Full wwPDB X-ray Structure Validation Report ⓘ

May 13, 2020 – 08:14 pm BST

PDB ID	:	5CZK
Title	:	Structure of E. coli beta-glucuronidase bound with a novel, potent inhibitor 1-((6,8-dimethyl-2-oxo-1,2-dihydroquinolin-3-yl)methyl)-1-(2-hydroxyethyl)-3-(4-hydroxyphenyl)thiourea
Authors	:	Roberts, A.R.; Wallace, B.R.; Redinbo, M.R.
Deposited on	:	2015-07-31
Resolution	:	2.39 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
https://www.wwpdb.org/validation/2017/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:

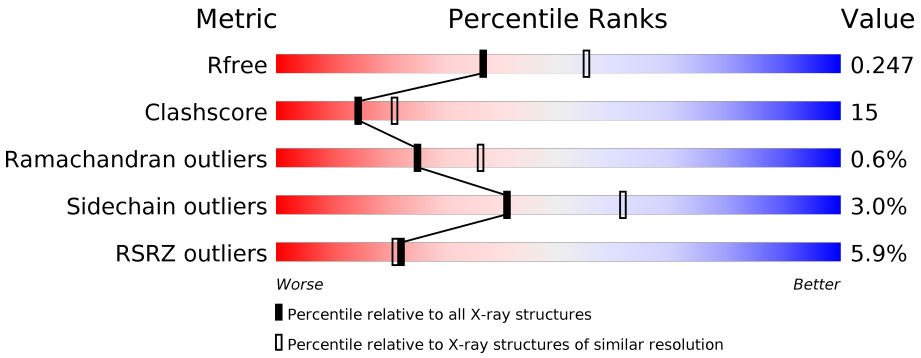
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.11
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.11

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 2.39 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	3907 (2.40-2.40)
Clashscore	141614	4398 (2.40-2.40)
Ramachandran outliers	138981	4318 (2.40-2.40)
Sidechain outliers	138945	4319 (2.40-2.40)
RSRZ outliers	127900	3811 (2.40-2.40)

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 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	605	3% 73% 22%
1	B	605	8% 73% 24%

2 Entry composition

There are 3 unique types of molecules in this entry. The entry contains 10059 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.

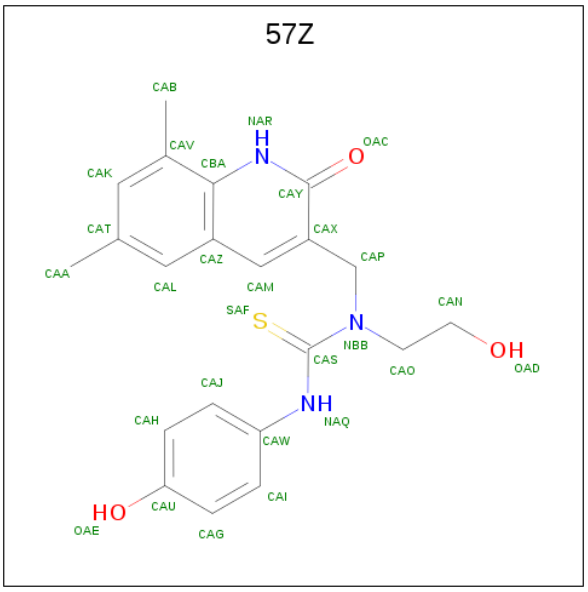
- Molecule 1 is a protein called Beta-glucuronidase.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
1	A	600	Total	C	N	O	S	Se	0	0	0
			4802	3049	830	901	9	13			
1	B	601	Total	C	N	O	S	Se	0	0	0
			4794	3039	830	903	9	13			

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-1	SER	-	expression tag	UNP P05804
A	0	HIS	-	expression tag	UNP P05804
B	-1	SER	-	expression tag	UNP P05804
B	0	HIS	-	expression tag	UNP P05804

- Molecule 2 is 1-[(6,8-dimethyl-2-oxo-1,2-dihydroquinolin-3-yl)methyl]-1-(2-hydroxyethyl)-3-(4-hydroxyphenyl)thiourea (three-letter code: 57Z) (formula: $C_{21}H_{23}N_3O_3S$).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
2	A	1	Total	C	N	O	S	0	0
			28	21	3	3	1		
2	B	1	Total	C	N	O	S	0	0
			28	21	3	3	1		

- Molecule 3 is water.

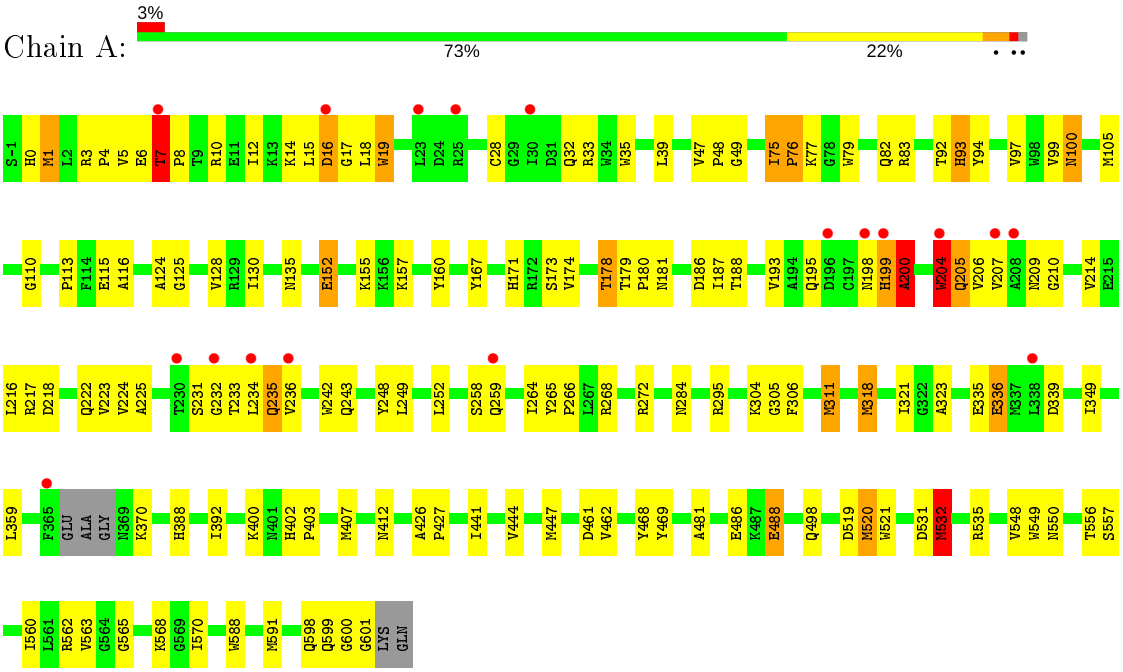
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	254	Total	O	0	0
			254	254		
3	B	153	Total	O	0	0
			153	153		

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 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.

