



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 9, 2026 – 10:36 AM UTC

PDB ID : 3CEJ / pdb_00003cej
Title : Human glycogen phosphorylase (tense state) in complex with the allosteric inhibitor AVE2865
Authors : Wendt, K.U.; Dreyer, M.K.; Anderka, O.; Klabunde, T.; Loenze, P.; Defossa, E.; Schmoll, D.
Deposited on : 2008-02-29
Resolution : 3.30 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

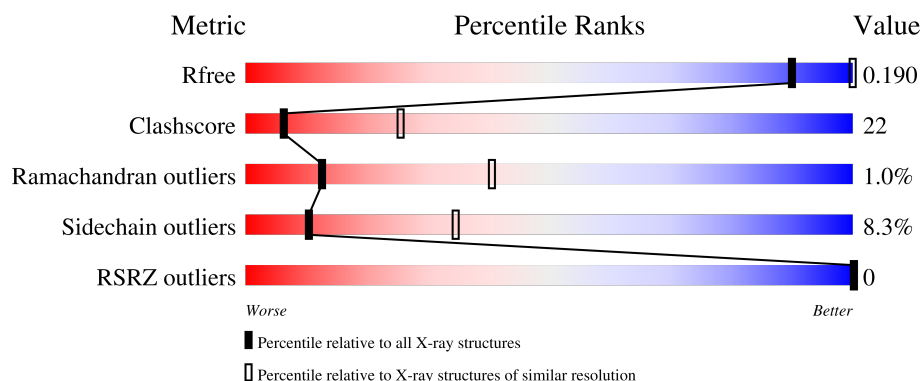
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION



The reported resolution of this entry is 3.30 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	1169 (3.32-3.28)
Clashscore	190562	1209 (3.32-3.28)
Ramachandran outliers	187476	1188 (3.32-3.28)
Sidechain outliers	187428	1187 (3.32-3.28)
RSRZ outliers	180081	1169 (3.32-3.28)

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	809	
1	B	809	

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
3	PLP	A	832	-	-	X	-

2 Entry composition [i](#)

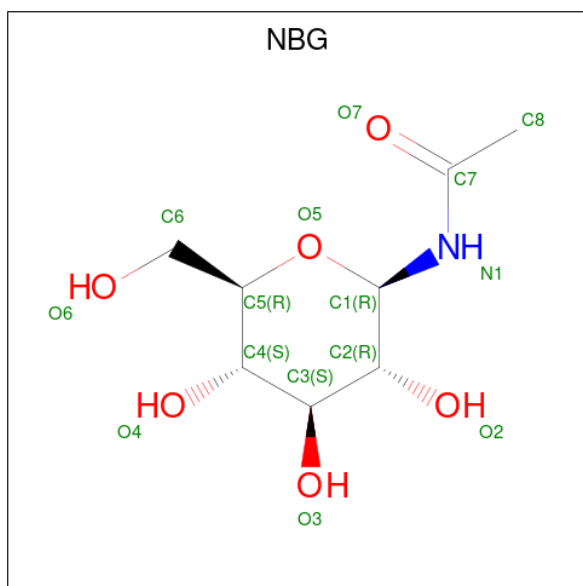
There are 5 unique types of molecules in this entry. The entry contains 13095 atoms, of which 0 are hydrogens and 0 are deuteriums.

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 Glycogen phosphorylase, liver form.

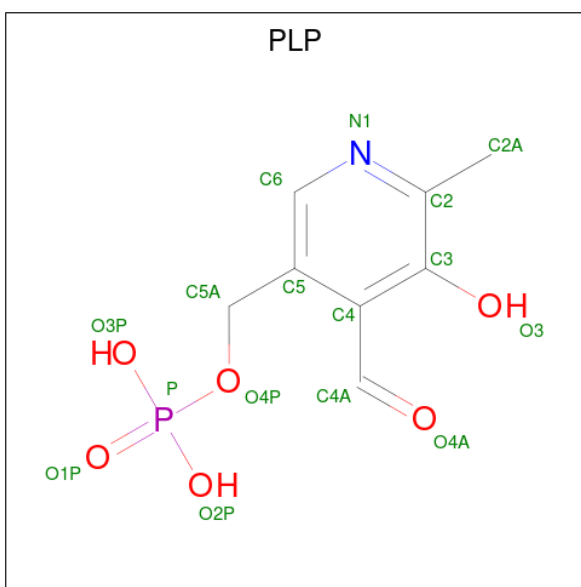
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	790	Total	C	N	O	S	0	0	0
			6415	4123	1088	1175	29			
1	B	790	Total	C	N	O	S	0	0	0
			6415	4123	1088	1175	29			

- Molecule 2 is N-acetyl-beta-D-glucopyranosylamine (CCD ID: NBG) (formula: $C_8H_{15}NO_6$).



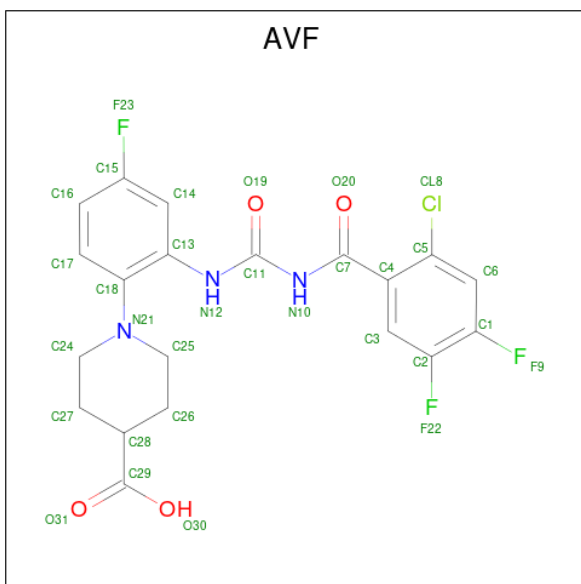
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
2	A	1	Total	C	N	O	0	0
			15	8	1	6		
2	B	1	Total	C	N	O	0	0
			15	8	1	6		

- Molecule 3 is PYRIDOXAL-5'-PHOSPHATE (CCD ID: PLP) (formula: $C_8H_{10}NO_6P$).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
3	A	1	Total	C	N	O	P	0	0
			16	8	1	6	1		
3	B	1	Total	C	N	O	P	0	0
			16	8	1	6	1		

- Molecule 4 is 1-{2-[3-(2-Chloro-4,5-difluoro-benzoyl)-ureido]-4-fluoro-phenyl}-piperidine-4-carboxylic acid (CCD ID: AVF) (formula: $C_{20}H_{17}ClF_3N_3O_4$).



Mol	Chain	Residues	Atoms						ZeroOcc	AltConf
4	A	1	Total	C	Cl	F	N	O	0	0
			31	20	1	3	3	4		

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Mol	Chain	Residues	Atoms						ZeroOcc	AltConf
4	B	1	Total	C	Cl	F	N	O	0	0
			31	20	1	3	3	4		

