



# Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 02:36 AM GMT

PDB ID : 2HWQ  
Title : Structural basis for the structure-activity relationships of Peroxisome Proliferator-Activated Receptor agonists  
Authors : Peng, Y.H.; Lu, I.L.; Mahindroo, N.; Lin, C.H.; Hsieh, H.P.; Wu, S.Y.  
Deposited on : 2006-08-01  
Resolution : 1.97 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  
<http://wwpdb.org/validation/2016/XrayValidationReportHelp>  
with specific help available everywhere you see the ⓘ symbol.

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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 : 1.7 (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

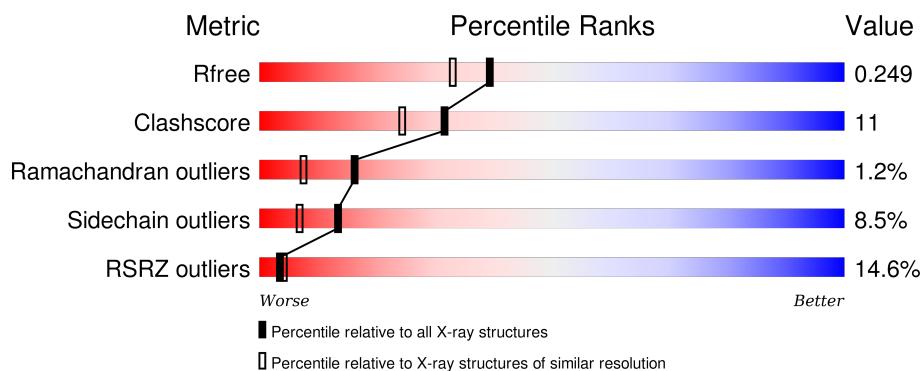
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

## *X-RAY DIFFRACTION*

The reported resolution of this entry is 1.97 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	8664 (2.00-1.96)
Clashscore	102246	9905 (2.00-1.96)
Ramachandran outliers	100387	9792 (2.00-1.96)
Sidechain outliers	100360	9791 (2.00-1.96)
RSRZ outliers	91569	8679 (2.00-1.96)

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. 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	271	
1	B	271	

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
2	DRY	A	1101	-	-	-	X

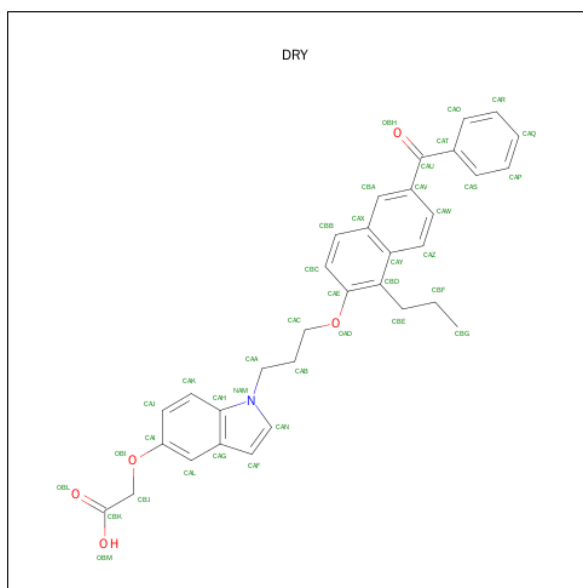


In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called Peroxisome proliferator-activated receptor gamma.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	261	Total	C	N	O	S	0	0	0
			2096	1355	340	391	10			
1	B	253	Total	C	N	O	S	0	0	0
			2017	1296	331	380	10			

- Molecule 2 is [(1-{3-[(6-BENZOYL-1-PROPYL-2-NAPHTHYL)OXY]PROPYL}-1H-INDO L-5-YL)OXY]ACETIC ACID (three-letter code: DRY) (formula:  $C_{33}H_{31}NO_5$ ).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
2	A	1	Total	C	N	O	0	0
			39	33	1	5		

- Molecule 3 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	82	Total O 82 82	0	0

