



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 01:50 PM GMT

PDB ID : 3V5W
Title : Human G Protein-Coupled Receptor Kinase 2 in Complex with Soluble Gbetagamma Subunits and Paroxetine
Authors : Thal, D.M.; Tesmer, J.J.G.
Deposited on : 2011-12-17
Resolution : 2.07 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
<http://wwpdb.org/validation/2016/XrayValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

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

MolProbity : 4.02b-467
Mogul : 1.7 (RC4), CSD as536be (2015)
Xtriage (Phenix) : 1.9-1692
EDS : rb-20026688
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)
Refmac : 5.8.0135
CCP4 : 6.5.0
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : trunk26865

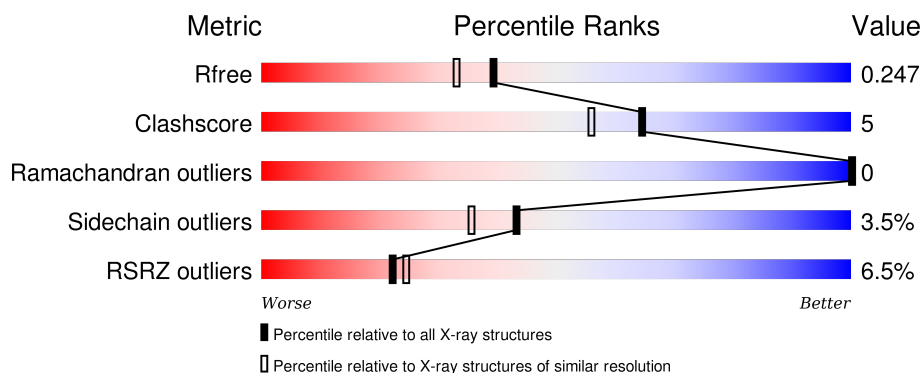
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.07 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}	91344	1799 (2.08-2.04)
Clashscore	102246	1910 (2.08-2.04)
Ramachandran outliers	100387	1893 (2.08-2.04)
Sidechain outliers	100360	1893 (2.08-2.04)
RSRZ outliers	91569	1802 (2.08-2.04)

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 ≥ 3 , 2, 1 and 0 types of geometric quality criteria. 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	689	<div> <div>8%</div> <div> <div></div> <div>78%</div> <div>12%</div> <div>10%</div> </div> </div>
2	B	340	<div> <div>2%</div> <div> <div></div> <div>87%</div> <div>11%</div> <div></div> </div> </div>
3	G	77	<div> <div>6%</div> <div> <div></div> <div>65%</div> <div>9%</div> <div>26%</div> </div> </div>

2 Entry composition

There are 6 unique types of molecules in this entry. The entry contains 8485 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 G-protein coupled receptor kinase 2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	623	Total	C	N	O	S	0	0	0
			5103	3251	892	925	35			

- Molecule 2 is a protein called Guanine nucleotide-binding protein G(I)/G(S)/G(T) subunit beta-1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	339	Total	C	N	O	S	0	2	0
			2619	1613	470	513	23			

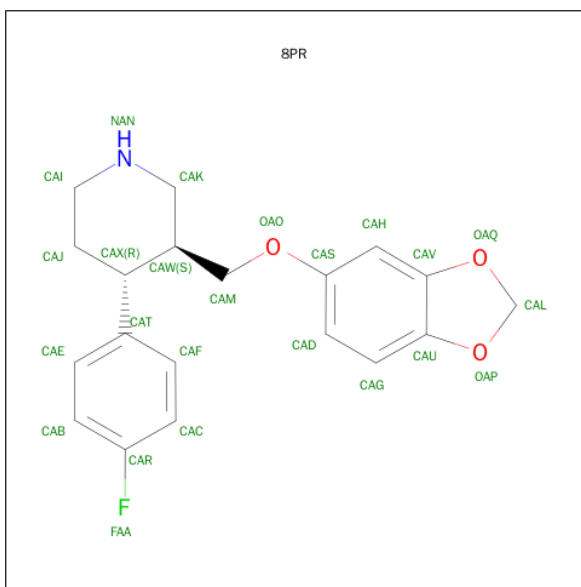
- Molecule 3 is a protein called Guanine nucleotide-binding protein G(I)/G(S)/G(O) subunit gamma-2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	G	57	Total	C	N	O	S	0	0	0
			442	277	78	84	3			

