



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 5, 2026 – 05:36 PM UTC

PDB ID : 4JL4 / pdb_00004jl4
Title : Crystal structure of the complex between PPARgamma LBD and the ligand LJ570 [(2S)-3-(biphenyl-4-yl)-2-(biphenyl-4-yloxy)propanoic acid]
Authors : Pochetti, G.; Montanari, R.; Capelli, D.
Deposited on : 2013-03-12
Resolution : 2.50 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 types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

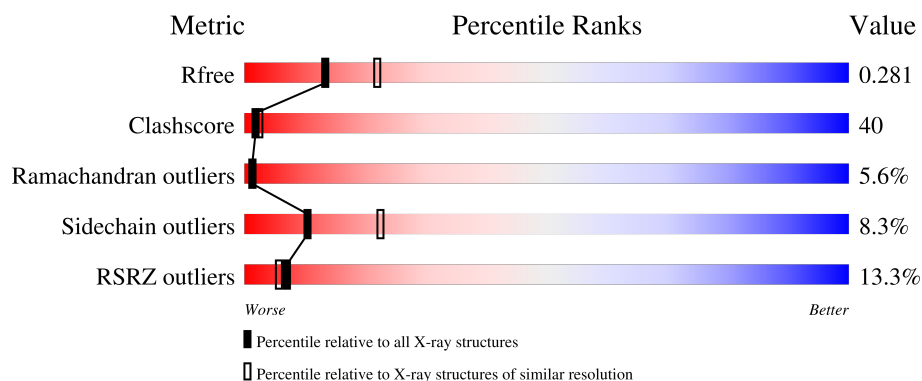
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.50 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}	180053	5829 (2.50-2.50)
Clashscore	190562	6492 (2.50-2.50)
Ramachandran outliers	187476	6378 (2.50-2.50)
Sidechain outliers	187428	6380 (2.50-2.50)
RSRZ outliers	180081	5833 (2.50-2.50)

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 $\leq 5\%$. 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	287	
1	B	287	

2 Entry composition

There are 3 unique types of molecules in this entry. The entry contains 4505 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.

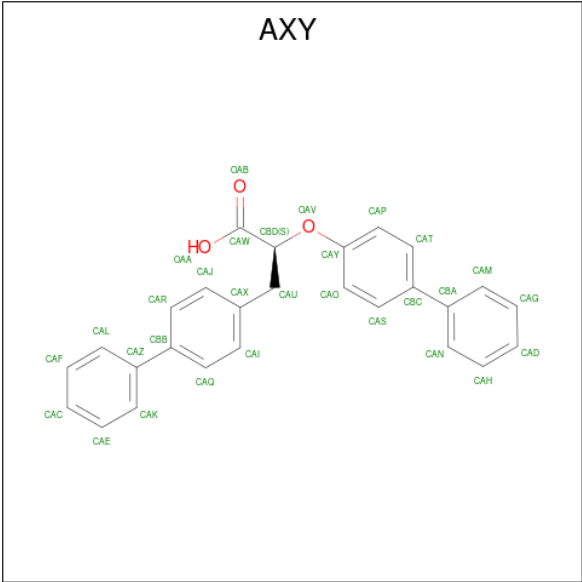
- Molecule 1 is a protein called Peroxisome proliferator-activated receptor gamma.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	268	Total	C	N	O	S	0	0	0
			2149	1387	352	400	10			
1	B	267	Total	C	N	O	S	33	0	0
			2140	1381	350	399	10			

There are 8 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	191	GLY	-	expression tag	UNP P37231
A	192	SER	-	expression tag	UNP P37231
A	193	HIS	-	expression tag	UNP P37231
A	194	MET	-	expression tag	UNP P37231
B	191	GLY	-	expression tag	UNP P37231
B	192	SER	-	expression tag	UNP P37231
B	193	HIS	-	expression tag	UNP P37231
B	194	MET	-	expression tag	UNP P37231

- Molecule 2 is (2S)-3-(biphenyl-4-yl)-2-(biphenyl-4-yloxy)propanoic acid (CCD ID: AXY) (formula: C₂₇H₂₂O₃).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
2	A	1	Total	C	O	0	0
			30	27	3		

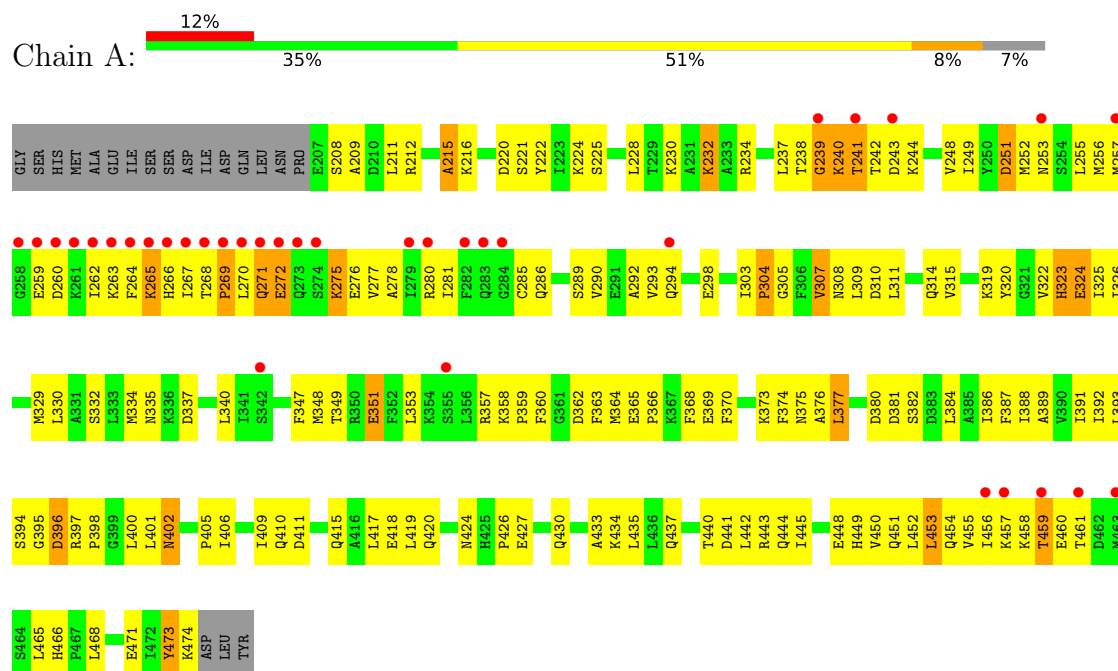
- Molecule 3 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	92	Total	O	0	0
			92	92		
3	B	94	Total	O	0	0
			94	94		