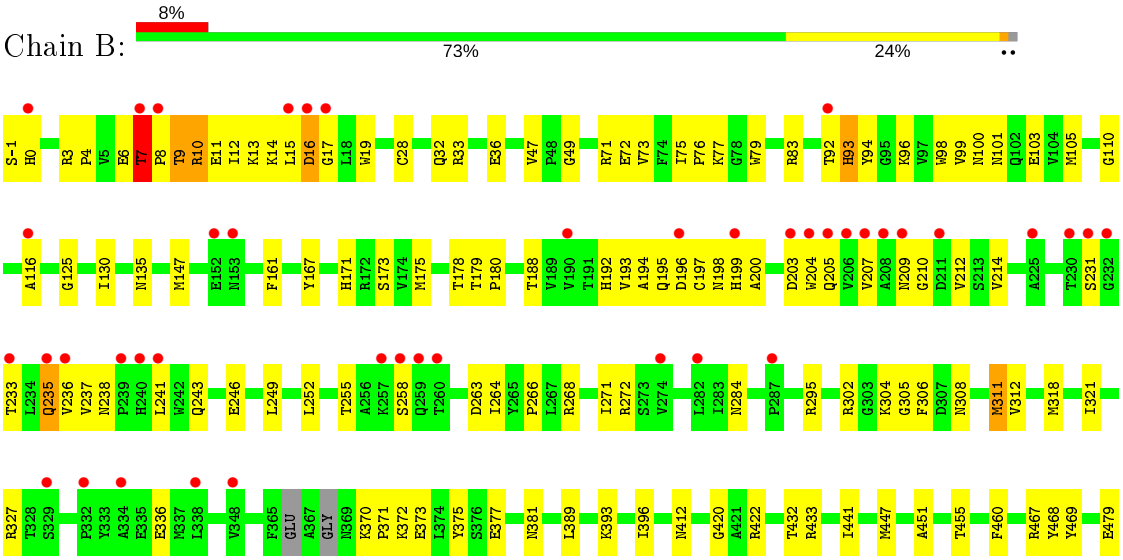
- Molecule 1: Beta-glucuronidase

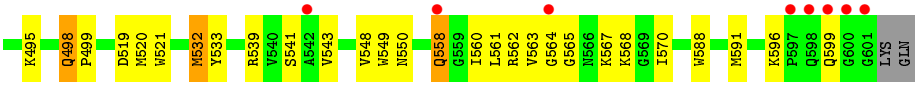
Chain A:



- Molecule 1: Beta-glucuronidase

Chain B:




K495
Q498
P499
D519
M520
W521
M532
Y533
R539
V540
S541
A542
V543
V548
W549
N550
Q558
G559
I560
L561
R562
V563
G564
G565
N566
K567
K568
G569
I570
W588
M591
K596
P597
Q598
Q599
G600
G601
LYS
GLN

4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α, β, γ	169.14Å 76.10Å 125.83Å 90.00° 125.30° 90.00°	Depositor
Resolution (Å)	42.00 – 2.39 42.01 – 2.39	Depositor EDS
% Data completeness (in resolution range)	99.0 (42.00-2.39) 94.9 (42.01-2.39)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.18 (at 2.39Å)	Xtriage
Refinement program	PHENIX 1.8.4_1496	Depositor
R, R_{free}	0.200 , 0.256 0.199 , 0.247	Depositor DCC
R_{free} test set	2609 reflections (5.09%)	wwPDB-VP
Wilson B-factor (Å^2)	36.7	Xtriage
Anisotropy	0.696	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.29 , 46.0	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	10059	wwPDB-VP
Average B, all atoms (Å^2)	61.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.44% of the height of the origin peak. No significant pseudotranslation is detected.*

[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: 57Z

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	0.56	2/4917 (0.0%)	0.66	9/6668 (0.1%)
1	B	0.48	2/4906 (0.0%)	0.60	3/6652 (0.0%)
All	All	0.53	4/9823 (0.0%)	0.63	12/13320 (0.1%)

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	A	0	2
1	B	0	1
All	All	0	3

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	19	TRP	NE1-CE2	-5.34	1.30	1.37
1	B	499	PRO	N-CD	5.19	1.55	1.47
1	A	76	PRO	N-CD	5.09	1.54	1.47
1	B	371	PRO	N-CD	5.00	1.54	1.47

All (12) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	532	MSE	CG-SE-CE	-6.74	84.08	98.90
1	A	1	MSE	CA-CB-CG	-6.29	102.60	113.30
1	A	204	TRP	CA-CB-CG	6.07	125.24	113.70
1	A	532	MSE	CA-CB-CG	5.83	123.22	113.30
1	A	7	THR	C-N-CD	5.78	140.54	128.40

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	498	GLN	C-N-CD	5.66	140.29	128.40
1	B	498	GLN	C-N-CD	5.64	140.25	128.40
1	B	258	SER	N-CA-C	-5.48	96.20	111.00
1	A	318	MSE	CA-CB-CG	5.40	122.48	113.30
1	B	370	LYS	C-N-CD	5.40	139.74	128.40
1	A	75	ILE	C-N-CD	5.13	139.18	128.40
1	A	200	ALA	N-CA-C	5.11	124.80	111.00

There are no chirality outliers.

All (3) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	16	ASP	Peptide
1	A	199	HIS	Peptide
1	B	7	THR	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	4802	0	4587	156	2
1	B	4794	0	4567	136	2
2	A	28	0	23	1	0
2	B	28	0	23	0	0
3	A	254	0	0	12	0
3	B	153	0	0	8	0
All	All	10059	0	9200	290	2

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 15.

All (290) 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:8:PRO:HG2	1:A:264:ILE:H	1.26	1.00

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:7:THR:O	3:A:801:HOH:O	1.80	0.98
1:B:10:ARG:HH12	1:B:79:TRP:HE1	1.13	0.91
1:B:10:ARG:NH1	1:B:79:TRP:HE1	1.69	0.90
1:A:157:LYS:NZ	3:A:802:HOH:O	2.05	0.88
1:A:447:MSE:CE	3:A:1015:HOH:O	2.20	0.88
1:A:15:LEU:HD11	1:A:173:SER:HA	1.54	0.88
1:A:407:MSE:HE1	1:A:462:VAL:HB	1.56	0.87
1:A:3:ARG:NH1	1:A:339:ASP:OD2	2.09	0.85
1:B:199:HIS:HB3	1:B:200:ALA:HB2	1.58	0.84
1:B:10:ARG:CB	1:B:10:ARG:HH11	1.93	0.82
1:A:75:ILE:H	1:A:75:ILE:HD12	1.43	0.81
1:A:447:MSE:HE2	3:A:1015:HOH:O	1.79	0.80
1:A:1:MSE:HE2	1:A:115:GLU:HG2	1.62	0.79
1:B:532:MSE:HE3	1:B:533:TYR:CE2	2.18	0.78
1:A:306:PHE:CZ	1:A:336:GLU:HG3	2.19	0.77
1:A:7:THR:HB	1:A:8:PRO:HD3	1.64	0.77
1:B:460:PHE:O	1:B:498:GLN:NE2	2.18	0.77
1:A:205:GLN:OE1	1:A:206:VAL:N	2.18	0.76
1:A:295:ARG:NH1	3:A:804:HOH:O	2.19	0.75
1:A:75:ILE:N	1:A:75:ILE:HD12	2.02	0.75
1:B:14:LYS:HZ1	1:B:130:ILE:HD12	1.52	0.74
1:B:9:THR:HG23	1:B:179:THR:HA	1.67	0.74
1:B:-1:SER:HB3	3:B:938:HOH:O	1.89	0.73
1:B:451:ALA:O	1:B:495:LYS:NZ	2.19	0.73
1:B:306:PHE:CZ	1:B:336:GLU:HG3	2.25	0.72
1:B:233:THR:HG23	1:B:235:GLN:NE2	2.05	0.72
1:A:0:HIS:ND1	1:A:186:ASP:HB2	2.05	0.72
1:B:7:THR:HB	1:B:8:PRO:CD	2.20	0.71
1:B:255:THR:HG22	1:B:264:ILE:HG13	1.71	0.71
1:A:402:HIS:NE2	3:A:807:HOH:O	2.24	0.71
1:B:7:THR:HG21	1:B:266:PRO:HD3	1.73	0.71
1:A:520:MSE:HE3	1:A:521:TRP:CD1	2.26	0.70
1:A:15:LEU:HD11	1:A:173:SER:CA	2.21	0.70
1:A:76:PRO:HG2	1:A:79:TRP:CD2	2.26	0.69
1:B:6:GLU:OE2	3:B:801:HOH:O	2.10	0.69
1:B:243:GLN:OE1	1:B:284:ASN:ND2	2.25	0.68
1:A:18:LEU:HD12	1:A:18:LEU:H	1.59	0.68
1:A:113:PRO:O	3:A:803:HOH:O	2.13	0.67
1:B:83:ARG:HH11	1:B:179:THR:HG21	1.59	0.67
1:B:197:CYS:O	1:B:238:ASN:ND2	2.26	0.67
1:A:7:THR:HB	1:A:8:PRO:CD	2.24	0.67