There are 7 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
G	-5	HIS	-	EXPRESSION TAG	UNP P63212
G	-4	HIS	-	EXPRESSION TAG	UNP P63212
G	-3	HIS	-	EXPRESSION TAG	UNP P63212
G	-2	HIS	-	EXPRESSION TAG	UNP P63212
G	-1	HIS	-	EXPRESSION TAG	UNP P63212
G	0	HIS	-	EXPRESSION TAG	UNP P63212
G	68	SER	CYS	ENGINEERED MUTATION	UNP P63212

- Molecule 4 is PAROXETINE (three-letter code: 8PR) (formula: C₁₉H₂₀FN₃O₃).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
4	A	1	Total	C	F	N	O	0	0
			24	19	1	1	3		

- Molecule 5 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	A	1	Total	Mg	0	0
			1	1		

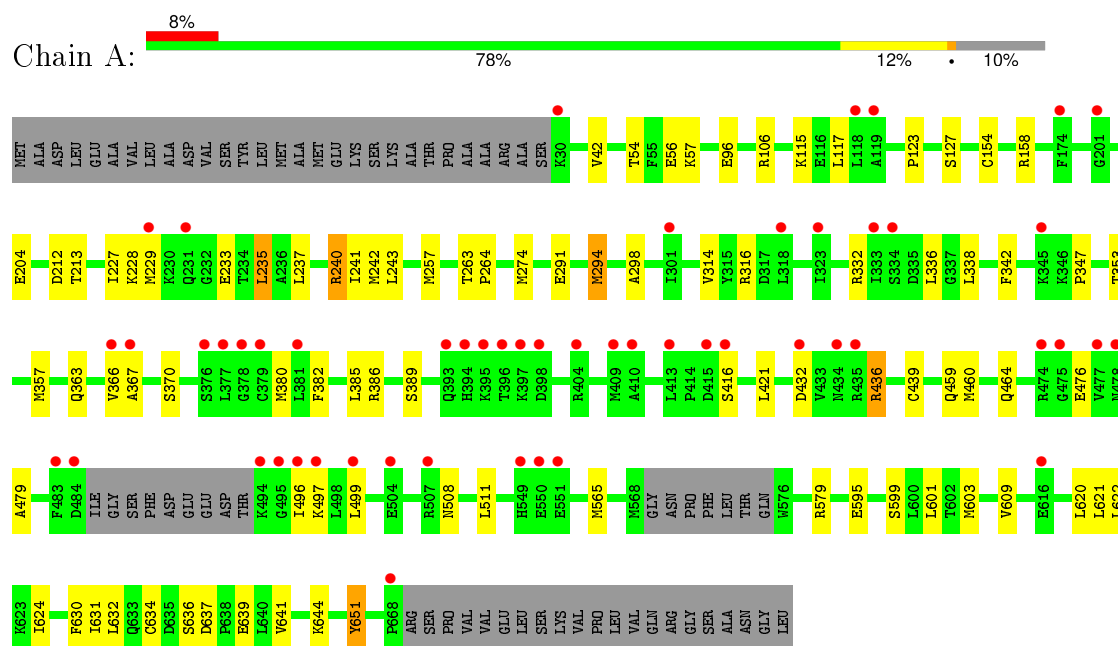
- Molecule 6 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
6	A	156	Total	O	0	0
			156	156		
6	B	140	Total	O	0	0
			140	140		