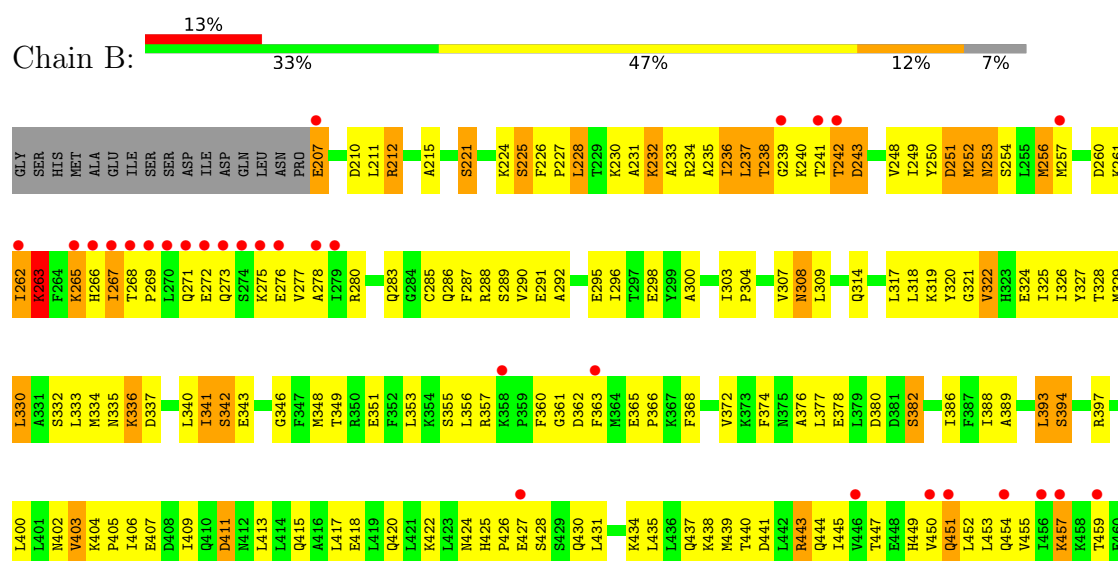
3 Residue-property plots

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: Peroxisome proliferator-activated receptor gamma



- Molecule 1: Peroxisome proliferator-activated receptor gamma



T461	D462	S464	H466	P467	L468	L469	Q470	E471	I472	Y473	LYS	ASP	LEU	TYR

4 Data and refinement statistics

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α , β , γ	93.04Å 62.53Å 119.05Å 90.00° 102.31° 90.00°	Depositor
Resolution (Å)	10.00 – 2.50 10.00 – 2.50	Depositor EDS
% Data completeness (in resolution range)	(Not available) (10.00-2.50) 78.4 (10.00-2.50)	Depositor EDS
R_{merge}	0.10	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.75 (at 2.51Å)	Xtriage
Refinement program	CNS 1.1	Depositor
R, R_{free}	0.241 , 0.287 0.269 , 0.281	Depositor DCC
R_{free} test set	861 reflections (4.60%)	wwPDB-VP
Wilson B-factor (Å ²)	23.3	Xtriage
Anisotropy	0.995	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.39 , 78.2	EDS
L-test for twinning ²	$\langle L \rangle = 0.47$, $\langle L^2 \rangle = 0.30$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.84	EDS
Total number of atoms	4505	wwPDB-VP
Average B, all atoms (Å ²)	56.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 5.01% 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, 0.333 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: AXY

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	0.51	0/2186	1.01	9/2945 (0.3%)
1	B	0.47	0/2177	1.00	10/2934 (0.3%)
All	All	0.49	0/4363	1.01	19/5879 (0.3%)

There are no bond length outliers.

All (19) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	403	VAL	N-CA-C	8.08	118.17	110.42
1	B	291	GLU	N-CA-C	-7.56	103.12	111.36
1	A	248	VAL	N-CA-C	6.74	117.83	107.99
1	A	473	TYR	N-CA-C	6.65	119.37	109.59
1	A	396	ASP	N-CA-C	-6.58	105.13	113.02
1	B	243	ASP	N-CA-C	-6.57	104.98	114.12
1	A	337	ASP	N-CA-C	6.47	121.34	113.38
1	B	328	THR	N-CA-C	-6.36	103.97	111.03
1	A	324	GLU	N-CA-C	-6.34	104.41	111.71
1	B	394	SER	CA-C-N	-5.94	117.00	123.30
1	B	394	SER	C-N-CA	-5.94	117.00	123.30
1	A	323	HIS	N-CA-C	5.90	118.67	111.82
1	B	256	MET	N-CA-C	-5.75	102.53	110.35
1	A	215	ALA	N-CA-C	-5.55	104.92	110.97
1	B	457	LYS	N-CA-C	-5.38	105.52	111.71
1	A	232	LYS	N-CA-C	-5.23	105.47	111.07
1	B	285	CYS	N-CA-C	-5.18	105.63	111.28
1	A	225	SER	N-CA-C	5.08	119.56	112.90
1	B	236	ILE	N-CA-C	5.04	115.26	110.42

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	2149	0	2217	170	0
1	B	2140	0	2204	173	0
2	A	30	0	21	8	0
3	A	92	0	0	14	0
3	B	94	0	0	18	0
All	All	4505	0	4442	346	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 40.