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1:MSE:HE1	3:A:883:HOH:O	1.94	0.67
1:B:203:ASP:OD1	1:B:233:THR:HB	1.94	0.67
1:A:75:ILE:O	1:A:125:GLY:N	2.26	0.67
1:B:520:MSE:HE3	1:B:521:TRP:NE1	2.11	0.66
1:B:93:HIS:H	1:B:110:GLY:HA3	1.61	0.66
1:B:10:ARG:HH11	1:B:10:ARG:HB3	1.61	0.65
1:A:204:TRP:CE3	1:A:204:TRP:O	2.50	0.65
1:A:295:ARG:HE	1:A:318:MSE:HE1	1.62	0.65
1:B:7:THR:O	3:B:802:HOH:O	2.14	0.64
1:A:93:HIS:H	1:A:110:GLY:HA3	1.62	0.64
1:A:407:MSE:HE1	1:A:462:VAL:CB	2.27	0.64
1:B:203:ASP:OD2	1:B:205:GLN:NE2	2.28	0.64
1:B:306:PHE:CE1	1:B:311:MSE:CE	2.80	0.64
1:A:14:LYS:NZ	1:A:130:ILE:HD12	2.12	0.64
1:A:249:LEU:HD13	1:A:268:ARG:HE	1.63	0.64
1:A:199:HIS:CE1	1:A:236:VAL:HG12	2.33	0.63
1:A:75:ILE:HB	1:A:124:ALA:HA	1.80	0.63
1:B:194:ALA:O	1:B:195:GLN:HB3	1.99	0.63
1:A:17:GLY:O	1:A:19:TRP:HD1	1.82	0.62
1:B:539:ARG:HA	1:B:599:GLN:OE1	1.99	0.62
1:A:186:ASP:OD2	1:A:204:TRP:HH2	1.81	0.62
1:B:389:LEU:HG	1:B:393:LYS:HE3	1.81	0.62
1:B:15:LEU:O	1:B:17:GLY:N	2.33	0.62
1:A:187:ILE:O	1:A:400:LYS:NZ	2.34	0.61
1:B:468:TYR:O	1:B:469:TYR:HB2	2.01	0.61
1:A:481:ALA:HB1	1:A:532:MSE:HE1	1.81	0.61
1:A:272:ARG:NE	1:A:403:PRO:O	2.32	0.61
1:B:520:MSE:HE3	1:B:521:TRP:CD1	2.37	0.60
1:A:8:PRO:HG2	1:A:264:ILE:N	2.06	0.59
1:B:422:ARG:NH1	1:B:455:THR:O	2.32	0.59
1:B:203:ASP:CG	1:B:233:THR:HB	2.22	0.59
1:B:49:GLY:HA2	1:B:305:GLY:HA3	1.84	0.59
1:A:295:ARG:NE	1:A:318:MSE:HE1	2.18	0.59
1:A:520:MSE:CE	1:A:521:TRP:CD1	2.86	0.59
1:A:447:MSE:HE1	1:A:469:TYR:N	2.18	0.59
1:A:15:LEU:CD1	1:A:174:VAL:H	2.16	0.58
1:A:242:TRP:CE3	1:A:272:ARG:HD3	2.38	0.58
1:B:192:HIS:O	1:B:200:ALA:N	2.36	0.58
1:B:199:HIS:N	1:B:237:VAL:O	2.28	0.57
1:A:336:GLU:OE1	1:A:336:GLU:N	2.37	0.57
1:A:598:GLN:O	1:A:601:GLY:N	2.37	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:192:HIS:HB2	1:B:200:ALA:HB3	1.86	0.57
1:B:249:LEU:HD13	1:B:268:ARG:HE	1.68	0.57
1:B:318:MSE:HA	1:B:321:ILE:HG22	1.86	0.57
1:B:306:PHE:CE1	1:B:336:GLU:HG3	2.39	0.57
1:A:204:TRP:O	1:A:204:TRP:HE3	1.88	0.57
1:B:94:TYR:HB3	1:B:135:ASN:HB3	1.87	0.57
1:A:15:LEU:HG	1:A:48:PRO:HD3	1.87	0.56
1:B:93:HIS:H	1:B:110:GLY:CA	2.17	0.56
1:B:105:MSE:HE2	1:B:116:ALA:HB3	1.87	0.56
1:A:93:HIS:H	1:A:110:GLY:CA	2.18	0.56
1:A:560:ILE:O	1:A:563:VAL:HG12	2.06	0.56
1:A:160:TYR:CE2	1:A:557:SER:HB3	2.40	0.56
1:B:532:MSE:HE3	1:B:533:TYR:CD2	2.40	0.56
1:A:218:ASP:OD1	1:A:222:GLN:N	2.39	0.55
1:B:306:PHE:CE1	1:B:311:MSE:HE1	2.42	0.55
1:A:258:SER:OG	1:A:259:GLN:N	2.39	0.55
1:A:186:ASP:O	1:A:205:GLN:OE1	2.24	0.55
1:B:71:ARG:HH11	1:B:71:ARG:HG2	1.71	0.55
1:B:76:PRO:HG2	1:B:79:TRP:CE2	2.42	0.55
1:A:311:MSE:HE1	1:A:336:GLU:HB2	1.89	0.54
1:B:13:LYS:NZ	3:B:813:HOH:O	2.40	0.54
1:A:306:PHE:CE1	1:A:336:GLU:HG3	2.42	0.54
1:A:488:GLU:OE1	1:A:488:GLU:N	2.40	0.54
1:B:71:ARG:NH1	1:B:72:GLU:O	2.41	0.54
1:A:77:LYS:H	1:B:10:ARG:HE	1.53	0.54
1:B:167:TYR:HB2	1:B:304:LYS:HG3	1.90	0.54
1:A:588:TRP:HA	1:A:591:MSE:HE3	1.90	0.54
1:A:92:THR:OG1	1:A:171:HIS:ND1	2.41	0.54
1:A:565:GLY:O	1:A:568:LYS:NZ	2.40	0.54
1:B:295:ARG:NH1	1:B:318:MSE:HE1	2.23	0.54
1:A:18:LEU:HD11	3:B:917:HOH:O	2.08	0.54
1:A:49:GLY:HA2	1:A:305:GLY:HA3	1.89	0.54
1:B:77:LYS:HD2	1:B:125:GLY:HA2	1.90	0.54
1:B:179:THR:HG23	1:B:180:PRO:O	2.08	0.54
1:B:19:TRP:CE2	1:B:71:ARG:HD2	2.43	0.53
1:A:531:ASP:O	1:A:535:ARG:HG3	2.07	0.53
1:A:12:ILE:HG22	1:A:79:TRP:CH2	2.43	0.53
1:B:15:LEU:HD11	1:B:173:SER:HA	1.90	0.53
1:B:306:PHE:HE1	1:B:311:MSE:CE	2.21	0.53
1:B:8:PRO:HD3	1:B:264:ILE:HB	1.90	0.53
1:A:217:ARG:HG2	1:A:223:VAL:HG22	1.88	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:207:VAL:HG21	1:B:210:GLY:O	2.09	0.53