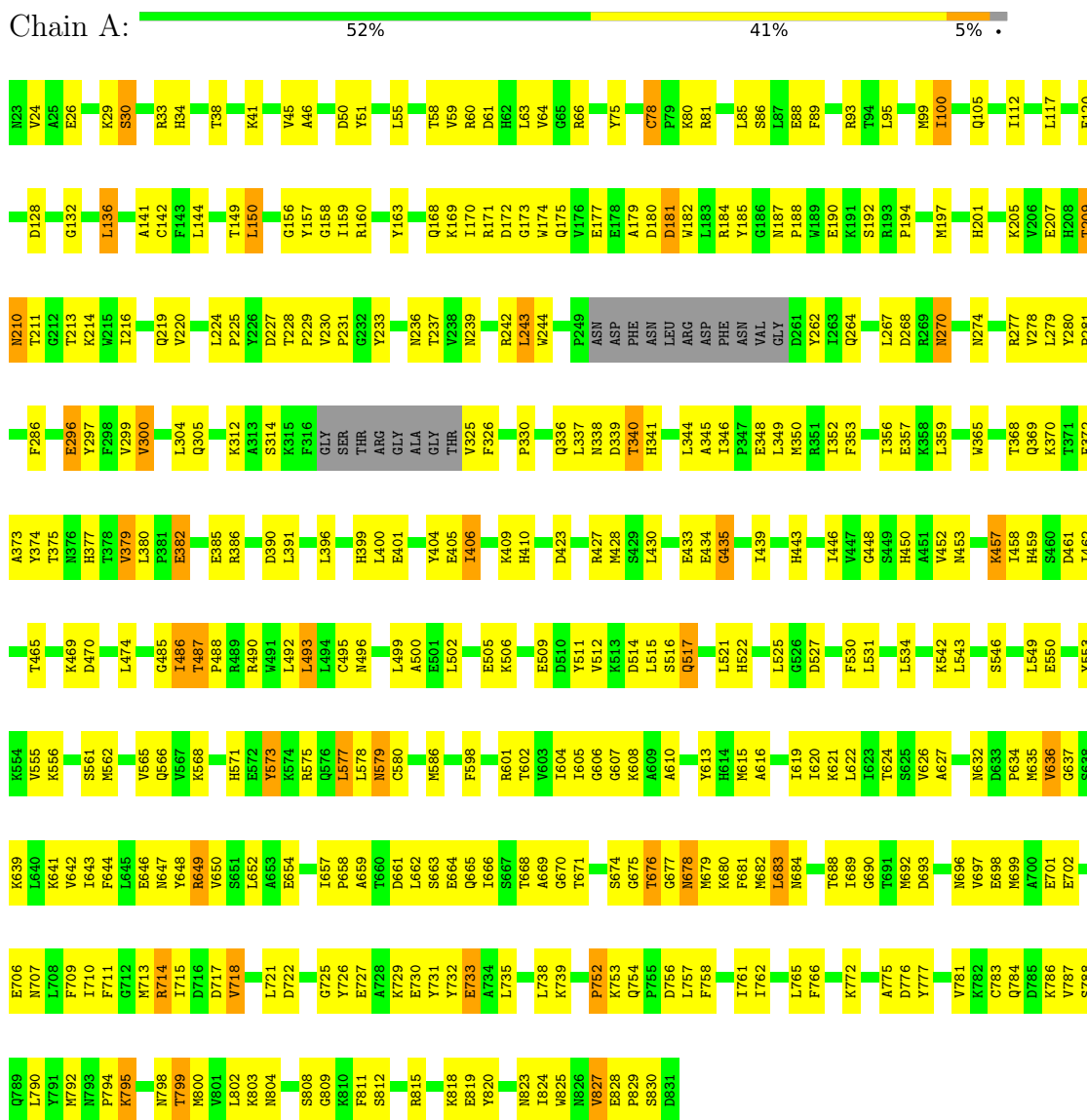
- Molecule 5 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	A	63	Total	O	0	0
			63	63		
5	B	78	Total	O	0	0
			78	78		

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: Glycogen phosphorylase, liver form



- Molecule 1: Glycogen phosphorylase, liver form





4 Data and refinement statistics

Property	Value	Source
Space group	P 31	Depositor
Cell constants a, b, c, α , β , γ	123.27Å 123.27Å 121.88Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	19.47 – 3.30 19.47 – 3.30	Depositor EDS
% Data completeness (in resolution range)	81.2 (19.47-3.30) 81.2 (19.47-3.30)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.46 (at 3.29Å)	Xtriage
Refinement program	REFMAC 5.2.0019	Depositor
R, R_{free}	0.176 , 0.271 0.182 , 0.190	Depositor DCC
R_{free} test set	1243 reflections (3.98%)	wwPDB-VP
Wilson B-factor (Å ²)	65.4	Xtriage
Anisotropy	0.126	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.32 , 37.1	EDS
L-test for twinning ²	$\langle L \rangle = 0.40$, $\langle L^2 \rangle = 0.23$	Xtriage
Estimated twinning fraction	0.074 for -h,-k,l 0.185 for h,-h-k,-l 0.078 for -k,-h,-l	Xtriage
F_o, F_c correlation	0.97	EDS
Total number of atoms	13095	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 3.98% 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 [i](#)

5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: NBG, AVF, PLP

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	0.59	0/6559	0.93	4/8869 (0.0%)
1	B	0.59	1/6559 (0.0%)	0.94	8/8869 (0.1%)
All	All	0.59	1/13118 (0.0%)	0.94	12/17738 (0.1%)

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	125	ILE	CA-CB	5.09	1.60	1.54

All (12) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	187	ASN	CA-C-N	8.63	128.28	119.82
1	B	187	ASN	C-N-CA	8.63	128.28	119.82
1	B	690	GLY	N-CA-C	6.10	119.41	110.38
1	A	676	THR	N-CA-C	-5.92	106.39	113.97
1	A	517	GLN	N-CA-C	-5.35	106.91	113.50
1	A	78	CYS	CA-C-N	-5.27	115.30	120.52
1	A	78	CYS	C-N-CA	-5.27	115.30	120.52
1	B	653	ALA	N-CA-C	-5.12	105.61	111.14
1	B	735	LEU	CA-C-N	5.12	124.57	119.24
1	B	735	LEU	C-N-CA	5.12	124.57	119.24
1	B	487	THR	CA-C-N	5.03	125.71	120.12
1	B	487	THR	C-N-CA	5.03	125.71	120.12

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	6415	0	6411	287	0
1	B	6415	0	6409	286	0
2	A	15	0	15	0	0
2	B	15	0	15	0	0
3	A	16	0	8	8	0
3	B	16	0	6	2	0
4	A	31	0	16	3	0
4	B	31	0	16	6	0
5	A	63	0	0	8	0
5	B	78	0	0	11	0
All	All	13095	0	12896	573	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 22.