All (346) 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:466:HIS:H	1:B:467:PRO:HD2	1.19	1.06
1:A:448:GLU:HA	1:A:451:GLN:HE21	1.21	1.01
1:B:466:HIS:H	1:B:467:PRO:CD	1.73	1.00
1:A:281:ILE:HG23	2:A:501:AXY:H17	1.48	0.96
1:A:401:LEU:C	1:A:402:ASN:HD22	1.74	0.95
1:A:357:ARG:HD2	1:A:359:PRO:HD2	1.46	0.95
1:B:343:GLU:HB2	3:B:581:HOH:O	1.67	0.93
1:A:437:GLN:O	1:A:440:THR:HG22	1.71	0.90
1:B:434:LYS:HA	1:B:437:GLN:HE21	1.36	0.88
1:B:325:ILE:HD12	1:B:388:ILE:HG23	1.59	0.84
1:A:293:VAL:HG22	1:A:322:VAL:HG21	1.59	0.82
1:B:377:LEU:HD11	1:B:438:LYS:HE3	1.61	0.82
1:B:455:VAL:HG21	3:B:550:HOH:O	1.80	0.80
1:A:265:LYS:HB3	1:A:265:LYS:NZ	1.98	0.79
1:B:212:ARG:HB3	1:B:212:ARG:NH1	1.98	0.79
1:A:392:ILE:HG22	1:A:393:LEU:HD23	1.62	0.78
1:A:267:ILE:H	1:A:280:ARG:HD2	1.47	0.78
1:B:321:GLY:O	1:B:325:ILE:HG12	1.85	0.76
1:B:466:HIS:N	1:B:467:PRO:CD	2.50	0.75
1:A:271:GLN:HB2	1:A:276:GLU:HA	1.68	0.74
1:B:238:THR:HG23	1:B:335:ASN:ND2	2.03	0.74
2:A:501:AXY:CAW	2:A:501:AXY:H14	2.16	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:425:HIS:O	1:B:428:SER:HB3	1.88	0.74
1:A:265:LYS:HB3	1:A:265:LYS:HZ3	1.52	0.73
1:A:402:ASN:HD22	1:A:402:ASN:N	1.84	0.73
1:A:434:LYS:HE3	3:B:563:HOH:O	1.89	0.73
1:A:330:LEU:HD11	2:A:501:AXY:H10	1.71	0.72
1:A:294:GLN:HB2	3:A:666:HOH:O	1.88	0.72
1:A:329:MET:HG3	3:A:649:HOH:O	1.90	0.72
1:B:469:LEU:HD22	1:B:472:ILE:HD12	1.70	0.72
1:A:322:VAL:HG13	1:A:323:HIS:HD2	1.54	0.71
1:B:351:GLU:HG2	3:B:512:HOH:O	1.90	0.71
1:B:271:GLN:HB2	1:B:280:ARG:HH12	1.55	0.70
1:A:373:LYS:O	1:A:376:ALA:HB3	1.91	0.70
1:B:425:HIS:HB3	1:B:428:SER:HB3	1.73	0.70
1:A:234:ARG:HH11	1:A:237:LEU:HD12	1.56	0.70
1:B:273:GLN:HA	3:B:570:HOH:O	1.91	0.70
1:B:351:GLU:HG3	3:B:521:HOH:O	1.92	0.70
1:A:270:LEU:HD13	1:A:271:GLN:N	2.07	0.70
1:A:293:VAL:HG22	1:A:322:VAL:CG2	2.22	0.70
1:A:320:TYR:HB2	1:A:397:ARG:HD2	1.75	0.69
1:A:363:PHE:CE2	1:A:456:ILE:HD11	2.28	0.69
1:B:324:GLU:OE2	1:B:443:ARG:HD2	1.93	0.69
1:B:212:ARG:HB3	1:B:212:ARG:HH11	1.58	0.68
1:A:320:TYR:CB	1:A:397:ARG:HD2	2.23	0.68
1:A:358:LYS:HB2	1:A:359:PRO:HD3	1.74	0.68
1:B:210:ASP:HB3	3:B:510:HOH:O	1.93	0.67
1:A:332:SER:HA	3:A:667:HOH:O	1.94	0.67
1:B:447:THR:O	1:B:450:VAL:HG22	1.95	0.67
1:B:256:MET:O	1:B:257:MET:HB2	1.94	0.67
1:B:465:LEU:O	1:B:466:HIS:HB2	1.93	0.67
1:B:397:ARG:HB2	1:B:400:LEU:HD11	1.76	0.67
1:B:333:LEU:HB3	1:B:340:LEU:HB2	1.77	0.66
1:A:230:LYS:HG3	3:A:667:HOH:O	1.96	0.66
1:A:263:LYS:C	1:A:264:PHE:HD1	2.04	0.66
1:A:322:VAL:HG13	1:A:323:HIS:CD2	2.31	0.66
1:A:369:GLU:O	1:A:373:LYS:HG2	1.95	0.66
1:A:220:ASP:HB2	3:A:653:HOH:O	1.96	0.65
2:A:501:AXY:CAW	2:A:501:AXY:CAP	2.72	0.65
1:A:430:GLN:HG3	1:A:433:ALA:HB3	1.79	0.65
1:B:237:LEU:O	1:B:239:GLY:N	2.30	0.64
1:B:348:MET:SD	1:B:353:LEU:HD21	2.36	0.64
1:A:241:THR:HG22	1:A:243:ASP:OD2	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:334:MET:HE2	1:A:368:PHE:CE1	2.31	0.64
1:B:441:ASP:O	1:B:445:ILE:HG12	1.97	0.64
1:B:253:ASN:N	1:B:253:ASN:HD22	1.93	0.64
1:A:238:THR:O	1:A:240:LYS:N	2.30	0.64
1:A:239:GLY:O	1:A:240:LYS:C	2.41	0.63
1:A:211:LEU:HD11	1:A:415:GLN:HE21	1.63	0.63
1:A:271:GLN:CG	1:A:272:GLU:H	2.11	0.63
1:A:402:ASN:N	1:A:402:ASN:ND2	2.44	0.63
1:B:212:ARG:HH11	1:B:212:ARG:CB	2.11	0.63
1:B:307:VAL:C	1:B:309:LEU:H	2.06	0.63
1:B:457:LYS:HD2	1:B:461:THR:HG21	1.79	0.62
1:B:289:SER:O	1:B:292:ALA:HB3	1.99	0.61
1:A:259:GLU:HA	1:A:264:PHE:HB2	1.81	0.61
1:B:457:LYS:HG3	3:B:538:HOH:O	2.00	0.61
1:A:319:LYS:HZ1	1:A:474:LYS:HB2	1.66	0.60
1:A:370:PHE:CZ	1:A:442:LEU:HD21	2.36	0.60
1:A:268:THR:N	1:A:269:PRO:HD2	2.16	0.60
1:A:393:LEU:HD12	1:A:409:ILE:HB	1.84	0.60
1:B:271:GLN:CD	1:B:277:VAL:HG23	2.27	0.59
1:B:265:LYS:HD2	1:B:265:LYS:N	2.17	0.59
1:B:428:SER:OG	1:B:431:LEU:HB2	2.01	0.59
1:B:210:ASP:OD2	1:B:211:LEU:N	2.36	0.59
1:A:311:LEU:O	1:A:315:VAL:HG23	2.03	0.59