1:A:181:ASN:O	1:A:209:ASN:ND2	2.42	0.53
1:A:225:ALA:HB1	1:A:235:GLN:HG3	1.91	0.53
1:A:272:ARG:HH21	1:A:403:PRO:HA	1.73	0.53
1:B:28:CYS:O	1:B:32:GLN:HG3	2.09	0.53
1:A:179:THR:HG23	1:A:180:PRO:O	2.09	0.52
1:A:205:GLN:NE2	1:A:207:VAL:HB	2.25	0.52
1:A:481:ALA:HB3	1:A:532:MSE:HE2	1.91	0.52
1:B:33:ARG:HG2	1:B:36:GLU:HG3	1.91	0.52
1:B:199:HIS:CD2	1:B:236:VAL:HG12	2.45	0.52
1:B:12:ILE:HG22	1:B:79:TRP:HH2	1.75	0.52
1:A:359:LEU:HD22	1:A:370:LYS:HD3	1.89	0.52
1:A:243:GLN:OE1	1:A:284:ASN:ND2	2.35	0.52
1:B:92:THR:OG1	1:B:171:HIS:ND1	2.41	0.52
1:A:318:MSE:HB2	1:A:323:ALA:HB3	1.90	0.52
1:A:520:MSE:CE	1:A:521:TRP:NE1	2.72	0.52
1:B:241:LEU:HD23	1:B:271:ILE:HG22	1.92	0.52
1:A:225:ALA:CB	1:A:235:GLN:HG3	2.40	0.52
1:A:207:VAL:HG22	1:A:209:ASN:H	1.74	0.51
1:A:520:MSE:CE	1:A:521:TRP:CE2	2.94	0.51
1:B:10:ARG:CG	1:B:10:ARG:HH11	2.21	0.51
1:B:14:LYS:HE3	1:B:73:VAL:HG21	1.92	0.51
1:A:318:MSE:HA	1:A:321:ILE:HG22	1.93	0.51
1:A:15:LEU:HD21	1:A:173:SER:OG	2.11	0.51
1:B:205:GLN:OE1	1:B:205:GLN:N	2.44	0.51
1:B:560:ILE:O	1:B:563:VAL:HG22	2.11	0.51
1:B:306:PHE:CZ	1:B:311:MSE:CE	2.95	0.50
1:B:306:PHE:CE1	1:B:311:MSE:HE2	2.46	0.50
1:A:105:MSE:HE2	1:A:116:ALA:HB3	1.93	0.50
1:A:167:TYR:HB2	1:A:304:LYS:HG3	1.93	0.50
1:B:16:ASP:HB3	1:B:71:ARG:HH21	1.77	0.50
1:B:588:TRP:HA	1:B:591:MSE:HE3	1.94	0.50
1:A:14:LYS:HZ2	1:A:130:ILE:HD12	1.75	0.50
1:B:567:LYS:NZ	3:B:819:HOH:O	2.43	0.50
1:A:447:MSE:HE3	2:A:701:57Z:SAF	2.51	0.50
1:A:94:TYR:HB3	1:A:135:ASN:HB3	1.94	0.50
1:A:10:ARG:CZ	1:A:79:TRP:HE1	2.24	0.50
1:A:214:VAL:HG13	1:A:252:LEU:HD11	1.93	0.49
1:A:6:GLU:O	1:A:7:THR:OG1	2.25	0.49
1:A:7:THR:HG22	1:A:8:PRO:N	2.26	0.49
1:B:558:GLN:O	1:B:562:ARG:HG2	2.11	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:520:MSE:HE3	1:A:521:TRP:CG	2.47	0.49
1:B:198:ASN:OD1	1:B:199:HIS:ND1	2.46	0.49
1:A:3:ARG:NH2	1:A:336:GLU:OE1	2.45	0.49
1:B:10:ARG:CG	1:B:10:ARG:NH1	2.73	0.49
1:B:-1:SER:OG	1:B:0:HIS:N	2.45	0.49
1:A:209:ASN:N	1:A:209:ASN:OD1	2.46	0.49
1:A:520:MSE:HE1	1:A:521:TRP:CE2	2.47	0.49
1:A:83:ARG:HH11	1:A:179:THR:HG21	1.78	0.49
1:A:83:ARG:HB3	1:A:179:THR:HG22	1.95	0.49
1:A:76:PRO:HG2	1:A:79:TRP:CG	2.48	0.49
1:A:75:ILE:H	1:A:75:ILE:CD1	2.20	0.48
1:B:12:ILE:HG22	1:B:79:TRP:CH2	2.47	0.48
1:B:396:ILE:HD11	1:B:432:THR:HG23	1.95	0.48
1:B:83:ARG:HB3	1:B:179:THR:HG22	1.95	0.48
1:B:306:PHE:CZ	1:B:311:MSE:HE1	2.48	0.48
1:A:186:ASP:OD2	1:A:204:TRP:CH2	2.63	0.48
1:B:235:GLN:HA	1:B:235:GLN:OE1	2.13	0.48
1:A:216:LEU:O	1:A:224:VAL:HG12	2.13	0.48
1:B:520:MSE:HE3	1:B:521:TRP:CE2	2.49	0.48
1:A:19:TRP:CD1	1:A:47:VAL:HG13	2.49	0.48
1:A:519:ASP:OD1	1:A:519:ASP:N	2.42	0.48
1:A:99:VAL:O	1:A:100:ASN:HB2	2.14	0.47
1:A:188:THR:CB	1:A:204:TRP:CE3	2.97	0.47
1:A:188:THR:HB	1:A:204:TRP:CE3	2.49	0.47
1:A:233:THR:HG23	1:A:235:GLN:OE1	2.13	0.47
1:B:71:ARG:NH1	1:B:73:VAL:HB	2.30	0.47
1:B:188:THR:O	1:B:204:TRP:N	2.45	0.47
1:B:207:VAL:CG2	1:B:210:GLY:H	2.26	0.47
1:A:199:HIS:ND1	1:A:200:ALA:HB2	2.29	0.47
1:A:14:LYS:HZ1	1:A:130:ILE:HD12	1.77	0.47
1:A:195:GLN:OE1	1:A:195:GLN:N	2.48	0.47
1:A:349:ILE:HG23	1:A:407:MSE:HG2	1.97	0.47
1:A:407:MSE:HE1	1:A:462:VAL:CG2	2.45	0.47
1:B:15:LEU:HD11	1:B:173:SER:CA	2.44	0.47
1:A:12:ILE:HG22	1:A:79:TRP:HH2	1.78	0.47
1:B:565:GLY:O	1:B:568:LYS:NZ	2.42	0.46
1:A:486:GLU:OE2	3:A:805:HOH:O	2.20	0.46
1:B:79:TRP:CD2	1:B:178:THR:HG21	2.51	0.46
1:A:548:VAL:HG11	1:A:570:ILE:HD11	1.96	0.46
1:A:200:ALA:HA	1:A:235:GLN:O	2.16	0.46
1:B:306:PHE:HE1	1:B:311:MSE:HE2	1.81	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:441:ILE:HG22	1:B:460:PHE:HD1	1.81	0.46