All (573) 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:680:LYS:NZ	3:A:832:PLP:H4A	0.91	1.23
1:A:680:LYS:HZ2	3:A:832:PLP:C4A	1.50	1.10
1:A:64:VAL:HG13	1:B:40:VAL:HG13	1.35	1.08
1:A:682:MET:HE3	1:A:699:MET:HE3	1.38	1.02
1:A:713:MET:HB2	1:A:717:ASP:HB2	1.41	1.02
1:B:88:GLU:HG2	1:B:132:GLY:HA2	1.47	0.95
1:B:184:ARG:HG3	1:B:184:ARG:HH11	1.32	0.95
1:A:120:GLU:HG2	5:A:886:HOH:O	1.69	0.93
1:B:168:GLN:HG3	1:B:175:GLN:HG3	1.50	0.92
1:A:675:GLY:HA3	1:A:678:ASN:HD21	1.32	0.91
1:B:160:ARG:HB2	1:B:243:LEU:HB3	1.50	0.90
1:B:274:ASN:HD22	1:B:277:ARG:HE	1.14	0.90
1:B:34:HIS:CE1	1:B:57:HIS:HB3	2.07	0.90
1:B:410:HIS:HE1	1:B:428:MET:O	1.55	0.90
1:A:575:ARG:NH2	1:A:776:ASP:HB2	1.88	0.89
1:A:680:LYS:HZ1	3:A:832:PLP:C4A	1.65	0.89
1:A:428:MET:HE1	1:A:474:LEU:HD22	1.56	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:455:VAL:H	1:B:459:HIS:HD2	1.20	0.88
1:A:100:ILE:HG13	1:A:105:GLN:OE1	1.75	0.87
1:A:181:ASP:OD2	1:A:184:ARG:HB2	1.74	0.87
1:A:649:ARG:HG2	1:A:649:ARG:HH11	1.40	0.87
1:A:680:LYS:HZ3	3:A:832:PLP:H4A	1.36	0.87
1:A:680:LYS:HZ1	3:A:832:PLP:H4A	1.07	0.86
1:B:507:ILE:HG12	1:B:507:ILE:O	1.77	0.84
1:B:599:VAL:HB	5:B:884:HOH:O	1.77	0.83
1:A:274:ASN:ND2	1:A:277:ARG:HE	1.75	0.83
1:B:274:ASN:ND2	1:B:277:ARG:HE	1.74	0.83
1:A:714:ARG:HH11	1:A:714:ARG:CG	1.90	0.83
1:A:550:GLU:HA	5:A:863:HOH:O	1.82	0.79
1:A:713:MET:HB2	1:A:717:ASP:CB	2.12	0.79
1:A:575:ARG:HH22	1:A:776:ASP:HB2	1.48	0.78
1:B:714:ARG:N	1:B:714:ARG:HD2	1.97	0.78
1:A:515:LEU:C	1:A:517:GLN:H	1.92	0.78
1:B:680:LYS:O	1:B:682:MET:N	2.18	0.77
1:A:777:TYR:O	1:A:781:VAL:HG23	1.84	0.77
1:B:308:ILE:HD13	1:B:352:ILE:HG21	1.66	0.76
1:A:665:GLN:HB2	1:A:696:ASN:HD21	1.50	0.76
1:A:682:MET:CE	1:A:699:MET:HE3	2.17	0.75
1:A:29:LYS:HB3	1:A:33:ARG:HH12	1.52	0.75
1:B:535:ALA:HB2	1:B:798:ASN:HD21	1.52	0.74
1:A:75:TYR:HA	1:A:81:ARG:HH22	1.53	0.74
1:A:756:ASP:O	1:A:758:PHE:N	2.21	0.74
1:B:329:PHE:HB3	1:B:330:PRO:HD3	1.69	0.74
1:B:78:CYS:SG	1:B:314:SER:HB2	2.27	0.74
1:B:55:LEU:HD22	1:B:122:LEU:HD12	1.69	0.73
1:A:30:SER:HB3	1:A:58:THR:HG23	1.69	0.73
1:A:729:LYS:O	1:A:733:GLU:HG2	1.89	0.73
1:B:184:ARG:HG3	1:B:184:ARG:NH1	2.03	0.73
1:B:455:VAL:H	1:B:459:HIS:CD2	2.06	0.73
1:B:93:ARG:HB3	1:B:126:GLU:OE1	1.89	0.73
1:A:168:GLN:HB3	1:A:647:ASN:HA	1.69	0.73
1:B:39:LEU:HD12	1:B:50:ASP:OD1	1.89	0.73
1:B:665:GLN:HB2	1:B:696:ASN:HD21	1.54	0.72
1:A:325:VAL:HB	5:A:853:HOH:O	1.91	0.71
1:B:665:GLN:CB	1:B:696:ASN:HD21	2.03	0.71
4:A:833:AVF:O19	4:A:833:AVF:H14	1.89	0.71
1:A:575:ARG:HB3	1:A:578:LEU:HB3	1.73	0.70
1:B:29:LYS:O	1:B:33:ARG:HB2	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:493:LEU:HD11	1:A:512:VAL:HG11	1.74	0.70
1:B:649:ARG:HG2	1:B:649:ARG:HH11	1.56	0.70
1:B:410:HIS:CE1	1:B:428:MET:O	2.43	0.70
1:A:649:ARG:HG2	1:A:649:ARG:NH1	2.07	0.69
1:A:495:CYS:HB2	1:A:654:GLU:O	1.92	0.69
1:B:657:ILE:HB	1:B:658:PRO:HD3	1.74	0.69
1:B:213:THR:HG21	1:B:398:ARG:NH2	2.08	0.69
1:A:622:LEU:HD23	1:A:626:VAL:HG23	1.75	0.69
1:B:777:TYR:O	1:B:781:VAL:HG23	1.93	0.68
1:B:713:MET:HB2	1:B:717:ASP:HB2	1.74	0.68
1:B:554:LYS:O	1:B:554:LYS:HG3	1.94	0.68
1:A:515:LEU:O	1:A:517:GLN:N	2.27	0.67
1:B:615:MET:HE3	1:B:615:MET:HA	1.75	0.67
1:A:675:GLY:HA3	1:A:678:ASN:ND2	2.09	0.67
1:A:714:ARG:HH11	1:A:714:ARG:HG3	1.60	0.67
1:B:174:TRP:CE2	1:B:621:LYS:HG3	2.30	0.67
1:A:515:LEU:HB3	5:A:842:HOH:O	1.93	0.66
1:B:606:GLY:HA3	1:B:645:LEU:HB2	1.77	0.66
1:B:193:ARG:HB2	1:B:225:PRO:HG2	1.78	0.66
1:B:89:PHE:HD1	5:B:900:HOH:O	1.76	0.66
1:A:613:TYR:HE1	1:A:615:MET:HB3	1.61	0.66
1:B:405:GLU:OE1	1:B:405:GLU:HA	1.93	0.66
1:A:88:GLU:HG2	1:A:132:GLY:HA2	1.77	0.65
1:A:149:THR:HG23	1:A:233:TYR:HB3	1.77	0.65
1:A:330:PRO:HB3	1:A:370:LYS:HB3	1.78	0.65
1:A:732:TYR:CE1	1:A:739:LYS:HG3	2.31	0.65
1:A:230:VAL:HB	1:A:239:ASN:HB2	1.79	0.64
1:B:566:GLN:HE22	1:B:579:ASN:HB2	1.62	0.64
1:B:577:LEU:O	1:B:581:LEU:HG	1.97	0.64
1:A:714:ARG:HH11	1:A:714:ARG:HG2	1.62	0.64
1:B:85:LEU:HD21	1:B:300:VAL:HG22	1.78	0.64
1:B:680:LYS:O	1:B:683:LEU:N	2.29	0.64
1:B:149:THR:HA	1:B:235:ASN:ND2	2.12	0.64
1:A:553:TYR:OH	1:A:646:GLU:HG3	1.98	0.64
1:B:455:VAL:N	1:B:459:HIS:HD2	1.93	0.64
1:B:72:GLN:HG3	4:B:833:AVF:C16	2.29	0.63