1:A:290:VAL:HG21	1:A:466:HIS:CD2	2.37	0.58
1:A:234:ARG:NH2	1:A:375:ASN:ND2	2.50	0.58
1:A:230:LYS:HE3	3:A:667:HOH:O	2.04	0.58
1:A:393:LEU:CD1	1:A:409:ILE:HB	2.33	0.58
1:B:322:VAL:O	1:B:326:ILE:HG13	2.03	0.58
1:A:363:PHE:CZ	1:A:456:ILE:HD11	2.37	0.57
1:A:473:TYR:O	1:A:474:LYS:HG3	2.04	0.57
1:B:226:PHE:CE1	1:B:329:MET:HE1	2.40	0.57
1:B:261:LYS:O	1:B:262:ILE:HB	2.04	0.57
1:A:395:GLY:HA2	1:A:400:LEU:CD1	2.35	0.57
1:B:263:LYS:H	1:B:263:LYS:HD3	1.70	0.57
1:B:368:PHE:O	1:B:372:VAL:HG23	2.05	0.57
1:A:364:MET:SD	2:A:501:AXY:H9	2.45	0.56
1:B:237:LEU:C	1:B:239:GLY:N	2.63	0.56
1:A:249:ILE:HD12	1:A:255:LEU:HA	1.87	0.56
1:A:211:LEU:HD11	1:A:415:GLN:NE2	2.21	0.56
1:A:259:GLU:OE2	1:A:268:THR:HA	2.05	0.56
1:A:374:PHE:O	1:A:377:LEU:HG	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:285:CYS:SG	2:A:501:AXY:CAQ	2.93	0.56
1:B:397:ARG:HB2	1:B:400:LEU:CD1	2.35	0.56
1:B:243:ASP:HB3	3:B:548:HOH:O	2.05	0.56
1:A:228:LEU:HD12	1:A:232:LYS:HB3	1.88	0.56
1:A:277:VAL:HG13	1:A:278:ALA:H	1.71	0.56
1:B:263:LYS:HD3	1:B:263:LYS:N	2.22	0.55
1:A:322:VAL:HG13	1:A:323:HIS:H	1.72	0.55
1:B:365:GLU:HB3	3:B:556:HOH:O	2.05	0.55
1:B:241:THR:O	1:B:241:THR:HG22	2.06	0.55
1:B:267:ILE:HG13	1:B:268:THR:N	2.21	0.55
1:A:444:GLN:O	1:A:448:GLU:HG3	2.07	0.55
1:A:440:THR:HB	1:B:440:THR:HG22	1.88	0.54
1:B:466:HIS:N	1:B:467:PRO:HD2	2.03	0.54
1:A:448:GLU:HA	1:A:451:GLN:NE2	2.06	0.54
1:A:249:ILE:HG21	1:A:348:MET:HE2	1.89	0.54
1:A:358:LYS:HB2	1:A:359:PRO:CD	2.37	0.54
1:B:265:LYS:HD2	1:B:265:LYS:H	1.73	0.54
1:B:451:GLN:NE2	1:B:452:LEU:HG	2.23	0.54
1:A:267:ILE:O	1:A:280:ARG:CZ	2.56	0.53
1:A:322:VAL:HG13	1:A:323:HIS:N	2.21	0.53
1:A:430:GLN:HE21	1:A:433:ALA:HB2	1.72	0.53
1:B:425:HIS:HB3	1:B:428:SER:CB	2.39	0.53
1:A:220:ASP:O	1:A:224:LYS:HG3	2.09	0.53
1:A:393:LEU:O	1:A:410:GLN:HB2	2.08	0.53
1:A:400:LEU:HD13	1:A:406:ILE:HD12	1.90	0.53
1:B:271:GLN:HE22	1:B:276:GLU:HA	1.73	0.53
1:B:234:ARG:NH2	1:B:334:MET:O	2.33	0.53
1:B:451:GLN:O	1:B:454:GLN:HG2	2.09	0.53
1:B:365:GLU:N	1:B:366:PRO:HD2	2.24	0.53
1:A:257:MET:O	1:A:260:ASP:HB3	2.09	0.52
1:A:387:PHE:CE2	1:A:391:ILE:HD11	2.44	0.52
1:B:380:ASP:OD1	1:B:382:SER:N	2.42	0.52
1:B:226:PHE:CD1	1:B:329:MET:HE1	2.45	0.52
1:A:401:LEU:C	1:A:402:ASN:ND2	2.57	0.52
1:B:361:GLY:C	1:B:363:PHE:H	2.16	0.52
1:A:435:LEU:HD12	1:A:435:LEU:O	2.09	0.52
1:A:468:LEU:HD13	1:A:468:LEU:O	2.10	0.52
1:B:341:ILE:HG22	1:B:346:GLY:HA3	1.92	0.52
1:A:289:SER:O	1:A:292:ALA:HB3	2.09	0.52
1:A:449:HIS:O	1:A:453:LEU:HB2	2.10	0.52
1:B:341:ILE:HG23	1:B:342:SER:N	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:253:ASN:N	1:B:253:ASN:ND2	2.57	0.52
1:A:271:GLN:HG3	1:A:272:GLU:H	1.74	0.51
1:A:234:ARG:HH22	1:A:375:ASN:ND2	2.09	0.51
1:B:236:ILE:O	1:B:237:LEU:O	2.28	0.51
1:A:303:ILE:O	1:A:304:PRO:C	2.53	0.51
1:A:322:VAL:HG22	1:A:326:ILE:HD12	1.91	0.51
1:A:349:THR:HG22	1:A:351:GLU:H	1.75	0.51
1:B:232:LYS:HG3	3:B:534:HOH:O	2.11	0.51
1:B:286:GLN:O	1:B:287:PHE:C	2.53	0.51
1:B:234:ARG:O	1:B:235:ALA:C	2.52	0.51
1:B:252:MET:C	1:B:253:ASN:HD22	2.18	0.51
1:B:405:PRO:O	1:B:409:ILE:HG13	2.11	0.51
1:A:286:GLN:NE2	1:A:465:LEU:HD12	2.26	0.51
1:A:365:GLU:N	1:A:366:PRO:HD2	2.26	0.51
1:B:250:TYR:HA	1:B:349:THR:OG1	2.11	0.51
1:B:425:HIS:N	1:B:426:PRO:CD	2.74	0.51
1:B:287:PHE:C	1:B:287:PHE:CD1	2.90	0.50
1:A:208:SER:O	1:A:211:LEU:N	2.44	0.50
1:A:363:PHE:HE2	1:A:456:ILE:HD11	1.77	0.50
1:B:212:ARG:HH11	1:B:212:ARG:CA	2.24	0.50
1:B:237:LEU:C	1:B:239:GLY:H	2.19	0.50
1:B:351:GLU:OE2	1:B:355:SER:HB3	2.12	0.50
1:B:374:PHE:HD1	1:B:438:LYS:HG2	1.77	0.50
1:A:325:ILE:O	1:A:329:MET:HG2	2.12	0.49
1:A:220:ASP:HA	3:A:642:HOH:O	2.10	0.49
1:A:433:ALA:O	1:A:437:GLN:HG3	2.12	0.49
1:B:290:VAL:HG21	1:B:473:TYR:CE1	2.47	0.49
1:A:320:TYR:HB3	1:A:397:ARG:NH1	2.27	0.49
1:A:453:LEU:HD21	3:A:689:HOH:O	2.11	0.49