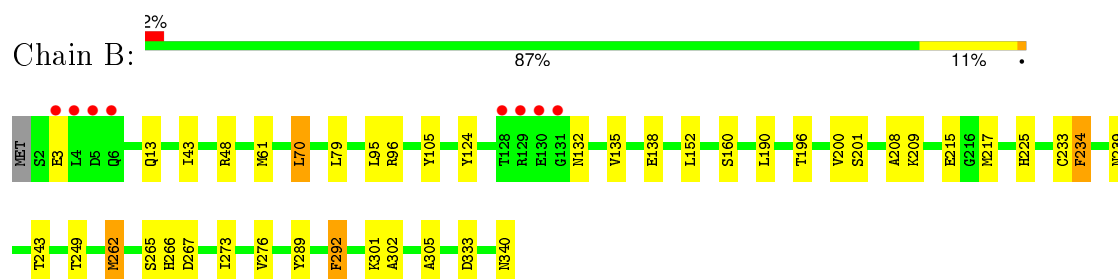
3 Residue-property plots

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.

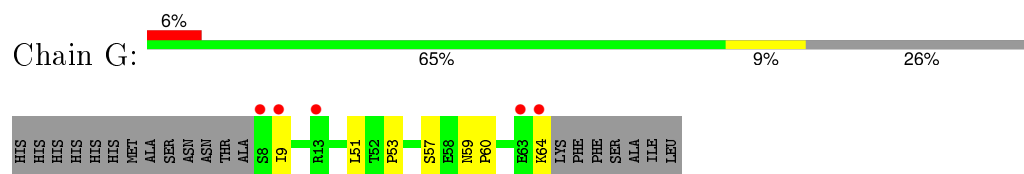
• Molecule 1: G-protein coupled receptor kinase 2



• Molecule 2: Guanine nucleotide-binding protein G(I)/G(S)/G(T) subunit beta-1



• Molecule 3: Guanine nucleotide-binding protein G(I)/G(S)/G(O) subunit gamma-2



4 Data and refinement statistics

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α , β , γ	194.97Å 71.01Å 111.17Å 90.00° 110.41° 90.00°	Depositor
Resolution (Å)	24.53 – 2.07 24.53 – 2.07	Depositor EDS
% Data completeness (in resolution range)	62.9 (24.53-2.07) 63.0 (24.53-2.07)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.08	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.31 (at 2.06Å)	Xtriage
Refinement program	REFMAC 5.6.0117	Depositor
R, R_{free}	0.193 , 0.247 0.197 , 0.247	Depositor DCC
R_{free} test set	2764 reflections (5.29%)	DCC
Wilson B-factor (Å ²)	42.8	Xtriage
Anisotropy	0.069	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.33 , 44.2	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning ²	$\langle L \rangle = 0.51$, $\langle L^2 \rangle = 0.34$	Xtriage
Outliers	0 of 54972 reflections	Xtriage
F_o, F_c correlation	0.95	EDS
Total number of atoms	8485	wwPDB-VP
Average B, all atoms (Å ²)	51.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.89% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.375 respectively for untwinned datasets, and 0.333, 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: 8PR, MG

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	0.49	0/5217	0.61	0/7008
2	B	0.56	0/2666	0.70	1/3613 (0.0%)
3	G	0.42	0/448	0.58	0/603
All	All	0.51	0/8331	0.64	1/11224 (0.0%)

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	333	ASP	CB-CG-OD1	5.21	122.99	118.30