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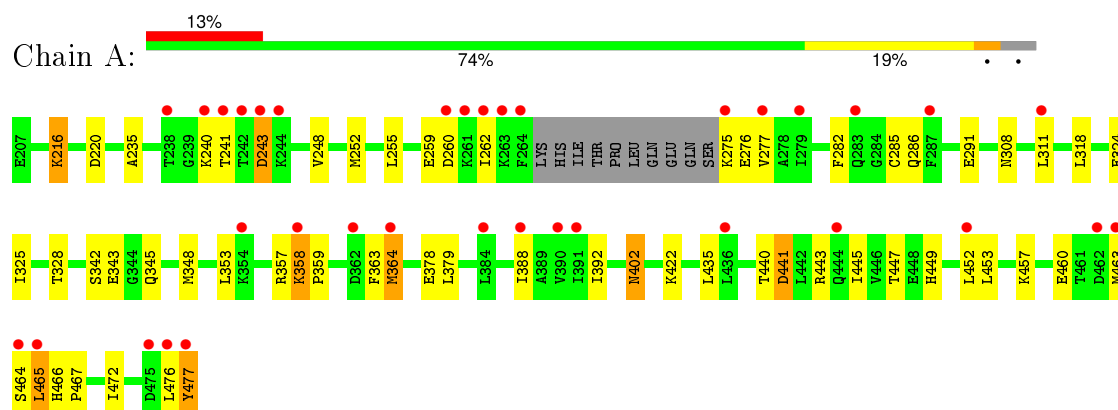
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	B	113	Total	O	0	0
			113	113		

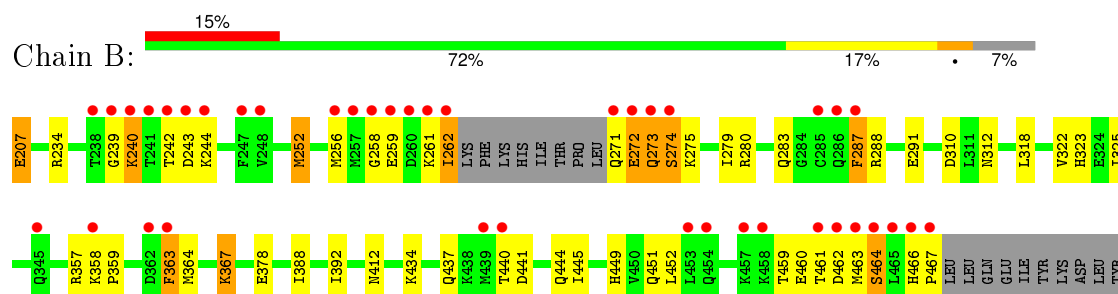
### 3 Residue-property plots [i](#)

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: Peroxisome proliferator-activated receptor gamma



- Molecule 1: Peroxisome proliferator-activated receptor gamma



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	56.02Å 88.67Å 58.02Å 90.00° 90.24° 90.00°	Depositor
Resolution (Å)	30.00 – 1.97 26.14 – 1.97	Depositor EDS
% Data completeness (in resolution range)	(Not available) (30.00-1.97) 99.1 (26.14-1.97)	Depositor EDS
$R_{merge}$	(Not available)	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	2.90 (at 1.96Å)	Xtriage
Refinement program	SHELXL-97	Depositor
R, $R_{free}$	0.239 , 0.265 0.227 , 0.249	Depositor DCC
$R_{free}$ test set	1998 reflections (5.28%)	DCC
Wilson B-factor (Å <sup>2</sup> )	28.4	Xtriage
Anisotropy	0.091	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.34 , 57.0	EDS
Estimated twinning fraction	0.000 for l,k,-h 0.032 for h,-k,-l 0.019 for l,-k,h	Xtriage
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.50$ , $\langle L^2 \rangle = 0.33$	Xtriage
Outliers	1 of 39914 reflections (0.003%)	Xtriage
$F_o, F_c$ correlation	0.93	EDS
Total number of atoms	4347	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	34.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 7.38% 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, 0.375 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: DRY

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	0.52	1/2131 (0.0%)	0.64	0/2868
1	B	0.44	0/2049	0.67	0/2759
All	All	0.48	1/4180 (0.0%)	0.66	0/5627

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	477	TYR	C-OXT	14.37	1.50	1.23

There are no bond angle outliers.

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	2096	0	2157	48	0
1	B	2017	0	2069	42	0
2	A	39	0	30	9	0
3	A	82	0	0	4	0
3	B	113	0	0	14	0
All	All	4347	0	4256	90	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 11.