1:B:428:MET:SD	1:B:470:ASP:HB3	2.37	0.63
1:B:680:LYS:O	1:B:681:PHE:C	2.42	0.63
1:B:754:GLN:HB3	1:B:757:LEU:HB2	1.79	0.63
1:A:225:PRO:HB3	1:A:244:TRP:CZ3	2.33	0.63
1:A:262:TYR:OH	1:B:166:PHE:HB3	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:726:TYR:HE1	1:A:775:ALA:HB2	1.64	0.63
1:B:224:LEU:HD12	1:B:225:PRO:HD2	1.81	0.63
1:A:149:THR:CG2	1:A:233:TYR:HB3	2.28	0.63
1:B:692:MET:HE2	1:B:710:ILE:HG21	1.79	0.63
1:B:457:LYS:O	1:B:461:ASP:HB2	1.99	0.63
1:B:197:MET:HE1	1:B:247:ARG:HD3	1.81	0.63
1:A:326:PHE:CE1	1:A:357:GLU:HG3	2.34	0.62
1:A:573:TYR:CD1	1:A:671:THR:HB	2.35	0.62
1:A:142:CYS:SG	1:A:487:THR:HG22	2.40	0.62
1:A:60:ARG:HD3	1:A:188:PRO:O	2.00	0.61
1:B:751:SER:HB2	1:B:754:GLN:O	2.00	0.61
1:B:482:LYS:HE2	1:B:824:ILE:HD12	1.80	0.61
1:B:543:LEU:O	1:B:547:GLN:HG3	2.00	0.61
1:B:525:LEU:HD21	1:B:803:LYS:HG2	1.81	0.61
1:B:593:ASP:HB3	5:B:894:HOH:O	2.00	0.61
1:A:336:GLN:OE1	1:A:373:ALA:HB3	2.01	0.61
3:B:832:PLP:O4A	3:B:832:PLP:H5A1	2.01	0.61
1:A:515:LEU:HD22	1:A:812:SER:HB2	1.83	0.61
1:B:665:GLN:NE2	1:B:678:ASN:HA	2.15	0.61
1:A:169:LYS:HB3	1:A:171:ARG:HD3	1.83	0.61
1:A:446:ILE:HG12	1:A:452:VAL:HG21	1.82	0.61
1:A:136:LEU:HD12	1:A:377:HIS:CG	2.36	0.61
1:A:174:TRP:CZ2	1:A:621:LYS:HG3	2.36	0.61
1:A:209:THR:OG1	1:A:210:ASN:N	2.27	0.61
1:B:449:SER:O	1:B:478:LYS:HE2	2.01	0.60
1:B:789:GLN:HA	1:B:792:MET:HE2	1.83	0.60
1:A:168:GLN:HB3	1:A:647:ASN:CA	2.31	0.60
1:B:496:ASN:HD22	1:B:658:PRO:HB3	1.66	0.60
1:A:278:VAL:HB	1:B:266:VAL:HG11	1.83	0.60
1:A:608:LYS:HE3	1:A:648:TYR:O	2.02	0.60
1:B:410:HIS:HD2	5:B:889:HOH:O	1.83	0.60
1:A:29:LYS:CB	1:A:33:ARG:HH12	2.14	0.60
1:A:274:ASN:HD22	1:A:277:ARG:HE	1.46	0.60
1:A:677:GLY:HA2	1:A:680:LYS:HD2	1.83	0.60
1:A:184:ARG:HD2	1:A:185:TYR:CZ	2.36	0.60
1:A:304:LEU:HD22	1:A:349:LEU:HD13	1.83	0.60
1:A:647:ASN:O	1:A:649:ARG:NH1	2.35	0.60
1:A:136:LEU:HD12	1:A:377:HIS:CD2	2.36	0.60
1:A:692:MET:HE2	1:A:710:ILE:HG21	1.84	0.60
1:B:74:TYR:OH	1:B:239:ASN:ND2	2.33	0.60
1:B:174:TRP:CZ2	1:B:621:LYS:HG3	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:662:LEU:HD22	1:B:787:VAL:HG11	1.82	0.60
1:A:457:LYS:NZ	1:A:701:GLU:OE2	2.27	0.59
1:B:567:VAL:HA	1:B:606:GLY:O	2.01	0.59
1:A:731:TYR:O	1:A:735:LEU:HB2	2.02	0.59
1:B:41:LYS:HD2	1:B:46:ALA:HA	1.84	0.59
1:A:80:LYS:HB3	1:A:827:VAL:HG13	1.84	0.59
1:A:615:MET:O	1:A:619:ILE:HG13	2.03	0.59
1:B:499:LEU:HD22	1:B:503:ILE:HD11	1.83	0.59
1:A:243:LEU:HB2	5:A:834:HOH:O	2.01	0.58
1:B:138:ARG:HH22	1:B:490:ARG:HH11	1.52	0.58
1:B:714:ARG:HD2	1:B:714:ARG:H	1.69	0.58
1:B:410:HIS:CD2	5:B:889:HOH:O	2.55	0.58
1:B:713:MET:HB2	1:B:717:ASP:CB	2.33	0.58
1:B:542:LYS:HA	1:B:659:ALA:HB1	1.84	0.58
1:B:387:TRP:HD1	1:B:441:MET:HG3	1.69	0.58
1:B:506:LYS:HD2	1:B:524:PHE:CE2	2.39	0.58
1:B:668:THR:OG1	1:B:771:PHE:O	2.15	0.58
1:A:665:GLN:CB	1:A:696:ASN:HD21	2.17	0.58
1:A:514:ASP:O	1:A:517:GLN:HG2	2.03	0.57
1:B:815:ARG:HD2	1:B:815:ARG:C	2.29	0.57
1:A:29:LYS:HB3	1:A:33:ARG:NH1	2.18	0.57
1:A:500:ALA:O	1:A:511:TYR:OH	2.21	0.57
1:B:649:ARG:HG2	1:B:649:ARG:NH1	2.19	0.57
1:A:197:MET:HE1	1:B:184:ARG:HD3	1.86	0.57
1:A:160:ARG:HB2	1:A:243:LEU:HB3	1.86	0.57
1:A:339:ASP:CG	1:A:340:THR:H	2.12	0.57
1:B:565:VAL:HA	1:B:604:ILE:O	2.04	0.57
1:A:493:LEU:HD21	1:A:512:VAL:HG13	1.87	0.57
1:B:729:LYS:O	1:B:733:GLU:HG2	2.04	0.57
1:B:732:TYR:CZ	1:B:739:LYS:HD2	2.40	0.57
1:A:493:LEU:HD21	1:A:512:VAL:CG1	2.35	0.57
1:A:575:ARG:HH22	1:A:776:ASP:CB	2.15	0.56
1:B:430:LEU:HD21	1:B:444:LEU:HA	1.87	0.56
1:B:327:ASP:OD1	1:B:363:LYS:HE2	2.05	0.56
1:B:221:VAL:HG21	1:B:275:ILE:HD12	1.87	0.56
1:A:613:TYR:CE1	1:A:615:MET:HB3	2.41	0.56
1:B:678:ASN:OD1	1:B:679:MET:N	2.39	0.56
1:B:698:GLU:O	1:B:702:GLU:HG2	2.05	0.56
1:A:562:MET:HE1	1:A:601:ARG:HH21	1.71	0.56
1:B:500:ALA:HA	1:B:511:TYR:OH	2.05	0.56
1:A:401:GLU:O	1:A:405:GLU:HB2	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:568:LYS:O	1:A:607:GLY:HA3	2.06	0.55
1:B:564:ASP:HB3	1:B:603:VAL:HA	1.88	0.55
1:A:34:HIS:HE1	1:A:61:ASP:OD2	1.89	0.55
1:A:571:HIS:CD2	1:A:613:TYR:HE2	2.24	0.55
1:B:71:GLN:HG3	4:B:833:AVF:CL8	2.44	0.55
1:B:131:LEU:HD22	1:B:161:TYR:HB2	1.87	0.55
1:B:522:HIS:HD2	1:B:525:LEU:HD11	1.71	0.55