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	5103	0	5086	54	0
2	B	2619	0	2518	27	0
3	G	442	0	455	5	0
4	A	24	0	20	0	0
5	A	1	0	0	0	0
6	A	156	0	0	3	0
6	B	140	0	0	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
All	All	8485	0	8079	83	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 (83) 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:609:VAL:HG22	1:A:622:LEU:CD2	2.08	0.83
1:A:609:VAL:HG22	1:A:622:LEU:HD23	1.75	0.68
1:A:565:MET:HE1	1:A:632:LEU:HB3	1.74	0.67
1:A:314:VAL:HG12	1:A:370:SER:HA	1.78	0.66
1:A:243:LEU:HD23	1:A:336:LEU:HD12	1.82	0.61
1:A:235:LEU:HD11	1:A:338:LEU:CD1	2.31	0.61
1:A:227:ILE:HG22	1:A:233:GLU:HG3	1.83	0.61
1:A:291:GLU:HG2	1:A:421:LEU:HD22	1.82	0.61
2:B:3:GLU:HG2	3:G:9:ILE:HD11	1.83	0.60
2:B:152:LEU:HD22	2:B:196:THR:HB	1.83	0.59
2:B:61:MET:HE3	2:B:70:LEU:HD13	1.84	0.59
1:A:314:VAL:HG13	1:A:342:PHE:CD2	2.39	0.58
1:A:243:LEU:CD2	1:A:336:LEU:HD12	2.33	0.58
2:B:262:MET:CE	2:B:302:ALA:HB2	2.34	0.58
2:B:249:THR:HG22	2:B:265:SER:HB3	1.85	0.57
1:A:382:PHE:CZ	1:A:386:ARG:HG3	2.38	0.57
1:A:436:ARG:HG2	1:A:439:CYS:SG	2.43	0.57
1:A:476:GLU:HG3	1:A:479:ALA:HB2	1.87	0.57
1:A:622:LEU:HB2	1:A:630:PHE:HB3	1.87	0.56
1:A:565:MET:HE3	1:A:634:CYS:SG	2.45	0.56
1:A:235:LEU:HD11	1:A:338:LEU:HD12	1.87	0.56
1:A:212:ASP:HB3	1:A:213:THR:HG23	1.87	0.56
1:A:622:LEU:HD12	1:A:630:PHE:HD1	1.71	0.56
2:B:3:GLU:CG	3:G:9:ILE:HD11	2.36	0.56
2:B:124:TYR:CE2	2:B:135:VAL:HG22	2.41	0.56
1:A:54:THR:OG1	1:A:57:LYS:HG2	2.06	0.55
3:G:51:LEU:O	3:G:53:PRO:HD3	2.07	0.55
1:A:464:GLN:NE2	6:A:896:HOH:O	2.40	0.55
1:A:294:MET:HE3	1:A:298:ALA:HB2	1.91	0.53
2:B:262:MET:SD	2:B:302:ALA:HB2	2.48	0.52
2:B:160:SER:HB3	2:B:190:LEU:HD23	1.90	0.52
1:A:42:VAL:HG23	6:A:804:HOH:O	2.09	0.52
2:B:43:ILE:HG12	2:B:305:ALA:HB1	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:225:HIS:NE2	2:B:243:THR:OG1	2.42	0.51
1:A:228:LYS:NZ	1:A:499:LEU:HD12	2.26	0.51
2:B:200:VAL:HG22	2:B:234:PHE:CE2	2.46	0.51
1:A:241:ILE:HG22	1:A:242:MET:HE2	1.93	0.51
2:B:124:TYR:CZ	2:B:135:VAL:HG22	2.46	0.50
2:B:340:ASN:OD1	3:G:59:ASN:ND2	2.41	0.50
1:A:385:LEU:HD13	1:A:421:LEU:HD21	1.93	0.49
1:A:637:ASP:O	1:A:641:VAL:HG23	2.11	0.49
2:B:292:PHE:N	2:B:292:PHE:CD1	2.79	0.49