1:A:388:HIS:O	1:A:392:ILE:HG13	2.16	0.46
1:A:335:GLU:HG2	3:A:1033:HOH:O	2.16	0.46
1:A:481:ALA:HB1	1:A:532:MSE:CE	2.46	0.46
1:B:96:LYS:HD3	1:B:98:TRP:CZ2	2.50	0.46
1:B:549:TRP:HA	1:B:550:ASN:HA	1.74	0.45
1:B:7:THR:HB	1:B:8:PRO:HD3	1.98	0.45
1:B:147:MSE:HE3	1:B:161:PHE:HZ	1.79	0.45
1:A:198:ASN:CG	1:A:199:HIS:HB2	2.36	0.45
1:B:7:THR:CB	1:B:8:PRO:CD	2.92	0.45
1:A:231:SER:C	1:A:233:THR:H	2.20	0.45
1:B:207:VAL:HG11	1:B:212:VAL:CG2	2.47	0.45
1:A:207:VAL:HG11	1:A:210:GLY:O	2.17	0.45
1:A:233:THR:CG2	1:A:235:GLN:OE1	2.65	0.45
1:B:233:THR:HG23	1:B:235:GLN:CD	2.37	0.45
1:A:28:CYS:O	1:A:32:GLN:HG3	2.17	0.45
1:A:447:MSE:HE1	1:A:469:TYR:H	1.81	0.45
1:B:372:LYS:HG3	1:B:373:GLU:HG2	1.98	0.44
1:B:14:LYS:HE3	1:B:73:VAL:HG11	1.99	0.44
1:A:265:TYR:HA	1:A:266:PRO:HD3	1.76	0.44
1:A:7:THR:CB	1:A:8:PRO:CD	2.94	0.44
1:B:76:PRO:HG2	1:B:79:TRP:CZ2	2.52	0.44
1:B:214:VAL:HG13	1:B:252:LEU:HD11	1.99	0.44
1:B:308:ASN:O	1:B:312:VAL:HG23	2.18	0.44
1:B:596:LYS:HE3	3:B:906:HOH:O	2.17	0.44
1:B:433:ARG:HG2	1:B:441:ILE:HD12	1.98	0.44
1:A:426:ALA:HB3	1:A:427:PRO:HD3	2.00	0.44
1:A:33:ARG:HA	1:A:35:TRP:CZ3	2.53	0.43
1:A:97:VAL:HB	1:A:105:MSE:HG2	2.00	0.43
1:A:15:LEU:HD12	1:A:174:VAL:H	1.83	0.43
1:B:19:TRP:CD1	1:B:47:VAL:HG13	2.53	0.43
1:B:543:VAL:O	1:B:596:LYS:NZ	2.42	0.43
1:B:14:LYS:NZ	1:B:130:ILE:HD12	2.29	0.43
1:B:519:ASP:OD1	1:B:519:ASP:N	2.32	0.43
1:B:71:ARG:HH11	1:B:71:ARG:CG	2.31	0.43
1:A:481:ALA:CB	1:A:532:MSE:CE	2.97	0.43
1:A:3:ARG:HA	1:A:4:PRO:HD3	1.90	0.43
1:A:601:GLY:O	3:A:806:HOH:O	2.21	0.43
1:B:0:HIS:CG	1:B:0:HIS:O	2.72	0.43
1:B:198:ASN:OD1	1:B:199:HIS:N	2.52	0.43
1:A:0:HIS:ND1	1:A:186:ASP:CB	2.78	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:167:TYR:CB	1:B:304:LYS:HG3	2.49	0.43
1:B:375:TYR:HB2	1:B:420:GLY:HA3	2.01	0.43
1:B:548:VAL:HG11	1:B:570:ILE:HD11	1.99	0.43
1:B:99:VAL:O	1:B:100:ASN:C	2.53	0.43
1:A:152:GLU:H	1:A:152:GLU:HG3	1.50	0.42
1:A:441:ILE:HG22	1:A:461:ASP:OD2	2.18	0.42
1:B:3:ARG:HA	1:B:4:PRO:HD3	1.86	0.42
1:A:412:ASN:HA	1:A:444:VAL:HB	2.01	0.42
1:A:7:THR:CB	1:A:8:PRO:HD3	2.40	0.42
1:B:96:LYS:HE2	1:B:103:GLU:OE1	2.19	0.42
1:B:-1:SER:CB	3:B:938:HOH:O	2.59	0.42
1:B:75:ILE:HA	1:B:76:PRO:HD2	1.79	0.42
1:A:15:LEU:HD11	1:A:174:VAL:H	1.83	0.42
1:A:549:TRP:HA	1:A:550:ASN:HA	1.78	0.42
1:B:15:LEU:HD11	1:B:173:SER:CB	2.50	0.42
1:A:556:THR:HB	1:A:560:ILE:HB	2.02	0.42
1:B:100:ASN:HB3	1:B:101:ASN:H	1.58	0.42
1:B:79:TRP:CE2	1:B:178:THR:HG21	2.54	0.42
1:A:14:LYS:HE2	1:A:14:LYS:HB3	1.51	0.42
1:B:14:LYS:HG2	1:B:175:MSE:HA	2.01	0.42
1:B:327:ARG:NH2	1:B:412:ASN:OD1	2.51	0.42
1:A:99:VAL:HG13	1:A:128:VAL:HG21	2.00	0.42
1:A:82:GLN:HB3	1:A:178:THR:HG23	2.01	0.42
1:B:377:GLU:HA	1:B:381:ASN:HB3	2.02	0.42
1:A:588:TRP:HD1	1:A:591:MSE:HE3	1.85	0.42
1:A:468:TYR:CE2	1:A:568:LYS:HE3	2.55	0.41
1:B:272:ARG:HG3	1:B:272:ARG:HH11	1.86	0.41
1:A:92:THR:HG1	1:A:171:HIS:CE1	2.38	0.41
1:B:447:MSE:HE3	1:B:467:ARG:CZ	2.50	0.41
1:B:209:ASN:N	1:B:209:ASN:OD1	2.53	0.41
1:A:39:LEU:HA	3:A:989:HOH:O	2.21	0.41
1:B:199:HIS:HB3	1:B:200:ALA:CB	2.40	0.41
1:A:10:ARG:HD2	1:B:77:LYS:HD3	2.01	0.41
1:A:218:ASP:HB2	1:A:248:TYR:OH	2.21	0.41
1:A:167:TYR:CB	1:A:304:LYS:HG3	2.50	0.41
1:A:599:GLN:HA	1:A:600:GLY:HA2	1.73	0.41
1:A:407:MSE:HE3	1:A:407:MSE:HB2	1.75	0.41
1:B:561:LEU:C	1:B:564:GLY:H	2.24	0.41
1:A:520:MSE:HE3	1:A:520:MSE:HB3	1.78	0.41
1:B:588:TRP:HD1	1:B:591:MSE:HE3	1.86	0.40
1:A:0:HIS:CE1	1:A:206:VAL:HG11	2.57	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:75:ILE:CG2	1:A:124:ALA:HA	2.52	0.40
1:B:255:THR:HA	1:B:263:ASP:O	2.22	0.40