1:B:709:PHE:HE2	1:B:786:LYS:HB3	1.69	0.55
1:A:580:CYS:SG	1:A:622:LEU:HD22	2.46	0.55
1:A:605:ILE:O	1:A:644:PHE:HA	2.06	0.55
1:B:496:ASN:OD1	1:B:499:LEU:HB2	2.07	0.55
1:B:579:ASN:ND2	5:B:868:HOH:O	2.39	0.55
1:B:647:ASN:O	1:B:649:ARG:NH1	2.40	0.55
1:B:149:THR:C	1:B:151:GLY:H	2.14	0.55
1:A:34:HIS:HD2	1:A:38:THR:OG1	1.89	0.55
1:A:93:ARG:O	1:A:490:ARG:NH2	2.39	0.55
1:B:158:GLY:O	1:B:243:LEU:HA	2.07	0.55
1:A:542:LYS:HA	1:A:659:ALA:HB1	1.88	0.54
1:B:538:LYS:HZ2	1:B:660:THR:H	1.53	0.54
1:A:41:LYS:HD3	1:A:45:VAL:HG23	1.88	0.54
1:A:531:LEU:HD22	1:A:798:ASN:HB3	1.89	0.54
1:A:542:LYS:NZ	1:A:561:SER:O	2.36	0.54
1:A:336:GLN:HB2	1:A:825:TRP:HE1	1.73	0.54
1:A:669:ALA:HB3	1:A:718:VAL:HG21	1.90	0.54
1:A:515:LEU:CD2	1:A:812:SER:HB2	2.37	0.54
1:A:709:PHE:HZ	1:A:790:LEU:HD22	1.72	0.54
1:A:280:TYR:CE1	1:B:263:ILE:HG13	2.42	0.54
1:B:535:ALA:HB2	1:B:798:ASN:ND2	2.22	0.54
1:B:34:HIS:HD2	1:B:38:THR:OG1	1.90	0.54
1:B:597:LEU:HG	1:B:597:LEU:O	2.07	0.54
1:B:170:ILE:HG12	1:B:646:GLU:HG2	1.90	0.54
1:B:465:THR:O	1:B:469:LYS:HB2	2.08	0.54
1:A:300:VAL:HG13	1:A:345:ALA:HA	1.89	0.54
1:B:714:ARG:HH11	1:B:714:ARG:HG2	1.73	0.53
1:B:128:ASP:OD2	1:B:651:SER:HB3	2.09	0.53
1:A:485:GLY:O	1:A:486:ILE:HG23	2.08	0.53
1:A:465:THR:O	1:A:469:LYS:HB2	2.08	0.53
1:A:698:GLU:O	1:A:702:GLU:HG2	2.07	0.53
1:B:739:LYS:HG3	1:B:743:ASP:OD2	2.08	0.53
4:A:833:AVF:O19	4:A:833:AVF:C14	2.57	0.53
1:B:76:ASP:O	1:B:315:LYS:HE2	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:248:ALA:HB3	1:B:269:ARG:CZ	2.39	0.53
1:B:330:PRO:HB3	1:B:370:LYS:HB3	1.91	0.53
1:B:369:GLN:HA	1:B:448:GLY:O	2.09	0.53
1:B:709:PHE:CE2	1:B:786:LYS:HB3	2.44	0.53
1:B:354:VAL:O	1:B:358:LYS:HA	2.08	0.53
1:A:792:MET:O	1:A:794:PRO:HD3	2.09	0.53
1:B:507:ILE:O	1:B:507:ILE:CG1	2.54	0.53
1:A:680:LYS:HZ2	3:A:832:PLP:H4A	0.70	0.53
1:B:184:ARG:HH11	1:B:184:ARG:CG	2.15	0.53
1:B:813:SER:O	1:B:817:ILE:HG12	2.09	0.52
1:B:502:LEU:HD11	1:B:533:GLU:HB3	1.91	0.52
1:B:144:LEU:HD13	1:B:230:VAL:HG21	1.92	0.52
1:B:88:GLU:CD	1:B:133:ASN:H	2.17	0.52
1:B:538:LYS:NZ	1:B:660:THR:H	2.08	0.52
1:A:172:ASP:O	1:A:174:TRP:CD1	2.62	0.52
1:A:627:ALA:HA	1:A:642:VAL:HB	1.92	0.52
1:B:89:PHE:HB3	1:B:91:MET:HG2	1.92	0.52
1:B:96:GLN:HE21	1:B:105:GLN:HE22	1.57	0.52
1:B:159:ILE:HG13	1:B:299:VAL:HB	1.92	0.51
1:A:41:LYS:HD2	1:A:46:ALA:HA	1.91	0.51
1:A:297:TYR:HB2	1:A:396:LEU:HD11	1.92	0.51
1:A:346:ILE:HD13	1:A:448:GLY:HA3	1.92	0.51
1:A:527:ASP:OD1	1:A:530:PHE:HB2	2.10	0.51
1:A:159:ILE:HG13	1:A:299:VAL:HB	1.92	0.51
1:A:488:PRO:O	1:A:492:LEU:HB3	2.11	0.51
1:A:99:MET:HB3	1:A:105:GLN:HA	1.92	0.51
1:A:664:GLU:O	1:A:665:GLN:NE2	2.43	0.51
1:B:53:PHE:HE1	1:B:188:PRO:HD3	1.75	0.51
1:B:197:MET:HE2	1:B:222:LEU:HD13	1.92	0.51
1:B:409:LYS:O	1:B:412:ASP:HB2	2.09	0.51
1:B:601:ARG:NH2	1:B:788:SER:OG	2.41	0.51
1:A:267:LEU:HD13	1:B:274:ASN:OD1	2.11	0.51
1:A:496:ASN:OD1	1:A:499:LEU:HB2	2.10	0.51
1:A:521:LEU:HB3	1:A:802:LEU:HD11	1.93	0.51
1:A:738:LEU:HB2	1:A:777:TYR:CE2	2.46	0.51
1:B:578:LEU:O	1:B:579:ASN:C	2.53	0.51
1:B:682:MET:HB2	1:B:699:MET:HE3	1.93	0.51
1:A:158:GLY:O	1:A:243:LEU:HA	2.11	0.50
1:A:577:LEU:HD13	1:A:765:LEU:HD21	1.93	0.50
1:A:809:GLY:HA3	5:A:840:HOH:O	2.11	0.50
1:B:428:MET:HE1	1:B:474:LEU:HD22	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:459:HIS:HA	1:A:462:ILE:HD12	1.93	0.50
1:A:636:VAL:CG2	1:A:637:GLY:N	2.74	0.50
1:B:413:ARG:HA	1:B:413:ARG:NE	2.26	0.50
1:B:566:GLN:NE2	1:B:579:ASN:HB2	2.26	0.50
1:A:546:SER:HA	1:A:549:LEU:HD12	1.94	0.50
1:A:662:LEU:HD22	1:A:787:VAL:HG11	1.94	0.50
1:B:49:ARG:HA	1:B:125:ILE:HG21	1.93	0.50
1:A:46:ALA:HB3	1:A:51:TYR:CZ	2.47	0.50
1:B:374:TYR:CD2	1:B:452:VAL:HG13	2.46	0.50
1:B:593:ASP:CB	5:B:894:HOH:O	2.59	0.50
1:B:691:THR:C	1:B:693:ASP:H	2.20	0.50
1:B:208:HIS:ND1	1:B:213:THR:HB	2.27	0.49
1:A:181:ASP:OD2	1:A:184:ARG:CB	2.55	0.49
1:A:721:LEU:O	1:A:725:GLY:N	2.45	0.49
1:B:67:TRP:CH2	1:B:229:PRO:HD3	2.47	0.49
1:A:669:ALA:HB1	1:A:715:ILE:HA	1.94	0.49
1:A:565:VAL:HG22	1:A:604:ILE:HB	1.94	0.49
1:B:95:LEU:O	1:B:99:MET:HG3	2.13	0.49
1:A:182:TRP:CZ3	1:A:187:ASN:ND2	2.81	0.49
1:B:71:GLN:CG	4:B:833:AVF:CL8	2.98	0.49
1:B:525:LEU:HD23	1:B:802:LEU:HD23	1.95	0.49
1:B:600:PRO:HA	1:B:639:LYS:O	2.13	0.49