1:B:250:TYR:CD1	1:B:251:ASP:HB2	2.48	0.49
1:B:307:VAL:C	1:B:309:LEU:N	2.71	0.49
1:B:248:VAL:HG12	1:B:249:ILE:N	2.28	0.49
1:B:329:MET:O	1:B:332:SER:HB2	2.13	0.49
1:A:262:ILE:HG22	1:A:263:LYS:N	2.28	0.49
1:B:263:LYS:H	1:B:263:LYS:CD	2.25	0.49
1:A:349:THR:HG22	1:A:351:GLU:N	2.27	0.49
1:A:420:GLN:NE2	1:A:424:ASN:HB2	2.28	0.48
1:A:286:GLN:NE2	1:A:465:LEU:HA	2.28	0.48
1:A:303:ILE:HD11	1:A:392:ILE:HD12	1.95	0.48
1:A:374:PHE:C	1:A:376:ALA:N	2.69	0.48
1:B:251:ASP:C	1:B:253:ASN:N	2.71	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:300:ALA:HA	1:B:303:ILE:HD12	1.95	0.48
1:A:266:HIS:HB3	1:A:280:ARG:HG2	1.95	0.48
1:B:298:GLU:HB2	3:B:513:HOH:O	2.13	0.48
1:B:319:LYS:HE3	1:B:320:TYR:CZ	2.49	0.48
1:B:434:LYS:HA	1:B:437:GLN:NE2	2.18	0.48
1:A:319:LYS:NZ	1:A:474:LYS:HD2	2.28	0.48
1:A:277:VAL:HG13	1:A:278:ALA:N	2.29	0.48
1:B:290:VAL:HG21	1:B:473:TYR:CD1	2.49	0.47
1:B:403:VAL:HG12	1:B:407:GLU:HG3	1.95	0.47
1:B:417:LEU:HD21	1:B:435:LEU:HD23	1.96	0.47
1:B:276:GLU:O	1:B:280:ARG:HD3	2.15	0.47
1:B:330:LEU:O	1:B:334:MET:HG3	2.15	0.47
1:A:262:ILE:HB	1:A:264:PHE:CE1	2.50	0.47
1:B:411:ASP:O	1:B:415:GLN:HG3	2.14	0.47
1:A:330:LEU:HD21	1:A:364:MET:HE1	1.97	0.47
1:B:271:GLN:HE21	1:B:280:ARG:NH1	2.12	0.47
1:B:469:LEU:HD13	1:B:469:LEU:O	2.15	0.47
1:A:253:ASN:O	1:A:257:MET:HG2	2.14	0.47
1:A:256:MET:HG2	1:A:268:THR:O	2.15	0.47
1:B:303:ILE:O	1:B:304:PRO:C	2.57	0.47
1:B:403:VAL:O	1:B:404:LYS:C	2.58	0.47
1:A:442:LEU:O	1:A:443:ARG:C	2.57	0.46
1:B:288:ARG:HD2	1:B:288:ARG:O	2.15	0.46
1:B:273:GLN:HG2	3:B:570:HOH:O	2.14	0.46
1:B:380:ASP:OD1	1:B:380:ASP:C	2.57	0.46
1:B:271:GLN:NE2	1:B:277:VAL:HG23	2.31	0.46
1:B:427:GLU:OE2	1:B:427:GLU:HA	2.14	0.46
1:A:309:LEU:HD13	1:A:406:ILE:HG12	1.98	0.46
1:A:340:LEU:HD23	1:A:347:PHE:HD1	1.81	0.46
1:A:473:TYR:HE2	3:A:689:HOH:O	1.99	0.46
1:B:320:TYR:HB2	1:B:397:ARG:HD2	1.97	0.46
1:A:305:GLY:HA2	1:A:308:ASN:HD22	1.80	0.46
1:A:457:LYS:NZ	1:A:461:THR:HG22	2.30	0.46
1:B:277:VAL:HG22	1:B:280:ARG:NH1	2.31	0.46
1:B:335:ASN:OD1	1:B:335:ASN:C	2.59	0.46
2:A:501:AXY:H14	2:A:501:AXY:OAB	2.16	0.46
1:B:221:SER:O	1:B:225:SER:OG	2.33	0.46
1:B:250:TYR:CE1	1:B:251:ASP:HB2	2.52	0.46
1:B:251:ASP:C	1:B:253:ASN:H	2.23	0.46
1:B:319:LYS:HE3	1:B:320:TYR:CE1	2.51	0.45
1:B:449:HIS:O	1:B:453:LEU:HB2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:215:ALA:CB	1:B:386:ILE:HD11	2.46	0.45
1:B:240:LYS:HG2	1:B:242:THR:HG22	1.99	0.45
1:A:370:PHE:CB	1:A:445:ILE:HD11	2.47	0.45
1:A:251:ASP:OD2	1:A:253:ASN:CB	2.65	0.45
1:A:293:VAL:HG11	1:A:468:LEU:HD11	1.99	0.45
1:B:207:GLU:O	1:B:210:ASP:OD2	2.35	0.45
1:B:273:GLN:HG3	3:B:539:HOH:O	2.15	0.45
1:B:402:ASN:O	1:B:405:PRO:HD2	2.16	0.45
1:B:265:LYS:H	1:B:265:LYS:CD	2.30	0.45
1:A:381:ASP:O	1:A:382:SER:C	2.59	0.45
1:A:417:LEU:O	1:A:418:GLU:C	2.59	0.45
1:B:207:GLU:HA	1:B:207:GLU:OE1	2.17	0.45
1:B:241:THR:O	1:B:243:ASP:N	2.50	0.45
1:B:266:HIS:O	1:B:267:ILE:HB	2.15	0.45
1:A:212:ARG:O	1:A:216:LYS:HD3	2.17	0.45
1:A:370:PHE:HB2	1:A:445:ILE:HD11	1.99	0.45
1:A:450:VAL:O	1:A:454:GLN:HG3	2.17	0.45
1:B:376:ALA:O	1:B:378:GLU:HG3	2.17	0.45
1:B:439:MET:HE3	3:B:507:HOH:O	2.16	0.45
1:A:239:GLY:O	1:A:241:THR:N	2.49	0.45
1:A:309:LEU:O	1:A:310:ASP:C	2.60	0.45
1:A:402:ASN:O	1:A:405:PRO:HG2	2.16	0.45
1:B:353:LEU:HA	1:B:356:LEU:HG	1.99	0.45
1:A:212:ARG:HD2	3:A:679:HOH:O	2.17	0.44
1:A:271:GLN:NE2	1:A:272:GLU:OE2	2.50	0.44
1:A:319:LYS:NZ	1:A:474:LYS:HB2	2.31	0.44
1:B:283:GLN:HB3	3:B:502:HOH:O	2.17	0.44
1:B:418:GLU:HG2	1:B:422:LYS:HE2	2.00	0.44
1:B:228:LEU:HD23	1:B:232:LYS:HB3	1.99	0.44
1:B:265:LYS:N	1:B:265:LYS:CD	2.79	0.44
1:B:353:LEU:O	1:B:356:LEU:HG	2.17	0.44
1:A:395:GLY:HA2	1:A:400:LEU:HD12	1.99	0.44
1:A:286:GLN:HE21	1:A:465:LEU:HD12	1.82	0.44
1:A:455:VAL:O	1:A:459:THR:HG23	2.17	0.44
1:A:259:GLU:O	1:A:262:ILE:O	2.36	0.44