All (2) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:520:MSE:CG	1:B:562:ARG:NH1[2_556]	2.00	0.20
1:A:562:ARG:NH1	1:B:520:MSE:CG[2_556]	2.12	0.08

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	596/605 (98%)	561 (94%)	31 (5%)	4 (1%)	22	32
1	B	596/605 (98%)	563 (94%)	30 (5%)	3 (0%)	29	41
All	All	1192/1210 (98%)	1124 (94%)	61 (5%)	7 (1%)	25	36

All (7) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	7	THR
1	A	200	ALA
1	B	7	THR
1	B	16	ASP
1	A	93	HIS
1	A	232	GLY
1	B	93	HIS

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	508/500 (102%)	492 (97%)	16 (3%)	40 60
1	B	506/500 (101%)	492 (97%)	14 (3%)	43 63
All	All	1014/1000 (101%)	984 (97%)	30 (3%)	41 61

All (30) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	5	VAL
1	A	16	ASP
1	A	100	ASN
1	A	152	GLU
1	A	155	LYS
1	A	178	THR
1	A	193	VAL
1	A	204	TRP
1	A	205	GLN
1	A	234	LEU
1	A	235	GLN
1	A	311	MSE
1	A	336	GLU
1	A	488	GLU
1	A	520	MSE
1	A	532	MSE
1	B	9	THR
1	B	10	ARG
1	B	11	GLU
1	B	193	VAL
1	B	196	ASP
1	B	231	SER
1	B	235	GLN
1	B	246	GLU
1	B	302	ARG
1	B	311	MSE
1	B	479	GLU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	B	532	MSE
1	B	541	SER
1	B	558	GLN

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (3) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	100	ASN
1	B	0	HIS
1	B	153	ASN

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

2 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	57Z	B	701	-	30,30,30	4.07	13 (43%)	38,42,42	5.90	12 (31%)
2	57Z	A	701	-	30,30,30	4.04	13 (43%)	38,42,42	5.88	13 (34%)

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	57Z	B	701	-	-	1/15/15/15	0/3/3/3
2	57Z	A	701	-	-	1/15/15/15	0/3/3/3

All (26) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	701	57Z	CAZ-CBA	10.59	1.57	1.42
2	B	701	57Z	CAZ-CBA	10.54	1.57	1.42
2	B	701	57Z	CAK-CAT	-8.50	1.24	1.39
2	A	701	57Z	CAK-CAT	-8.41	1.24	1.39
2	B	701	57Z	CAS-NBB	7.98	1.45	1.33
2	A	701	57Z	CAV-CBA	7.71	1.55	1.42
2	B	701	57Z	CAV-CBA	7.69	1.55	1.42
2	A	701	57Z	CAS-NBB	7.62	1.45	1.33
2	B	701	57Z	CAL-CAT	-7.23	1.23	1.37
2	A	701	57Z	CAL-CAT	-7.14	1.24	1.37
2	B	701	57Z	OAC-CAY	6.55	1.41	1.24
2	A	701	57Z	OAC-CAY	6.45	1.40	1.24
2	B	701	57Z	CAS-NAQ	4.72	1.45	1.36
2	A	701	57Z	CAS-NAQ	4.72	1.45	1.36
2	B	701	57Z	CAY-NAR	4.39	1.40	1.33
2	A	701	57Z	CAY-NAR	4.35	1.40	1.33
2	B	701	57Z	CBA-NAR	3.68	1.42	1.35
2	A	701	57Z	CBA-NAR	3.64	1.42	1.35
2	B	701	57Z	CAY-CAX	3.47	1.48	1.41
2	A	701	57Z	CAY-CAX	3.46	1.48	1.41
2	A	701	57Z	CAP-CAX	2.67	1.55	1.51
2	B	701	57Z	CAP-CAX	2.47	1.55	1.51
2	B	701	57Z	OAE-CAU	2.28	1.42	1.37
2	B	701	57Z	CAW-NAQ	2.24	1.46	1.41
2	A	701	57Z	OAE-CAU	2.19	1.42	1.37
2	A	701	57Z	CAW-NAQ	2.15	1.46	1.41

All (25) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	B	701	57Z	CAV-CBA-CAZ	-30.75	102.71	120.04
2	A	701	57Z	CAV-CBA-CAZ	-30.50	102.85	120.04

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	A	701	57Z	CAV-CBA-NAR	15.24	137.83	118.23
2	B	701	57Z	CAV-CBA-NAR	15.23	137.82	118.23
2	A	701	57Z	CAL-CAT-CAK	5.17	126.31	119.02
2	B	701	57Z	CAL-CAT-CAK	5.17	126.30	119.02
2	A	701	57Z	CAV-CAK-CAT	-4.84	120.18	123.17
2	B	701	57Z	CAV-CAK-CAT	-4.71	120.26	123.17
2	B	701	57Z	CAX-CAY-NAR	-3.60	119.98	125.25
2	A	701	57Z	CAM-CAX-CAY	3.58	119.44	115.46
2	A	701	57Z	CAB-CAV-CBA	-3.49	116.65	120.03
2	A	701	57Z	SAF-CAS-NBB	-3.44	119.57	124.42
2	B	701	57Z	CAM-CAX-CAY	3.41	119.25	115.46
2	B	701	57Z	SAF-CAS-NBB	-3.31	119.76	124.42
2	A	701	57Z	CAZ-CBA-NAR	-3.30	119.32	122.72
2	A	701	57Z	CAX-CAY-NAR	-3.29	120.42	125.25
2	B	701	57Z	CAB-CAV-CBA	-3.22	116.91	120.03
2	B	701	57Z	CAZ-CBA-NAR	-3.15	119.47	122.72
2	A	701	57Z	CAA-CAT-CAK	-3.12	116.32	120.94
2	B	701	57Z	CAA-CAT-CAK	-3.02	116.47	120.94
2	B	701	57Z	CAL-CAZ-CBA	2.50	122.44	118.58
2	A	701	57Z	CAL-CAZ-CBA	2.41	122.30	118.58
2	A	701	57Z	CAP-NBB-CAS	-2.27	118.68	122.53
2	A	701	57Z	CAM-CAZ-CBA	-2.11	115.31	118.58
2	B	701	57Z	CAB-CAV-CAK	-2.11	117.67	120.74

There are no chirality outliers.

All (2) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	701	57Z	OAD-CAN-CAO-NBB
2	B	701	57Z	OAD-CAN-CAO-NBB

There are no ring outliers.

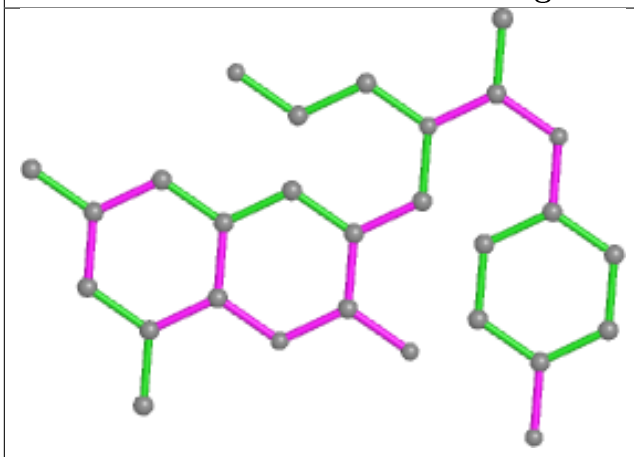
1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	701	57Z	1	0

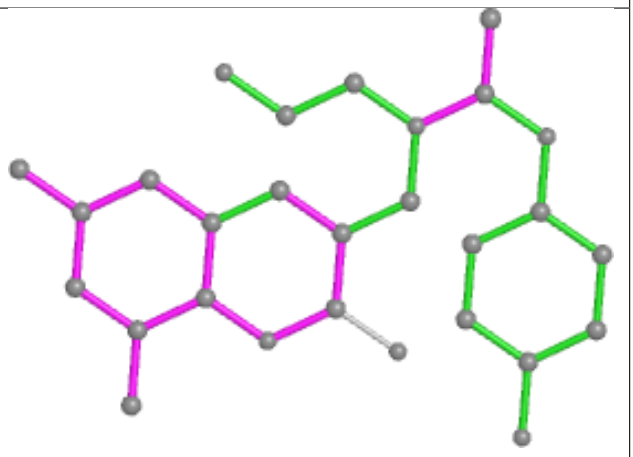
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier.

Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

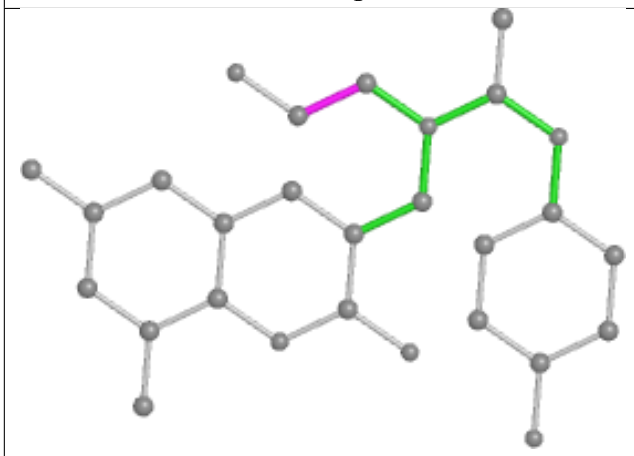
Ligand 57Z B 701



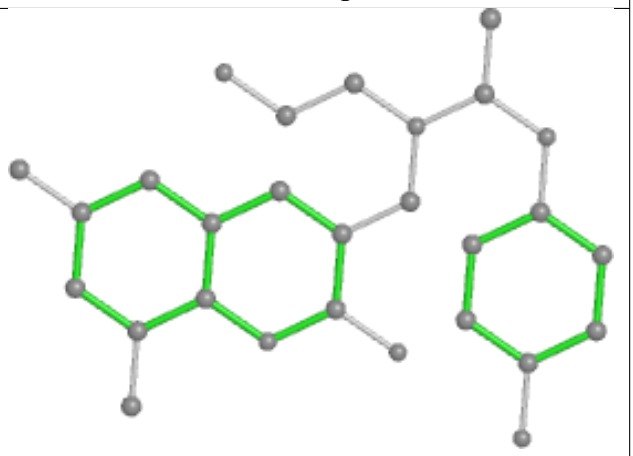
Bond lengths



Bond angles

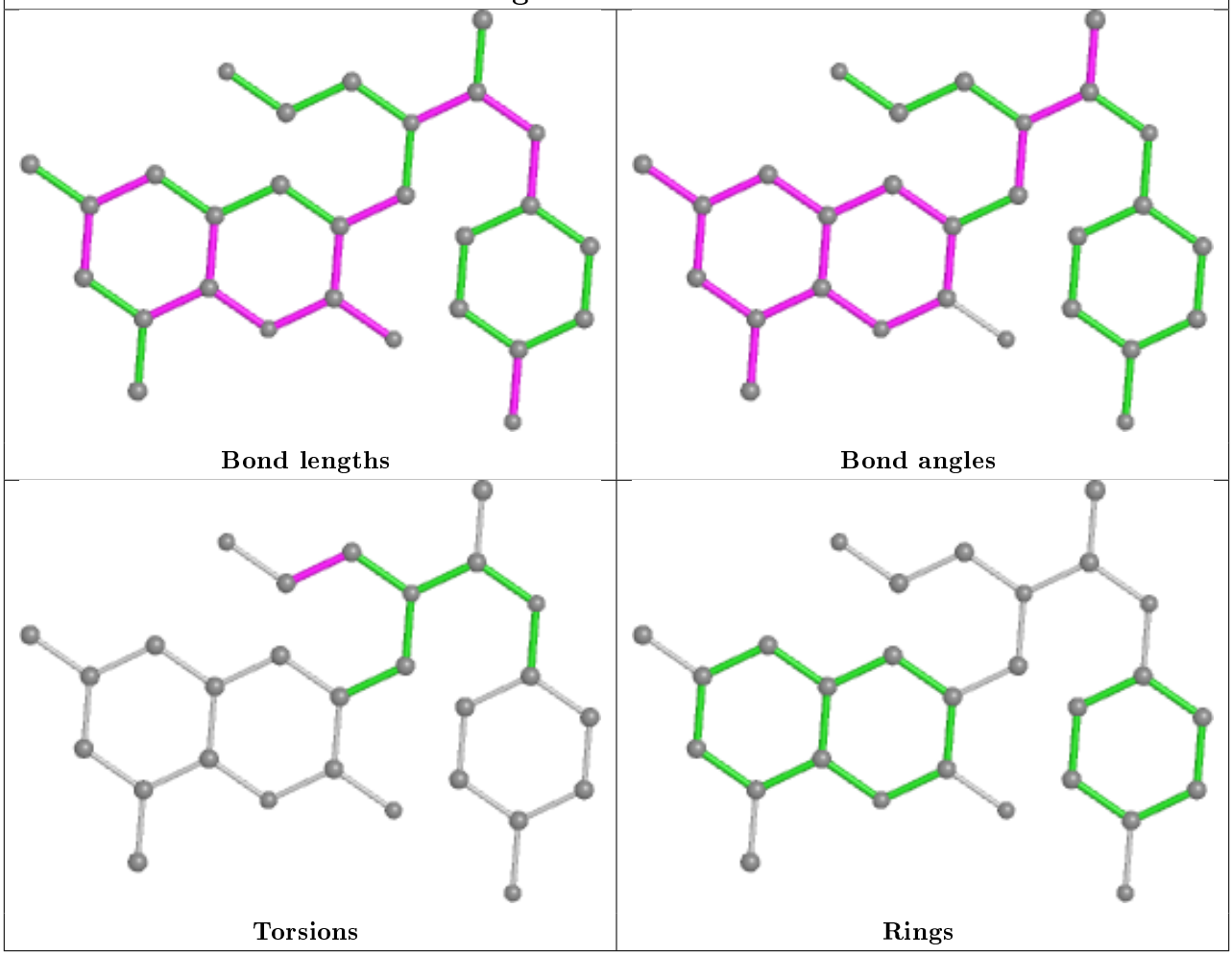


Torsions



Rings

Ligand 57Z A 701



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^{th} 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	587/605 (97%)	0.15	18 (3%) 49 47	26, 50, 90, 167	0
1	B	588/605 (97%)	0.49	51 (8%) 10 9	31, 66, 109, 190	0
All	All	1175/1210 (97%)	0.32	69 (5%) 22 21	26, 59, 102, 190	0

All (69) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	208	ALA	17.7
1	A	208	ALA	9.1
1	B	206	VAL	6.2
1	B	207	VAL	6.1
1	B	338	LEU	5.4
1	A	16	ASP	5.3
1	B	231	SER	5.3
1	A	232	GLY	5.3
1	B	232	GLY	4.8
1	A	198	ASN	4.7
1	B	209	ASN	4.6
1	B	199	HIS	4.5
1	B	230	THR	4.4
1	B	259	GLN	4.1
1	B	204	TRP	4.0
1	B	190	VAL	3.9
1	B	16	ASP	3.8
1	A	204	TRP	3.7
1	B	601	GLY	3.7
1	B	235	GLN	3.6
1	A	199	HIS	3.6
1	A	365	PHE	3.5
1	A	230	THR	3.5
1	B	205	GLN	3.5