All (90) 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:B:207:GLU:HB3	3:B:196:HOH:O	1.47	1.11
1:B:444:GLN:HB3	3:B:197:HOH:O	1.66	0.95
1:A:353:LEU:HD22	1:A:364:MET:SD	2.08	0.92
1:A:364:MET:SD	2:A:1101:DRY:HAC1	2.18	0.84
1:A:282:PHE:CE1	2:A:1101:DRY:HAJ	2.17	0.80
1:A:364:MET:HA	2:A:1101:DRY:HAA2	1.64	0.80
1:B:378:GLU:HG2	3:B:148:HOH:O	1.86	0.74
1:B:252:MET:HE1	3:B:173:HOH:O	1.88	0.73
1:A:466:HIS:CG	1:A:467:PRO:HD2	2.23	0.73
1:B:275:LYS:HE3	1:B:462:ASP:OD1	1.90	0.72
1:A:276:GLU:OE2	1:A:357:ARG:HD3	1.92	0.69
1:A:216:LYS:HE2	1:A:216:LYS:O	1.94	0.68
1:A:282:PHE:CD1	2:A:1101:DRY:HAJ	2.32	0.64
1:A:443:ARG:O	1:A:447:THR:HG23	1.98	0.63
1:A:325:ILE:HD11	1:A:392:ILE:HG13	1.81	0.63
1:A:364:MET:HB3	2:A:1101:DRY:HAB1	1.84	0.60
1:A:358:LYS:HB3	1:A:359:PRO:HD3	1.84	0.58
1:B:357:ARG:HG2	1:B:359:PRO:HD2	1.86	0.58
1:B:288:ARG:HH11	1:B:291:GLU:HB3	1.68	0.58
1:B:258:GLY:HA2	1:B:261:LYS:HB2	1.84	0.57
1:A:325:ILE:HG12	1:A:388:ILE:HG23	1.86	0.57
1:A:364:MET:CA	2:A:1101:DRY:HAA2	2.34	0.57
1:B:252:MET:O	1:B:256:MET:HG2	2.05	0.56
1:B:207:GLU:HG3	3:B:170:HOH:O	2.05	0.56
1:B:283:GLN:NE2	1:B:462:ASP:OD2	2.38	0.56
1:A:364:MET:HB3	2:A:1101:DRY:CAB	2.36	0.56
1:B:325:ILE:HD11	1:B:392:ILE:HG13	1.87	0.56
1:B:271:GLN:HG3	1:B:272:GLU:N	2.21	0.55
1:A:422:LYS:HG3	3:A:125:HOH:O	2.06	0.54
1:A:457:LYS:HG3	3:A:172:HOH:O	2.07	0.54
1:B:261:LYS:HG2	3:B:137:HOH:O	2.09	0.53
1:B:310:ASP:OD1	1:B:312:ASN:HB2	2.09	0.53
1:B:412:ASN:HB3	3:B:122:HOH:O	2.09	0.53
1:A:348:MET:SD	1:A:353:LEU:HD21	2.49	0.52
1:B:363:PHE:CE2	1:B:452:LEU:HG	2.44	0.52
1:B:262:ILE:HG22	3:B:137:HOH:O	2.10	0.52
1:B:288:ARG:NH1	1:B:291:GLU:HB3	2.24	0.51
1:B:325:ILE:HD11	1:B:392:ILE:CG1	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:308:ASN:ND2	1:B:291:GLU:OE2	2.40	0.51
1:A:255:LEU:HD21	1:A:277:VAL:HG13	1.93	0.51
1:B:259:GLU:OE1	1:B:280:ARG:NH2	2.34	0.50
1:A:363:PHE:CD1	1:A:452:LEU:HD23	2.48	0.49
1:A:357:ARG:NH2	1:A:460:GLU:OE1	2.47	0.48
1:B:367:LYS:N	1:B:367:LYS:HD2	2.27	0.48
1:A:363:PHE:CE1	1:A:452:LEU:HB3	2.49	0.47
1:B:412:ASN:CB	3:B:122:HOH:O	2.62	0.47
1:A:449:HIS:HE1	2:A:1101:DRY:CAL	2.28	0.47
1:B:467:PRO:HG3	3:B:131:HOH:O	2.13	0.47
1:A:466:HIS:CE1	1:A:467:PRO:HG2	2.50	0.46
1:B:364:MET:O	1:B:367:LYS:HB2	2.15	0.46
1:A:243:ASP:OD1	1:A:243:ASP:N	2.49	0.46
1:B:467:PRO:HB3	3:B:131:HOH:O	2.15	0.46
1:A:282:PHE:O	1:A:285:CYS:HB2	2.15	0.46
1:A:325:ILE:HG12	1:A:388:ILE:HD12	1.98	0.45
1:B:279:ILE:HD13	1:B:462:ASP:CB	2.46	0.45
1:A:325:ILE:HD11	1:A:392:ILE:CG1	2.46	0.45
1:B:259:GLU:CD	1:B:280:ARG:HH22	2.19	0.45
1:B:287:PHE:HB3	3:B:138:HOH:O	2.15	0.45
1:A:342:SER:O	1:A:345:GLN:HG2	2.17	0.45
1:B:273:GLN:O	1:B:274:SER:HB3	2.17	0.45
1:B:325:ILE:HG12	1:B:388:ILE:HG23	1.99	0.44
1:A:465:LEU:HD13	1:A:465:LEU:N	2.32	0.44
1:B:434:LYS:HA	1:B:437:GLN:HE21	1.82	0.44
1:A:472:ILE:O	1:A:476:LEU:HD13	2.17	0.44
1:A:286:GLN:NE2	1:A:465:LEU:HD12	2.32	0.44
1:B:363:PHE:HE1	1:B:449:HIS:CE1	2.35	0.44
1:B:258:GLY:HA2	1:B:261:LYS:CB	2.48	0.44
1:B:467:PRO:N	3:B:118:HOH:O	2.50	0.44
2:A:1101:DRY:HAB2	2:A:1101:DRY:HAN	1.92	0.43
1:A:357:ARG:O	1:A:359:PRO:HD2	2.18	0.43
1:A:452:LEU:HD12	1:A:452:LEU:HA	1.86	0.43
1:A:328:THR:HG21	1:A:388:ILE:HD11	2.00	0.42
1:A:311:LEU:HD12	1:A:311:LEU:O	2.19	0.42
1:B:463:MET:O	1:B:464:SER:CB	2.67	0.42
1:A:363:PHE:CZ	1:A:452:LEU:HB3	2.54	0.42
1:A:255:LEU:HD21	1:A:277:VAL:CG1	2.49	0.42
1:B:240:LYS:HB2	1:B:240:LYS:HE3	1.75	0.42
1:A:353:LEU:HD22	1:A:364:MET:CE	2.49	0.42
1:B:243:ASP:OD1	1:B:244:LYS:HG2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:402:ASN:ND2	3:A:168:HOH:O	2.52	0.41
1:A:358:LYS:HB3	1:A:359:PRO:CD	2.48	0.41
1:B:459:THR:O	1:B:460:GLU:HG2	2.20	0.41
1:B:363:PHE:HE1	1:B:449:HIS:ND1	2.18	0.41
1:A:262:ILE:HG12	3:A:177:HOH:O	2.19	0.41
1:A:441:ASP:O	1:A:445:ILE:HG12	2.21	0.41
1:A:259:GLU:O	1:A:262:ILE:HG13	2.20	0.41
1:A:379:LEU:HD11	1:A:435:LEU:HD13	2.02	0.41
1:A:235:ALA:HB1	1:A:240:LYS:HD3	2.04	0.40
1:B:445:ILE:HD13	3:B:182:HOH:O	2.21	0.40
1:A:324:GLU:OE2	1:A:443:ARG:HD3	2.21	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	257/271 (95%)	248 (96%)	7 (3%)	2 (1%)	24	14
1	B	249/271 (92%)	236 (95%)	9 (4%)	4 (2%)	12	4
All	All	506/542 (93%)	484 (96%)	16 (3%)	6 (1%)	16	7