1:B:554:LYS:O	1:B:554:LYS:CG	2.60	0.49
1:A:579:ASN:C	1:A:579:ASN:HD22	2.21	0.49
1:B:511:TYR:O	1:B:515:LEU:HA	2.13	0.49
1:B:530:PHE:HE2	1:B:802:LEU:HD13	1.77	0.49
1:A:86:SER:HB3	1:A:89:PHE:CE1	2.47	0.49
1:A:150:LEU:HD21	1:A:818:LYS:HG3	1.93	0.49
1:A:624:THR:O	1:A:627:ALA:HB3	2.12	0.49
1:A:632:ASN:O	1:A:634:PRO:HD3	2.12	0.48
1:A:157:TYR:HE2	1:A:244:TRP:CZ2	2.32	0.48
1:A:423:ASP:O	1:A:427:ARG:HB2	2.13	0.48
1:A:690:GLY:O	1:A:710:ILE:HA	2.13	0.48
1:A:689:ILE:HG12	1:A:711:PHE:CE2	2.49	0.48
1:B:679:MET:O	1:B:680:LYS:C	2.55	0.48
1:A:396:LEU:HB3	1:A:399:HIS:ND1	2.29	0.48
1:B:146:SER:HB2	1:B:817:ILE:HG13	1.95	0.48
1:B:170:ILE:HA	1:B:174:TRP:O	2.14	0.48
1:B:231:PRO:HA	1:B:238:VAL:HG22	1.96	0.48
1:B:679:MET:O	1:B:680:LYS:O	2.31	0.48
1:B:87:LEU:HD22	1:B:299:VAL:HG11	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:721:LEU:HA	1:B:724:LYS:HB3	1.96	0.48
1:A:379:VAL:O	1:A:380:LEU:C	2.57	0.48
1:A:602:THR:HG23	1:A:641:LYS:HB2	1.96	0.48
1:B:346:ILE:CD1	1:B:445:CYS:HA	2.44	0.48
1:A:286:PHE:CD1	1:A:385:GLU:HA	2.49	0.48
1:A:650:VAL:HA	3:A:832:PLP:H2A3	1.96	0.48
1:A:225:PRO:HB3	1:A:244:TRP:CE3	2.49	0.48
1:B:75:TYR:HA	1:B:81:ARG:NH2	2.28	0.48
1:B:669:ALA:HB3	1:B:718:VAL:HG21	1.96	0.48
1:B:304:LEU:HD11	1:B:345:ALA:HB1	1.96	0.48
1:B:522:HIS:HB2	5:B:913:HOH:O	2.13	0.48
1:A:380:LEU:HB3	1:A:382:GLU:OE2	2.14	0.47
1:B:428:MET:CG	1:B:470:ASP:HB3	2.43	0.47
1:B:446:ILE:HD11	1:B:468:PHE:CE2	2.49	0.47
1:B:762:ILE:O	1:B:766:PHE:HD1	1.96	0.47
1:A:168:GLN:HG3	1:A:175:GLN:HG3	1.96	0.47
1:B:80:LYS:HG3	1:B:332:GLN:C	2.39	0.47
1:B:455:VAL:HG23	1:B:674:SER:HB3	1.97	0.47
1:B:181:ASP:OD2	1:B:184:ARG:NH1	2.48	0.47
1:A:190:GLU:HA	1:A:227:ASP:O	2.14	0.47
1:A:522:HIS:O	1:A:525:LEU:HG	2.13	0.47
1:A:799:THR:O	1:A:803:LYS:HG3	2.15	0.47
1:B:293:LEU:HB2	1:B:387:TRP:CZ3	2.49	0.47
1:B:538:LYS:NZ	1:B:658:PRO:O	2.47	0.47
1:A:174:TRP:CE2	1:A:621:LYS:HG3	2.49	0.47
1:A:692:MET:HG3	1:A:697:VAL:HG22	1.96	0.47
1:B:212:GLY:HA3	1:B:358:LYS:HE2	1.96	0.47
1:B:573:TYR:HA	1:B:771:PHE:CG	2.49	0.47
1:A:676:THR:OG1	3:A:832:PLP:O4A	2.31	0.47
1:A:692:MET:HE1	1:A:710:ILE:HG13	1.96	0.47
1:B:30:SER:O	1:B:34:HIS:HB2	2.15	0.47
1:B:340:THR:O	1:B:343:ALA:N	2.48	0.47
1:B:463:VAL:HG13	1:B:468:PHE:HD1	1.80	0.47
1:B:575:ARG:NH2	1:B:776:ASP:HB2	2.30	0.47
4:B:833:AVF:H14	4:B:833:AVF:O19	2.13	0.47
1:A:372:PHE:O	1:A:450:HIS:HD2	1.97	0.47
1:A:772:LYS:HB3	1:A:775:ALA:HB3	1.97	0.47
1:B:213:THR:HG23	1:B:355:ASP:OD2	2.15	0.47
1:B:443:HIS:HA	1:B:446:ILE:HD12	1.97	0.47
1:B:742:ILE:HG23	1:B:762:ILE:HD12	1.97	0.47
1:B:518:LEU:O	1:B:806:ALA:HA	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:665:GLN:HB3	1:B:696:ASN:HD21	1.77	0.47
1:A:180:ASP:O	1:A:182:TRP:N	2.42	0.46
1:A:296:GLU:HB2	1:A:344:LEU:HD12	1.98	0.46
1:A:542:LYS:NZ	1:A:661:ASP:OD2	2.41	0.46
1:A:800:MET:O	1:A:804:ASN:ND2	2.48	0.46
1:B:651:SER:O	1:B:654:GLU:HB2	2.16	0.46
3:B:832:PLP:O4A	3:B:832:PLP:C5A	2.63	0.46
1:A:555:VAL:HG13	1:A:641:LYS:HD2	1.97	0.46
1:B:586:MET:SD	1:B:601:ARG:HD2	2.55	0.46
1:A:410:HIS:HE1	1:A:428:MET:O	1.98	0.46
1:B:711:PHE:CE1	1:B:780:TYR:HB2	2.50	0.46
1:A:157:TYR:HD2	1:A:244:TRP:HE1	1.63	0.46
1:B:42:ASP:OD2	1:B:44:ASN:HB2	2.15	0.46
4:B:833:AVF:HN12	4:B:833:AVF:H24A	1.80	0.46
1:A:229:PRO:O	1:A:231:PRO:HD3	2.15	0.46
1:A:341:HIS:HD2	1:A:385:GLU:OE1	1.98	0.46
1:B:781:VAL:O	1:B:784:GLN:HB2	2.16	0.46
1:A:173:GLY:O	1:A:621:LYS:HA	2.15	0.46
1:A:693:ASP:O	1:A:696:ASN:HB2	2.16	0.46
1:B:55:LEU:CD2	1:B:122:LEU:HD12	2.43	0.46
1:B:436:SER:O	1:B:438:ARG:HG3	2.15	0.46
1:A:66:ARG:HD2	1:A:236:ASN:HA	1.97	0.46
1:A:502:LEU:HD11	1:A:534:LEU:HA	1.96	0.46
1:B:161:TYR:HE1	1:B:295:GLN:NE2	2.14	0.46
1:B:308:ILE:CD1	1:B:352:ILE:HG21	2.41	0.46
1:B:645:LEU:HD23	1:B:645:LEU:HA	1.79	0.46
1:B:685:GLY:HA2	1:B:801:VAL:HG13	1.97	0.46
1:A:26:GLU:HA	1:A:29:LYS:HG3	1.96	0.46
1:A:201:HIS:HA	1:A:219:GLN:O	2.16	0.46
1:B:430:LEU:HD21	1:B:444:LEU:CA	2.45	0.46
1:B:729:LYS:C	1:B:731:TYR:H	2.23	0.46
1:A:714:ARG:HG2	1:A:714:ARG:NH1	2.31	0.46
1:A:815:ARG:C	1:A:815:ARG:HD2	2.41	0.46
1:B:280:TYR:HA	1:B:281:PRO:HD3	1.79	0.46
1:B:340:THR:OG1	1:B:385:GLU:HG3	2.16	0.46
1:A:78:CYS:SG	1:A:314:SER:HB2	2.56	0.45