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	B	152	GLU	3.5
1	B	599	GLN	3.4
1	B	241	LEU	3.3
1	B	597	PRO	3.1
1	B	260	THR	3.0
1	A	236	VAL	3.0
1	B	17	GLY	3.0
1	B	153	ASN	3.0
1	B	236	VAL	2.9
1	B	287	PRO	2.9
1	A	207	VAL	2.9
1	B	558	GLN	2.9
1	B	92	THR	2.8
1	A	196	ASP	2.7
1	B	239	PRO	2.6
1	B	196	ASP	2.6
1	B	211	ASP	2.6
1	B	542	ALA	2.5
1	B	598	GLN	2.5
1	B	564	GLY	2.4
1	B	15	LEU	2.4
1	B	233	THR	2.4
1	B	116	ALA	2.4
1	A	338	LEU	2.4
1	A	259	GLN	2.3
1	B	8	PRO	2.3
1	B	274	VAL	2.3
1	B	225	ALA	2.3
1	A	23	LEU	2.2
1	B	7	THR	2.2
1	A	234	LEU	2.2
1	B	600	GLY	2.2
1	B	240	HIS	2.2
1	B	257	LYS	2.2
1	B	258	SER	2.2
1	B	0	HIS	2.1
1	A	7	THR	2.1
1	B	282	LEU	2.1
1	A	25	ARG	2.1
1	B	348	VAL	2.1
1	B	203	ASP	2.1
1	A	30	ILE	2.0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	B	329	SER	2.0
1	B	332	PRO	2.0
1	B	334	ALA	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)

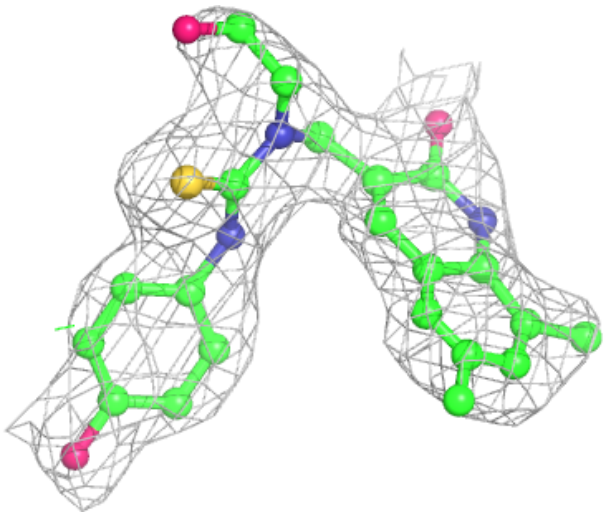
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

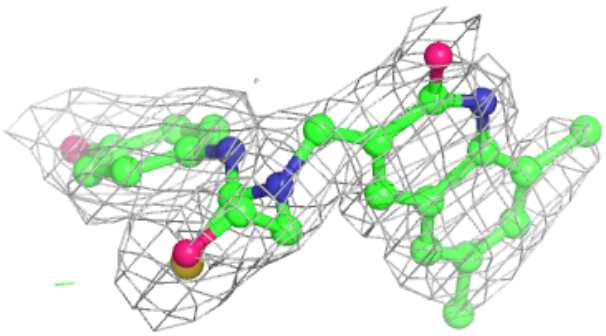
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
2	57Z	B	701	28/28	0.88	0.16	57,67,74,98	0
2	57Z	A	701	28/28	0.91	0.15	48,64,72,79	0

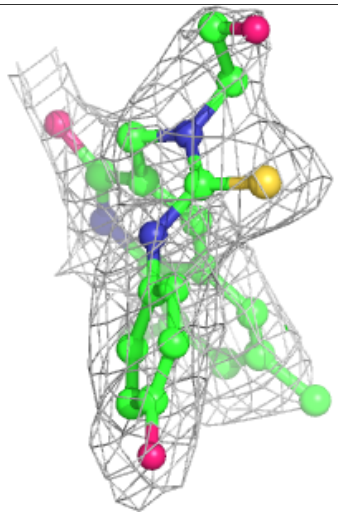
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

Electron density around 57Z B 701:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

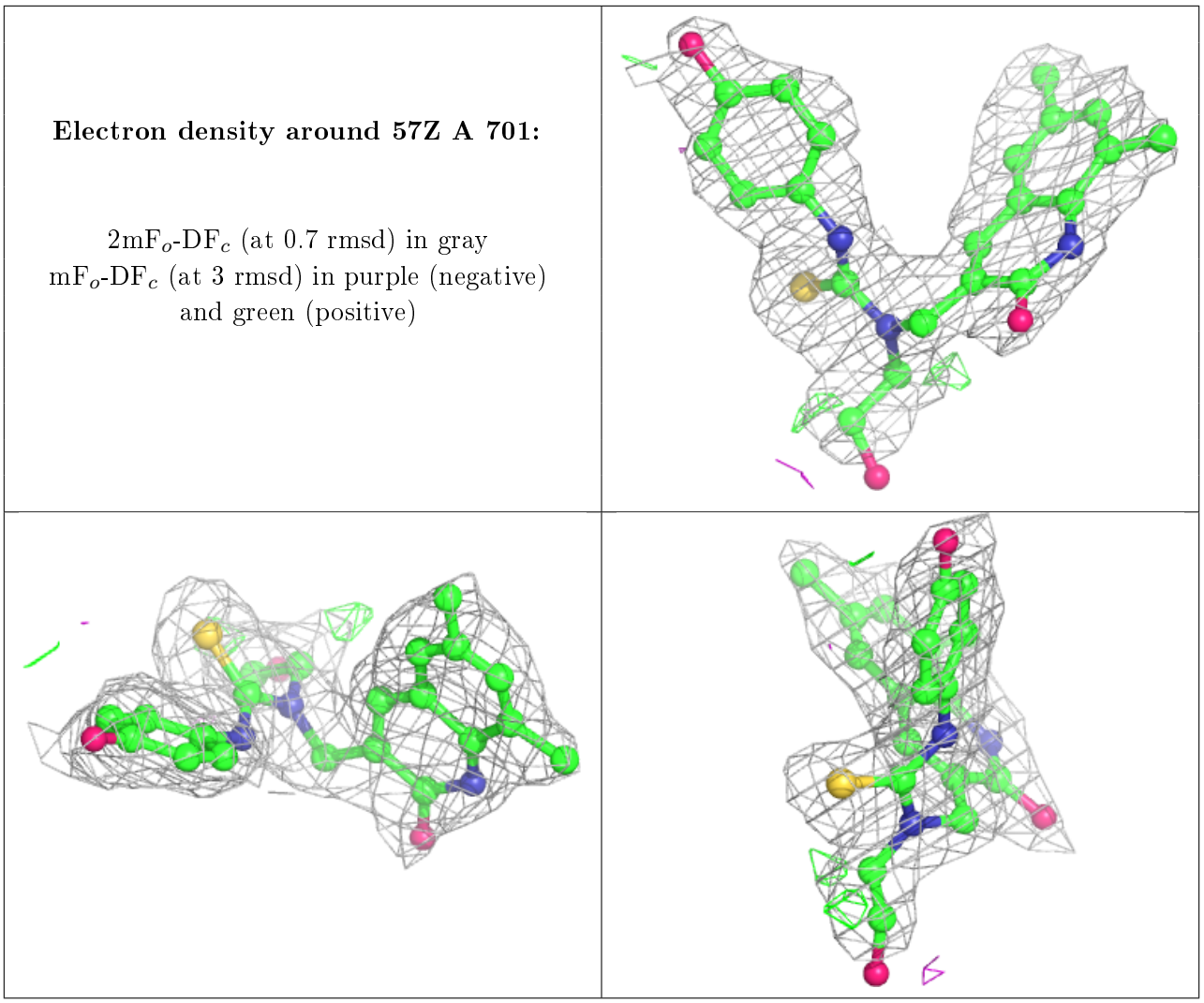






Electron density around 57Z A 701:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



6.5 Other polymers

There are no such residues in this entry.