2:B:233[B]:CYS:SG	2:B:276:VAL:HG23	2.54	0.48
1:A:96:GLU:HA	1:A:459:GLN:HE22	1.79	0.48
2:B:79:LEU:HG	2:B:95:LEU:HD21	1.95	0.48
3:G:60:PRO:HA	3:G:64:LYS:HB3	1.96	0.47
1:A:257:MET:HE1	1:A:511:LEU:HD23	1.95	0.47
2:B:61:MET:HE3	2:B:70:LEU:CD1	2.45	0.47
1:A:601:LEU:HD11	1:A:624:ILE:HD12	1.97	0.47
1:A:263:THR:HB	1:A:264:PRO:CD	2.45	0.47
2:B:48:ARG:HE	2:B:340:ASN:HB3	1.79	0.47
1:A:154:CYS:O	1:A:158:ARG:HG2	2.15	0.47
1:A:263:THR:HB	1:A:264:PRO:HD2	1.97	0.46
1:A:363:GLN:HE21	1:A:366:VAL:HG21	1.80	0.46
1:A:56:GLU:OE2	1:A:158:ARG:NH1	2.47	0.46
2:B:239:ASN:HB3	6:B:463:HOH:O	2.15	0.46
1:A:565:MET:CE	1:A:634:CYS:SG	3.04	0.45
1:A:243:LEU:HD23	1:A:336:LEU:CD1	2.46	0.45
1:A:565:MET:CE	1:A:632:LEU:HB3	2.44	0.45
2:B:262:MET:HE2	2:B:302:ALA:HB2	1.98	0.45
1:A:363:GLN:NE2	1:A:366:VAL:HG21	2.32	0.45
1:A:621:LEU:HD13	1:A:631:ILE:HD11	2.00	0.44
1:A:314:VAL:HG23	1:A:316:ARG:HG3	2.00	0.44
1:A:636:SER:OG	1:A:639:GLU:OE1	2.23	0.44
1:A:565:MET:HE1	1:A:632:LEU:CB	2.46	0.44
2:B:301:LYS:O	2:B:302:ALA:HB3	2.19	0.43
1:A:294:MET:CE	1:A:298:ALA:HB2	2.47	0.43
1:A:620:LEU:HD21	1:A:644:LYS:HB2	2.01	0.42
2:B:48:ARG:CG	2:B:340:ASN:HB3	2.50	0.42
1:A:117:LEU:O	1:A:123:PRO:HA	2.20	0.42
1:A:240:ARG:NH2	1:A:508:ASN:O	2.48	0.41
1:A:621:LEU:HD12	1:A:631:ILE:HG12	2.02	0.41
1:A:353:THR:O	1:A:357:MET:HG3	2.21	0.41
1:A:603:MET:HB3	1:A:651:TYR:HA	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:201:SER:O	2:B:208:ALA:HA	2.21	0.41
1:A:274:MET:HE2	1:A:332:ARG:HB2	2.03	0.41
1:A:347:PRO:O	1:A:367:ALA:HA	2.21	0.41
2:B:200:VAL:HA	2:B:209:LYS:O	2.21	0.40
1:A:229:MET:HB2	1:A:496:ILE:HD12	2.03	0.40
2:B:273:ILE:HG13	2:B:289:TYR:CE2	2.57	0.40
1:A:314:VAL:HG12	1:A:370:SER:CA	2.50	0.40
1:A:644:LYS:NZ	6:A:943:HOH:O	2.54	0.40
2:B:96:ARG:NH1	2:B:138:GLU:OE1	2.55	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	617/689 (90%)	597 (97%)	20 (3%)	0	100	100
2	B	339/340 (100%)	321 (95%)	18 (5%)	0	100	100
3	G	55/77 (71%)	51 (93%)	4 (7%)	0	100	100
All	All	1011/1106 (91%)	969 (96%)	42 (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	A	556/609 (91%)	537 (97%)	19 (3%)	44	37
2	B	284/283 (100%)	273 (96%)	11 (4%)	39	31
3	G	47/64 (73%)	46 (98%)	1 (2%)	61	57
All	All	887/956 (93%)	856 (96%)	31 (4%)	43	35