1:A:555:VAL:HG11	1:A:643:ILE:HD11	1.98	0.45
1:B:587:TYR:O	1:B:591:LYS:HG2	2.16	0.45
1:A:170:ILE:HG12	1:A:646:GLU:HG2	1.98	0.45
1:A:795:LYS:O	1:A:799:THR:OG1	2.33	0.45
1:B:531:LEU:HD22	1:B:798:ASN:HB3	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:565:VAL:HG22	1:B:604:ILE:HB	1.98	0.45
1:A:197:MET:HE3	1:A:224:LEU:HB2	1.97	0.45
1:A:264:GLN:NE2	1:A:268:ASP:OD1	2.49	0.45
1:B:615:MET:HE1	1:B:761:ILE:HG12	1.98	0.45
1:A:586:MET:SD	1:A:601:ARG:HD2	2.56	0.45
1:A:820:TYR:CD1	1:A:824:ILE:HD12	2.51	0.45
1:A:663:SER:HB2	1:A:681:PHE:HB3	1.99	0.45
1:B:360:PRO:O	1:B:361:TRP:C	2.58	0.45
1:B:681:PHE:HB3	1:B:686:ALA:HB3	1.99	0.45
1:B:596:LYS:HG3	1:B:597:LEU:N	2.31	0.45
1:A:549:LEU:HD22	1:A:643:ILE:HG21	1.99	0.45
1:B:511:TYR:CD2	1:B:518:LEU:HD21	2.51	0.45
1:B:751:SER:O	1:B:752:PRO:C	2.59	0.45
1:A:177:GLU:OE1	1:A:177:GLU:N	2.50	0.45
1:B:456:ALA:C	1:B:481:ASN:ND2	2.75	0.45
1:B:793:ASN:O	1:B:794:PRO:C	2.58	0.45
1:A:156:GLY:O	1:A:242:ARG:N	2.46	0.45
1:A:566:GLN:HB2	1:A:664:GLU:HB2	1.98	0.45
1:A:157:TYR:HE2	1:A:244:TRP:HZ2	1.65	0.45
1:B:456:ALA:C	1:B:481:ASN:HD21	2.25	0.45
1:A:375:THR:HG23	1:A:453:ASN:HD21	1.82	0.44
1:A:663:SER:HB3	1:A:688:THR:HA	1.99	0.44
4:A:833:AVF:HN12	4:A:833:AVF:H24A	1.81	0.44
1:B:575:ARG:C	1:B:577:LEU:N	2.71	0.44
1:B:613:TYR:CE1	1:B:615:MET:HB3	2.52	0.44
1:A:458:ILE:HG23	1:A:459:HIS:H	1.81	0.44
1:A:410:HIS:CE1	1:A:428:MET:O	2.71	0.44
1:B:261:ASP:HB3	1:B:264:GLN:HB3	2.00	0.44
1:B:491:TRP:HA	1:B:495:CYS:SG	2.58	0.44
1:A:386:ARG:HA	1:A:439:ILE:O	2.17	0.44
1:A:575:ARG:HD3	1:A:666:ILE:O	2.18	0.44
1:B:325:VAL:HB	1:B:326:PHE:H	1.63	0.44
1:B:349:LEU:O	1:B:353:PHE:N	2.44	0.44
1:B:463:VAL:O	1:B:468:PHE:HB2	2.17	0.44
1:B:575:ARG:HD3	1:B:666:ILE:O	2.18	0.44
1:A:616:ALA:O	1:A:620:ILE:HG13	2.17	0.44
1:A:727:GLU:O	1:A:730:GLU:HG2	2.17	0.44
1:A:752:PRO:C	1:A:754:GLN:H	2.26	0.44
1:B:482:LYS:HE2	1:B:824:ILE:CD1	2.48	0.44
1:B:804:ASN:HD22	1:B:804:ASN:H	1.64	0.44
1:A:349:LEU:HG	1:A:353:PHE:CE1	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:325:VAL:HB	1:A:326:PHE:H	1.59	0.44
1:A:604:ILE:HA	1:A:643:ILE:O	2.17	0.44
1:B:407:ASN:HB2	1:B:430:LEU:HB2	2.00	0.44
1:B:464:LYS:NZ	1:B:476:PRO:O	2.50	0.44
1:B:772:LYS:HB3	1:B:775:ALA:HB3	2.00	0.44
1:A:400:LEU:HD12	1:A:400:LEU:HA	1.87	0.43
1:A:657:ILE:HB	1:A:658:PRO:HD3	1.99	0.43
1:A:669:ALA:HB3	1:A:718:VAL:CG2	2.47	0.43
1:B:34:HIS:CD2	1:B:38:THR:OG1	2.69	0.43
1:B:582:HIS:CD2	1:B:784:GLN:HG3	2.52	0.43
1:A:493:LEU:HD21	1:A:512:VAL:CG2	2.48	0.43
1:A:550:GLU:HG2	1:A:555:VAL:O	2.18	0.43
1:A:577:LEU:CD1	1:A:765:LEU:HD21	2.48	0.43
1:A:819:GLU:O	1:A:823:ASN:ND2	2.51	0.43
1:B:374:TYR:CG	1:B:445:CYS:HB3	2.53	0.43
1:B:492:LEU:HD12	1:B:492:LEU:HA	1.78	0.43
1:A:55:LEU:O	1:A:59:VAL:HG23	2.18	0.43
1:B:724:LYS:HE2	5:B:911:HOH:O	2.18	0.43
1:A:163:TYR:CD2	1:A:179:ALA:HB1	2.53	0.43
1:A:348:GLU:O	1:A:352:ILE:HG13	2.18	0.43
1:A:714:ARG:CG	1:A:714:ARG:NH1	2.61	0.43
1:B:487:THR:HG23	1:B:490:ARG:HB3	2.00	0.43
1:B:506:LYS:HG3	1:B:530:PHE:CD1	2.54	0.43
1:B:635:MET:HE3	1:B:635:MET:HB2	1.85	0.43
1:A:300:VAL:CG1	1:A:345:ALA:HA	2.48	0.43
1:A:369:GLN:O	1:A:450:HIS:HB3	2.19	0.43
1:A:711:PHE:HB3	1:A:783:CYS:SG	2.59	0.43
1:A:666:ILE:HG22	1:A:711:PHE:HZ	1.84	0.43
1:B:143:PHE:O	1:B:147:MET:HG3	2.19	0.43
1:B:187:ASN:HA	1:B:188:PRO:HD2	1.66	0.43
1:B:418:PHE:HB3	1:B:421:ASP:HB2	2.01	0.43
1:B:652:LEU:O	1:B:652:LEU:HD22	2.19	0.43
1:A:207:GLU:HB2	1:A:216:ILE:HG12	2.01	0.43
1:B:150:LEU:O	1:B:829:PRO:HB3	2.18	0.43
1:B:541:ASN:C	1:B:659:ALA:HB2	2.44	0.43
1:B:615:MET:O	1:B:619:ILE:HG13	2.19	0.43
1:A:714:ARG:NH1	5:A:891:HOH:O	2.51	0.43
1:B:363:LYS:O	1:B:367:LEU:HG	2.19	0.43
1:B:446:ILE:O	1:B:478:LYS:NZ	2.51	0.43
1:B:615:MET:CE	1:B:761:ILE:HG12	2.48	0.43
4:B:833:AVF:H24A	4:B:833:AVF:O20	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:80:LYS:HE3	1:B:330:PRO:O	2.19	0.43
1:B:428:MET:HG2	1:B:470:ASP:HB3	2.00	0.43
1:B:563:PHE:HD2	1:B:659:ALA:O	2.02	0.43
1:B:714:ARG:HH11	1:B:714:ARG:CG	2.32	0.43
1:A:141:ALA:O	1:A:144:LEU:HB2	2.19	0.42
1:A:312:LYS:HB3	1:A:312:LYS:HE2	1.84	0.42
1:B:575:ARG:HB3	1:B:578:LEU:CB	2.49	0.42
1:A:187:ASN:HB3	1:A:190:GLU:HG2	2.01	0.42