All (6) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	358	LYS
1	A	464	SER
1	B	274	SER
1	B	464	SER
1	B	242	THR
1	B	239	GLY

### 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	234/244 (96%)	214 (92%)	20 (8%)	13	7
1	B	226/244 (93%)	207 (92%)	19 (8%)	14	7
All	All	460/488 (94%)	421 (92%)	39 (8%)	13	7

All (39) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	216	LYS
1	A	220	ASP
1	A	241	THR
1	A	243	ASP
1	A	248	VAL
1	A	252	MET
1	A	260	ASP
1	A	275	LYS
1	A	291	GLU
1	A	318	LEU
1	A	343	GLU
1	A	364	MET
1	A	378	GLU
1	A	402	ASN
1	A	440	THR
1	A	441	ASP
1	A	453	LEU
1	A	463	MET
1	A	465	LEU
1	A	477	TYR
1	B	207	GLU
1	B	234	ARG
1	B	240	LYS
1	B	252	MET
1	B	262	ILE
1	B	272	GLU
1	B	273	GLN

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Mol	Chain	Res	Type
1	B	287	PHE
1	B	318	LEU
1	B	322	VAL
1	B	323	HIS
1	B	358	LYS
1	B	363	PHE
1	B	367	LYS
1	B	440	THR
1	B	441	ASP
1	B	451	GLN
1	B	461	THR
1	B	466	HIS

