	GLU	A	801	-	2,9,9	1.17	0	2,11,11	0.19	0
3	GLU	B	801	-	2,9,9	0.95	0	2,11,11	0.53	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	GLU	A	801	-	-	0/3/9/9	-
3	GLU	B	801	-	-	0/3/9/9	-

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.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	B	801	GLU	1	0

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	B	1
1	D	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	B	506:LYS	C	630:GLY	N	2.31
1	D	506:LYS	C	630:GLY	N	2.17

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, 95th 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	258/263 (98%)	0.27	7 (2%)	54	58	9, 16, 29, 40	0
1	B	258/263 (98%)	0.38	9 (3%)	44	49	12, 21, 34, 39	0
1	C	258/263 (98%)	0.19	0	100	100	10, 17, 28, 35	0
1	D	258/263 (98%)	1.34	64 (24%)	0	0	15, 26, 49, 52	0
All	All	1032/1052 (98%)	0.55	80 (7%)	13	15	9, 20, 39, 52	0

All (80) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	D	646	ALA	8.1
1	D	671	TRP	7.4
1	D	670	MET	7.2
1	D	700	TYR	7.2
1	D	679	PRO	6.8
1	D	665	ALA	6.6
1	D	667	PHE	6.5
1	D	650	LEU	6.5
1	D	664	ILE	6.3
1	A	770	LYS	6.3
1	D	647	TYR	5.6
1	D	684	ARG	5.6
1	D	686	SER	5.5
1	D	690	VAL	5.5
1	B	455	ALA	5.3
1	D	639	LEU	5.1
1	D	640	SER	5.0
1	D	651	ASP	5.0
1	D	701	ALA	4.8
1	D	683	VAL	4.8
1	D	655	THR	4.7

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Mol	Chain	Res	Type	RSRZ
1	B	630	GLY	4.5
1	D	673	TYR	4.4
1	D	666	VAL	4.4
1	D	682	PHE	4.3
1	D	687	ALA	4.3
1	D	668	ASP	4.2
1	D	693	VAL	4.2
1	D	648	GLY	4.2
1	D	643	THR	4.0
1	D	455	ALA	4.0
1	D	636	ALA	4.0
1	D	645	ILE	4.0
1	D	699	LYS	3.8
1	D	642	GLN	3.8
1	D	677	ALA	3.7
1	B	456	ASP	3.7
1	A	773	CYS	3.7
1	D	771	GLY	3.7
1	D	658	PHE	3.6
1	D	641	LYS	3.6
1	D	689	GLY	3.5
1	D	674	MET	3.5
1	D	456	ASP	3.5
1	B	411	ASN	3.4
1	D	649	THR	3.4
1	A	769	ASP	3.3
1	D	708	MET	3.2
1	D	659	PHE	3.2
1	D	685	THR	3.2
1	D	770	LYS	3.1
1	D	644	GLU	3.1
1	D	672	THR	3.0
1	D	457	THR	3.0
1	D	675	ARG	2.9
1	D	680	SER	2.9
1	A	768	TYR	2.8
1	D	691	ALA	2.8
1	D	635	SER	2.8
1	B	435	HIS	2.8
1	D	660	ARG	2.7
1	B	770	LYS	2.7
1	A	771	GLY	2.7

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Mol	Chain	Res	Type	RSRZ
1	A	456	ASP	2.7
1	D	652	SER	2.6
1	D	712	ILE	2.4
1	D	669	LYS	2.3
1	D	696	SER	2.3
1	D	435	HIS	2.3
1	D	715	ARG	2.2
1	A	675	ARG	2.1
1	D	681	VAL	2.1
1	B	643	THR	2.1
1	D	661	ARG	2.1
1	B	641	LYS	2.1
1	D	702	TYR	2.1
1	D	453	ARG	2.1
1	B	724	GLY	2.1
1	D	768	TYR	2.0
1	D	503	MET	2.0

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 monosaccharides 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. The B-factors column lists the minimum, median, 95th 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^2)	Q<0.9
3	GLU	B	801	10/10	0.91	0.12	12,13,15,16	0
3	GLU	A	801	10/10	0.94	0.11	8,10,12,13	0
2	SO4	A	901	5/5	0.94	0.13	40,41,41,41	0
2	SO4	C	902	5/5	0.96	0.12	36,37,39,40	0
2	SO4	A	903	5/5	0.96	0.13	28,32,33,35	0
2	SO4	B	904	5/5	0.96	0.09	25,28,31,31	0

6.5 Other polymers (i)

There are no such residues in this entry.