1:A:456:ILE:O	1:A:457:LYS:C	2.60	0.44
1:B:232:LYS:O	1:B:233:ALA:C	2.61	0.44
1:B:309:LEU:O	1:B:314:GLN:NE2	2.49	0.44
1:B:418:GLU:O	1:B:422:LYS:HG3	2.18	0.44
1:B:426:PRO:HG2	1:B:427:GLU:H	1.82	0.44
1:B:261:LYS:HG3	1:B:262:ILE:N	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:263:LYS:O	1:A:264:PHE:HD1	2.01	0.44
1:A:411:ASP:OD2	1:A:411:ASP:C	2.61	0.44
1:B:317:LEU:HD21	1:B:406:ILE:HD13	1.99	0.44
1:A:222:TYR:CE2	1:A:381:ASP:HB3	2.53	0.44
1:A:384:LEU:O	1:A:388:ILE:HG12	2.18	0.43
1:B:228:LEU:HD13	1:B:333:LEU:CD2	2.48	0.43
1:A:335:ASN:C	1:A:335:ASN:OD1	2.61	0.43
1:B:307:VAL:HG23	1:B:308:ASN:N	2.33	0.43
1:A:267:ILE:HD12	1:A:275:LYS:HB2	1.99	0.43
1:A:330:LEU:O	1:A:334:MET:HG3	2.18	0.43
1:A:374:PHE:C	1:A:376:ALA:H	2.26	0.43
1:A:459:THR:OG1	1:A:460:GLU:N	2.51	0.43
1:A:363:PHE:CZ	1:A:452:LEU:HD22	2.53	0.43
1:A:265:LYS:NZ	1:A:265:LYS:CB	2.78	0.43
1:B:336:LYS:HE2	1:B:337:ASP:CG	2.42	0.43
1:B:250:TYR:HB3	1:B:349:THR:HG21	2.01	0.43
1:B:251:ASP:O	1:B:253:ASN:N	2.51	0.43
1:A:359:PRO:HG2	1:A:360:PHE:CD1	2.54	0.43
1:A:255:LEU:HD21	1:A:277:VAL:HG23	2.01	0.43
1:B:307:VAL:O	1:B:309:LEU:N	2.51	0.43
1:A:243:ASP:O	1:A:244:LYS:HG2	2.19	0.43
1:B:237:LEU:HD23	1:B:237:LEU:HA	1.84	0.43
1:B:393:LEU:HD13	1:B:393:LEU:HA	1.80	0.43
1:A:452:LEU:HD23	1:A:452:LEU:O	2.19	0.42
1:B:230:LYS:O	1:B:231:ALA:C	2.61	0.42
1:B:248:VAL:CG1	1:B:249:ILE:N	2.82	0.42
1:B:292:ALA:O	1:B:296:ILE:HG13	2.19	0.42
1:B:336:LYS:HE2	1:B:337:ASP:OD2	2.19	0.42
1:A:271:GLN:CG	1:A:272:GLU:N	2.80	0.42
1:A:220:ASP:OD2	1:A:224:LYS:HE3	2.18	0.42
1:A:228:LEU:HD13	1:A:232:LYS:HD3	2.01	0.42
1:A:237:LEU:C	1:A:239:GLY:H	2.28	0.42
1:B:389:ALA:HB1	1:B:413:LEU:HD13	2.00	0.42
1:B:438:LYS:HB2	1:B:438:LYS:HE2	1.85	0.42
1:A:237:LEU:HG	1:A:340:LEU:HD11	2.02	0.42
1:A:286:GLN:HE22	1:A:465:LEU:HA	1.83	0.42
1:A:348:MET:SD	1:A:353:LEU:HD21	2.60	0.42
1:B:227:PRO:CD	1:B:295:GLU:OE2	2.67	0.42
1:B:327:TYR:N	1:B:327:TYR:CD1	2.87	0.42
1:B:256:MET:O	1:B:257:MET:CB	2.66	0.42
1:B:286:GLN:O	1:B:289:SER:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:307:VAL:O	1:B:314:GLN:NE2	2.53	0.42
1:A:234:ARG:HD2	3:A:624:HOH:O	2.20	0.42
1:A:264:PHE:C	1:A:266:HIS:H	2.27	0.42
1:B:237:LEU:O	1:B:238:THR:C	2.62	0.42
1:A:271:GLN:HG3	1:A:272:GLU:N	2.35	0.42
1:A:271:GLN:O	1:A:272:GLU:C	2.63	0.41
1:B:226:PHE:HA	1:B:227:PRO:HD3	1.77	0.41
1:B:451:GLN:HE22	1:B:452:LEU:HG	1.84	0.41
1:A:365:GLU:OE1	1:A:365:GLU:HA	2.20	0.41
1:B:434:LYS:HA	1:B:437:GLN:HG2	2.03	0.41
2:A:501:AXY:H15	3:A:687:HOH:O	2.21	0.41
1:B:443:ARG:NH1	3:B:507:HOH:O	2.53	0.41
1:A:212:ARG:HD3	1:A:419:LEU:CD2	2.51	0.41
1:B:267:ILE:CG1	1:B:268:THR:N	2.83	0.41
1:B:271:GLN:HE21	1:B:271:GLN:HA	1.85	0.41
1:A:323:HIS:HA	1:A:326:ILE:HB	2.02	0.41
1:B:451:GLN:HE21	1:B:451:GLN:HB3	1.61	0.41
1:A:324:GLU:HB3	1:A:442:LEU:HD13	2.03	0.41
1:A:348:MET:HE3	1:A:348:MET:HB2	1.97	0.41
1:B:215:ALA:HB1	1:B:386:ILE:HD11	2.03	0.41
1:B:224:LYS:HA	1:B:224:LYS:HD3	1.91	0.41
1:B:278:ALA:HB1	1:B:360:PHE:CD2	2.55	0.41
1:A:212:ARG:O	1:A:215:ALA:HB3	2.21	0.41
1:B:261:LYS:O	1:B:262:ILE:CB	2.68	0.41
1:B:269:PRO:HA	3:B:564:HOH:O	2.21	0.41
1:A:380:ASP:OD1	1:A:380:ASP:C	2.64	0.40
1:B:343:GLU:HG3	1:B:343:GLU:O	2.20	0.40
1:B:386:ILE:HD12	1:B:420:GLN:HG2	2.02	0.40
1:A:373:LYS:HG2	1:A:373:LYS:H	1.68	0.40
1:A:386:ILE:O	1:A:389:ALA:HB3	2.21	0.40
1:A:397:ARG:HA	1:A:398:PRO:HD3	1.83	0.40
1:A:230:LYS:CE	3:A:667:HOH:O	2.67	0.40
1:A:362:ASP:HB2	3:A:625:HOH:O	2.20	0.40
1:B:251:ASP:O	1:B:254:SER:N	2.53	0.40
1:B:361:GLY:C	1:B:363:PHE:N	2.80	0.40
1:A:307:VAL:HA	1:A:314:GLN:OE1	2.22	0.40
1:B:340:LEU:O	1:B:341:ILE:HD12	2.22	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	266/287 (93%)	228 (86%)	28 (10%)	10 (4%)	2	3
1	B	265/287 (92%)	215 (81%)	30 (11%)	20 (8%)	1	0
All	All	531/574 (92%)	443 (83%)	58 (11%)	30 (6%)	1	1