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (9) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	283	GLN
1	A	294	GLN
1	A	402	ASN
1	A	449	HIS
1	A	451	GLN
1	B	273	GLN
1	B	402	ASN
1	B	437	GLN
1	B	454	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

1 ligand is 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	DRY	A	1101	-	40,43,43	1.54	4 (10%)	51,59,59	1.08	4 (7%)

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
2	DRY	A	1101	-	-	0/21/23/23	0/5/5/5

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	1101	DRY	CAH-NAM	-5.43	1.33	1.39
2	A	1101	DRY	CAN-NAM	-3.32	1.33	1.38
2	A	1101	DRY	CAT-CAU	2.55	1.53	1.49
2	A	1101	DRY	CAV-CAU	3.04	1.54	1.49

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	1101	DRY	CAZ-CAY-CBD	-3.17	118.77	122.72
2	A	1101	DRY	CBJ-OB-CAI	-2.50	110.99	117.70
2	A	1101	DRY	CAV-CAU-CAT	2.16	124.18	120.26
2	A	1101	DRY	CBD-CAY-CAX	2.19	121.97	119.59

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

1 monomer is involved in 9 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	1101	DRY	9	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	261/271 (96%)	0.92	35 (13%) 4 5	15, 30, 63, 89	0
1	B	253/271 (93%)	1.09	40 (15%) 3 3	14, 27, 75, 92	0
All	All	514/542 (94%)	1.01	75 (14%) 3 4	14, 29, 70, 92	0

All (75) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	264	PHE	24.0
1	B	465	LEU	16.6
1	B	241	THR	13.8
1	A	262	ILE	10.9
1	B	467	PRO	9.1
1	B	273	GLN	9.0
1	B	242	THR	8.2
1	B	240	LYS	7.9
1	B	260	ASP	7.8
1	B	243	ASP	7.6
1	A	477	TYR	6.7
1	B	274	SER	6.5
1	B	363	PHE	6.5
1	B	259	GLU	6.4
1	B	461	THR	6.2
1	B	463	MET	5.5
1	A	242	THR	5.4
1	A	263	LYS	5.3
1	B	272	GLU	5.3
1	A	465	LEU	5.0
1	B	464	SER	4.9
1	B	244	LYS	4.7
1	A	358	LYS	4.7
1	A	452	LEU	4.6

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Mol	Chain	Res	Type	RSRZ
1	B	239	GLY	4.5
1	A	243	ASP	4.5
1	B	262	ILE	4.4
1	A	244	LYS	4.3
1	B	458	LYS	4.3
1	B	261	LYS	4.2
1	B	358	LYS	4.0
1	A	476	LEU	4.0
1	A	279	ILE	3.9
1	B	457	LYS	3.6
1	A	240	LYS	3.6
1	A	241	THR	3.6
1	B	466	HIS	3.6
1	A	364	MET	3.5
1	B	462	ASP	3.3
1	A	261	LYS	3.3
1	B	454	GLN	3.3
1	B	257	MET	3.3
1	A	260	ASP	3.3
1	B	247	PHE	3.1
1	B	362	ASP	3.1
1	A	311	LEU	2.9
1	A	391	ILE	2.9
1	A	277	VAL	2.8
1	B	248	VAL	2.8
1	A	388	ILE	2.7
1	A	464	SER	2.7
1	B	271	GLN	2.7
1	A	287	PHE	2.7
1	A	444	GLN	2.6
1	B	256	MET	2.4
1	A	238	THR	2.4
1	B	286	GLN	2.4
1	A	354	LYS	2.4
1	A	463	MET	2.4
1	A	283	GLN	2.4
1	B	258	GLY	2.4
1	A	436	LEU	2.4
1	A	462	ASP	2.4
1	A	384	LEU	2.3
1	A	390	VAL	2.3
1	B	345	GLN	2.3

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Mol	Chain	Res	Type	RSRZ
1	A	362	ASP	2.3
1	A	475	ASP	2.3
1	B	287	PHE	2.2
1	B	238	THR	2.2
1	A	275	LYS	2.2
1	B	453	LEU	2.1
1	B	439	MET	2.1
1	B	440	THR	2.1
1	B	285	CYS	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, 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	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
2	DRY	A	1101	39/39	0.23	0.48	6.64	65,76,79,80	0

## 6.5 Other polymers [i](#)

There are no such residues in this entry.