All (31) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	106	ARG
1	A	115	LYS
1	A	127	SER
1	A	204	GLU
1	A	235	LEU
1	A	237	LEU
1	A	240	ARG
1	A	294	MET
1	A	380	MET
1	A	389	SER
1	A	416	SER
1	A	432	ASP
1	A	436	ARG
1	A	460	MET
1	A	497	LYS
1	A	579	ARG
1	A	595	GLU
1	A	599	SER
1	A	651	TYR
2	B	13	GLN
2	B	70	LEU
2	B	105	TYR
2	B	132	ASN
2	B	215	GLU
2	B	217	MET
2	B	234	PHE
2	B	262	MET
2	B	266	HIS
2	B	267	ASP
2	B	292	PHE
3	G	57	SER

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

Mol	Chain	Res	Type
1	A	147	GLN
1	A	310	ASN
1	A	363	GLN
1	A	459	GLN
1	A	464	GLN
2	B	239	ASN
2	B	259	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 carbohydrates in this entry.

5.6 Ligand geometry ⓘ

Of 2 ligands modelled in this entry, 1 is monoatomic - leaving 1 for Mogul analysis.

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	$\# Z > 2$
4	8PR	A	701	-	26,27,27	0.81	1 (3%)	33,37,37	1.66	3 (9%)

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	8PR	A	701	-	-	0/9/26/26	0/4/4/4

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	A	701	8PR	CAT-CAX	-2.28	1.48	1.51

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	A	701	8PR	CAI-CAJ-CAX	-2.91	108.82	111.32
4	A	701	8PR	CAJ-CAX-CAT	-2.01	109.34	112.76
4	A	701	8PR	CAK-NAN-CAI	6.73	121.38	111.66

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

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, 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	623/689 (90%)	0.37	53 (8%) 13 15	25, 53, 102, 145	0
2	B	339/340 (99%)	-0.12	8 (2%) 62 66	24, 35, 70, 128	0
3	G	57/77 (74%)	0.09	5 (8%) 12 13	33, 47, 82, 95	0
All	All	1019/1106 (92%)	0.19	66 (6%) 22 24	24, 46, 95, 145	0

All (66) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	483	PHE	6.5
1	A	494	LYS	5.9
1	A	409	MET	5.0
1	A	496	ILE	4.9
1	A	396	THR	4.7
2	B	129	ARG	4.6
1	A	377	LEU	4.5
1	A	318	LEU	4.4
1	A	393	GLN	4.0
2	B	4	LEU	3.9
1	A	616	GLU	3.9
1	A	30	LYS	3.7
3	G	9	ILE	3.7
1	A	475	GLY	3.7
1	A	398	ASP	3.7
1	A	345	LYS	3.6
1	A	551	GLU	3.6
1	A	668	PRO	3.6
1	A	415	ASP	3.4
1	A	323	ILE	3.3
3	G	64	LYS	3.3
2	B	130	GLU	3.3
3	G	63	GLU	3.1

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Mol	Chain	Res	Type	RSRZ
1	A	497	LYS	3.1
1	A	477	VAL	3.0
1	A	229	MET	3.0
1	A	550	GLU	2.9
1	A	381	LEU	2.9
2	B	5	ASP	2.9
2	B	3	GLU	2.9
1	A	474	ARG	2.9
1	A	397	LYS	2.8
1	A	499	LEU	2.8
1	A	404	ARG	2.7
1	A	549	HIS	2.7
1	A	174	PHE	2.7
1	A	334	SER	2.7
1	A	495	GLY	2.7
3	G	13	ARG	2.6
1	A	119	ALA	2.5
1	A	376	SER	2.5
1	A	378	GLY	2.5
3	G	8	SER	2.5
1	A	201	GLY	2.4
1	A	410	ALA	2.4
1	A	416	SER	2.4
1	A	379	CYS	2.4
1	A	478	ASN	2.4
1	A	484	ASP	2.4
1	A	435	ARG	2.3
2	B	131	GLY	2.3
1	A	413	LEU	2.3
1	A	394	HIS	2.2
2	B	128	THR	2.2
2	B	6	GLN	2.2
1	A	118	LEU	2.2
1	A	432	ASP	2.1
1	A	434	ASN	2.1
1	A	507	ARG	2.1
1	A	367	ALA	2.1
1	A	366	VAL	2.1
1	A	395	LYS	2.1
1	A	504	GLU	2.1
1	A	231	GLN	2.0
1	A	301	ILE	2.0

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Mol	Chain	Res	Type	RSRZ
1	A	333	ILE	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 carbohydrates 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. 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, 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	LLDF	B-factors(Å ²)	Q<0.9
4	8PR	A	701	24/24	0.94	0.14	-0.53	50,56,59,59	0
5	MG	A	702	1/1	0.96	0.15	-1.18	66,66,66,66	0

6.5 Other polymers [i](#)

There are no such residues in this entry.