All (30) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	239	GLY
1	A	240	LYS
1	A	269	PRO
1	A	272	GLU
1	A	394	SER
1	B	237	LEU
1	B	242	THR
1	B	466	HIS
1	B	238	THR
1	B	308	ASN
1	B	342	SER
1	B	394	SER
1	B	424	ASN
1	A	209	ALA
1	A	275	LYS
1	B	263	LYS
1	B	362	ASP
1	B	459	THR
1	B	464	SER
1	A	242	THR
1	A	459	THR
1	B	252	MET
1	B	275	LYS
1	B	357	ARG
1	B	232	LYS

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Mol	Chain	Res	Type
1	B	260	ASP
1	B	262	ILE
1	B	272	GLU
1	A	426	PRO
1	B	267	ILE

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	241/258 (93%)	223 (92%)	18 (8%)	12	26
1	B	240/258 (93%)	218 (91%)	22 (9%)	8	19
All	All	481/516 (93%)	441 (92%)	40 (8%)	10	22

All (40) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	221	SER
1	A	241	THR
1	A	251	ASP
1	A	252	MET
1	A	265	LYS
1	A	271	GLN
1	A	298	GLU
1	A	304	PRO
1	A	307	VAL
1	A	351	GLU
1	A	377	LEU
1	A	396	ASP
1	A	402	ASN
1	A	427	GLU
1	A	441	ASP
1	A	453	LEU
1	A	458	LYS
1	A	471	GLU

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Mol	Chain	Res	Type
1	B	207	GLU
1	B	212	ARG
1	B	221	SER
1	B	225	SER
1	B	228	LEU
1	B	251	ASP
1	B	253	ASN
1	B	263	LYS
1	B	265	LYS
1	B	318	LEU
1	B	322	VAL
1	B	330	LEU
1	B	336	LYS
1	B	341	ILE
1	B	382	SER
1	B	393	LEU
1	B	411	ASP
1	B	430	GLN
1	B	443	ARG
1	B	444	GLN
1	B	451	GLN
1	B	469	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (22) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	271	GLN
1	A	286	GLN
1	A	308	ASN
1	A	312	ASN
1	A	402	ASN
1	A	415	GLN
1	A	430	GLN
1	A	451	GLN
1	A	454	GLN
1	A	470	GLN
1	B	217	HIS
1	B	253	ASN
1	B	271	GLN
1	B	323	HIS
1	B	345	GLN
1	B	412	ASN

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Mol	Chain	Res	Type
1	B	424	ASN
1	B	437	GLN
1	B	444	GLN
1	B	449	HIS
1	B	451	GLN
1	B	470	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains [i](#)

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

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	AXY	A	501	-	33,33,33	1.43	3 (9%)	43,44,44	1.15	2 (4%)

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	AXY	A	501	-	-	0/20/20/20	0/4/4/4

All (3) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	501	AXY	CAU-CAX	-5.03	1.39	1.51
2	A	501	AXY	CBA-CBC	-4.18	1.39	1.49
2	A	501	AXY	CBB-CAZ	-3.96	1.39	1.49

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	501	AXY	CAY-OAV-CBD	-5.03	111.55	118.49
2	A	501	AXY	OAB-CAW-CBD	-2.96	116.46	122.85

There are no chirality outliers.

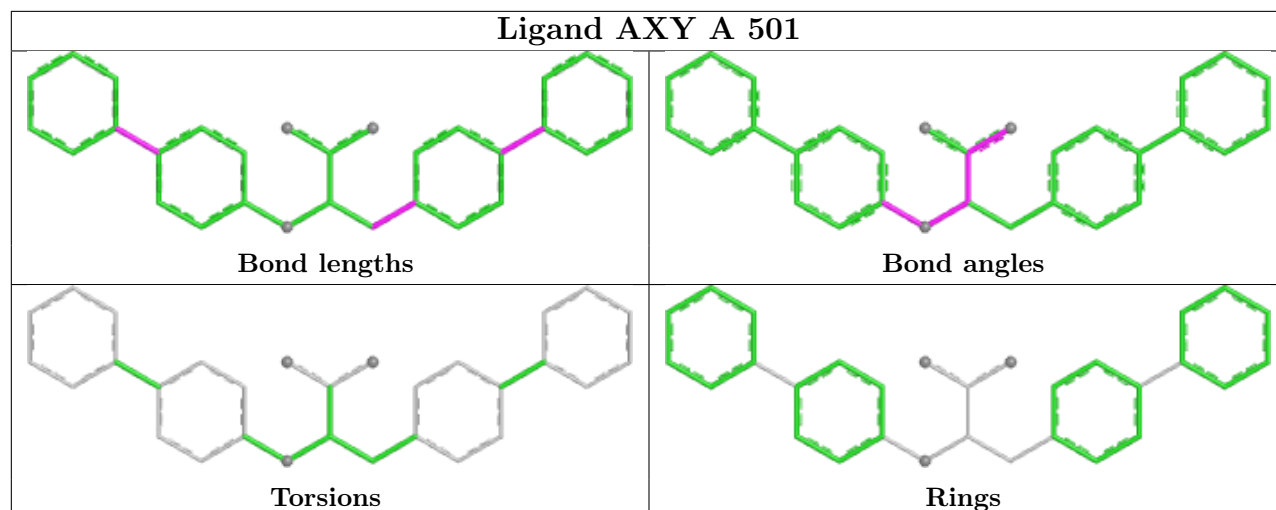
There are no torsion outliers.

There are no ring outliers.

1 monomer is involved in 8 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	501	AXY	8	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 than 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.



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	268/287 (93%)	0.86	35 (13%) 7 6	22, 47, 113, 130	0
1	B	264/287 (91%)	0.89	36 (13%) 7 5	22, 47, 119, 135	1 (0%)
All	All	532/574 (92%)	0.87	71 (13%) 7 6	22, 47, 116, 135	1 (0%)

All (71) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	461	THR	5.3
1	B	271	GLN	5.2
1	B	267	ILE	4.7
1	B	268	THR	4.7
1	A	459	THR	4.3
1	A	270	LEU	4.3
1	B	269	PRO	4.1
1	A	258	GLY	3.7
1	A	269	PRO	3.6
1	A	284	GLY	3.6
1	A	263	LYS	3.5
1	A	271	GLN	3.4
1	B	241	THR	3.3
1	B	273	GLN	3.0
1	A	265	LYS	3.0
1	B	270	LEU	2.9
1	A	243	ASP	2.9
1	B	462	ASP	2.9
1	B	278	ALA	2.9
1	A	262	ILE	2.9
1	A	268	THR	2.9
1	B	454	GLN	2.9
1	B	279	ILE	2.8
1	B	450	VAL	2.8

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Mol	Chain	Res	Type	RSRZ
1	A	239	GLY	2.7
1	A	259	GLU	2.7
1	B	456	ILE	2.7
1	A	261	LYS	2.6
1	B	274	SER	2.6
1	B	239	GLY	2.6
1	B	446	VAL	2.6
1	A	253	ASN	2.5
1	B	275	LYS	2.5
1	B	457	LYS	2.5
1	A	274	SER	2.5
1	B	459	THR	2.5
1	A	280	ARG	2.5
1	B	358	LYS	2.4
1	B	451	GLN	2.4
1	B	363	PHE	2.4
1	A	342	SER	2.4
1	A	355	SER	2.4
1	A	279	ILE	2.4
1	A	260	ASP	2.4
1	A	272	GLU	2.4
1	A	456	ILE	2.4
1	B	262	ILE	2.4
1	A	283	GLN	2.4
1	A	241	THR	2.3
1	B	465	LEU	2.3
1	A	457	LYS	2.3
1	B	276	GLU	2.3
1	B	265	LYS	2.3
1	A	294	GLN	2.3
1	B	242	THR	2.3
1	A	266	HIS	2.3
1	B	466	HIS	2.3
1	A	264	PHE	2.3
1	A	257	MET	2.2
1	B	257	MET	2.2
1	B	463	MET	2.2
1	A	273	GLN	2.2
1	B	427	GLU	2.1
1	A	267	ILE	2.1
1	B	207	GLU	2.1
1	B	266	HIS	2.1

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Mol	Chain	Res	Type	RSRZ
1	A	282	PHE	2.1
1	A	463	MET	2.0
1	B	470	GLN	2.0
1	B	272	GLU	2.0
1	A	461	THR	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](#)

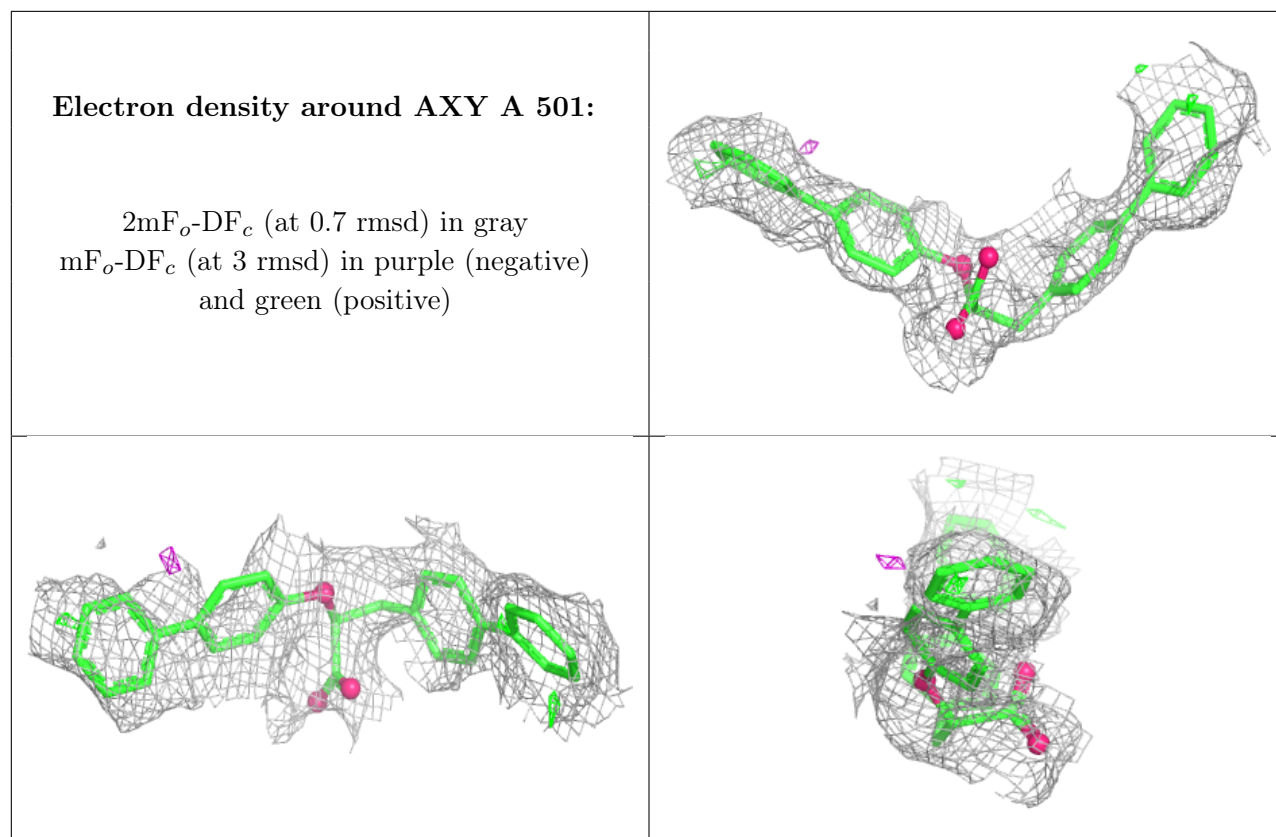
There are no oligosaccharides in this entry.

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, 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($\text{\AA}^2$)	Q<0.9
2	AXY	A	501	30/30	0.62	0.18	83,85,89,91	30

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.



6.5 Other polymers [i](#)

There are no such residues in this entry.