1:A:356:ILE:HG22	1:A:357:GLU:OE1	2.19	0.42
1:B:131:LEU:CD2	1:B:161:TYR:HB2	2.49	0.42
1:B:582:HIS:CE1	1:B:586:MET:SD	3.12	0.42
1:B:683:LEU:O	1:B:683:LEU:HD22	2.19	0.42
1:B:693:ASP:O	1:B:696:ASN:HB2	2.19	0.42
1:A:646:GLU:O	1:A:647:ASN:C	2.61	0.42
1:B:85:LEU:HD13	1:B:303:THR:HG21	2.02	0.42
1:A:85:LEU:HD21	1:A:300:VAL:HG22	2.01	0.42
1:A:400:LEU:HG	1:A:404:TYR:CE2	2.54	0.42
1:B:308:ILE:O	1:B:309:ARG:C	2.61	0.42
1:B:392:VAL:HG21	1:B:439:ILE:HD12	2.00	0.42
1:B:538:LYS:HG3	1:B:542:LYS:HD2	2.00	0.42
1:B:720:ALA:O	1:B:724:LYS:N	2.49	0.42
1:A:112:ILE:HG23	1:A:117:LEU:HB2	2.02	0.42
1:A:185:TYR:CD2	1:B:194:PRO:HB3	2.53	0.42
1:A:280:TYR:HA	1:A:281:PRO:HD3	1.77	0.42
1:A:427:ARG:NE	1:A:470:ASP:OD1	2.52	0.42
1:B:387:TRP:CD1	1:B:441:MET:HG3	2.52	0.42
1:B:202:PHE:CD1	1:B:395:LEU:HD11	2.54	0.42
1:B:567:VAL:HB	1:B:648:TYR:CE1	2.55	0.42
1:B:188:PRO:HG2	1:B:189:TRP:CD1	2.55	0.42
1:B:303:THR:O	1:B:307:ILE:HG13	2.20	0.42
1:A:374:TYR:O	1:A:452:VAL:HA	2.19	0.42
1:A:663:SER:HB2	1:A:681:PHE:CB	2.49	0.42
1:A:330:PRO:HG2	1:A:370:LYS:HD3	2.01	0.42
1:A:506:LYS:HG3	1:A:530:PHE:HE1	1.85	0.42
1:A:663:SER:OG	1:A:665:GLN:NE2	2.53	0.42
1:A:665:GLN:HG3	1:A:678:ASN:HB3	2.02	0.42
1:A:670:GLY:HA3	1:A:715:ILE:HD13	2.02	0.42
1:A:714:ARG:N	1:A:714:ARG:CD	2.82	0.42
1:A:368:THR:HG23	1:A:372:PHE:CD1	2.54	0.42
1:A:604:ILE:HG23	1:A:643:ILE:HB	2.01	0.42
1:A:679:MET:HE2	1:A:811:PHE:CD1	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:683:LEU:HD22	1:A:683:LEU:O	2.19	0.42
1:A:706:GLU:HG2	1:A:707:ASN:N	2.35	0.42
1:B:246:ALA:N	1:B:276:SER:OG	2.53	0.42
1:A:64:VAL:HG11	1:B:36:HIS:O	2.20	0.41
1:A:170:ILE:CG1	1:A:646:GLU:HG2	2.50	0.41
1:A:668:THR:HB	1:A:671:THR:HG21	2.01	0.41
1:A:689:ILE:HD13	1:A:784:GLN:NE2	2.35	0.41
1:A:812:SER:HB3	5:A:842:HOH:O	2.20	0.41
1:B:582:HIS:HB2	1:B:780:TYR:HE2	1.85	0.41
1:A:405:GLU:OE2	1:A:409:LYS:HE3	2.19	0.41
1:A:598:PHE:HB3	1:A:639:LYS:HE3	2.03	0.41
1:A:732:TYR:CZ	1:A:739:LYS:HG3	2.55	0.41
1:A:270:ASN:O	1:A:274:ASN:ND2	2.53	0.41
1:B:167:ASN:HD22	1:B:167:ASN:HA	1.65	0.41
1:B:413:ARG:O	1:B:416:ALA:HB3	2.20	0.41
1:B:530:PHE:HE2	1:B:802:LEU:CD1	2.33	0.41
1:B:133:ASN:O	1:B:569:ARG:HD3	2.20	0.41
1:B:213:THR:CG2	1:B:398:ARG:NH2	2.81	0.41
1:A:682:MET:C	1:A:684:ASN:H	2.29	0.41
1:A:729:LYS:H	1:A:729:LYS:HG3	1.61	0.41
1:B:662:LEU:HD11	1:B:689:ILE:HB	2.03	0.41
1:A:168:GLN:HE21	1:A:175:GLN:HG3	1.86	0.41
1:A:666:ILE:HG22	1:A:711:PHE:CZ	2.55	0.41
1:A:762:ILE:HG23	1:A:766:PHE:CD1	2.55	0.41
1:A:828:GLU:HA	1:A:829:PRO:HD3	1.83	0.41
1:B:88:GLU:HB3	1:B:137:GLY:HA2	2.03	0.41
1:B:688:THR:N	5:B:849:HOH:O	2.53	0.41
1:A:493:LEU:HD21	1:A:512:VAL:HG22	2.03	0.41
1:B:197:MET:HE2	1:B:222:LEU:HB3	2.02	0.41
1:B:361:TRP:CH2	1:B:402:ILE:HG23	2.56	0.41
1:B:525:LEU:CD2	1:B:803:LYS:HG2	2.50	0.41
1:B:733:GLU:HG2	1:B:733:GLU:H	1.69	0.41
1:A:224:LEU:HD12	1:A:225:PRO:HD2	2.02	0.41
1:A:649:ARG:HH11	1:A:649:ARG:CG	2.21	0.41
1:B:664:GLU:OE1	1:B:780:TYR:OH	2.24	0.41
1:A:144:LEU:HD23	1:A:144:LEU:HA	1.87	0.41
1:A:338:ASN:OD1	1:A:377:HIS:NE2	2.54	0.41
1:A:357:GLU:CB	1:A:359:LEU:HG	2.51	0.41
1:A:365:TRP:CZ3	1:A:406:ILE:HG12	2.56	0.41
1:A:470:ASP:O	1:A:474:LEU:HD13	2.21	0.41
1:B:67:TRP:O	1:B:71:GLN:HG2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:187:ASN:ND2	5:B:864:HOH:O	2.53	0.41
1:B:67:TRP:CZ3	1:B:229:PRO:HD3	2.56	0.41
1:B:329:PHE:HB3	1:B:330:PRO:CD	2.47	0.41
1:B:709:PHE:HB3	1:B:783:CYS:SG	2.60	0.41
1:A:346:ILE:HA	1:A:372:PHE:CE1	2.56	0.40
1:A:606:GLY:HA2	1:A:644:PHE:CE1	2.56	0.40
1:A:339:ASP:CG	1:A:340:THR:N	2.78	0.40
1:A:350:MET:SD	1:A:365:TRP:HA	2.61	0.40
1:A:752:PRO:C	1:A:754:GLN:N	2.79	0.40
1:B:577:LEU:O	1:B:580:CYS:HB3	2.22	0.40
1:A:41:LYS:HE3	1:A:50:ASP:OD2	2.21	0.40
1:A:192:SER:C	1:A:194:PRO:HD3	2.45	0.40
1:A:458:ILE:O	1:A:461:ASP:HB3	2.21	0.40
1:A:610:ALA:HB3	1:A:613:TYR:HB2	2.03	0.40
1:B:345:ALA:HA	1:B:348:GLU:HB3	2.02	0.40
1:A:368:THR:HG23	1:A:372:PHE:HD1	1.86	0.40
1:A:499:LEU:HD23	1:A:499:LEU:HA	1.88	0.40
1:B:493:LEU:HD21	1:B:512:VAL:CG2	2.51	0.40
1:B:692:MET:HB3	1:B:714:ARG:HG3	2.03	0.40
1:A:430:LEU:CD2	1:A:443:HIS:HB3	2.51	0.40
1:A:434:GLU:O	1:A:435:GLY:C	2.65	0.40
1:B:101:ASN:HB3	1:B:232:GLY:O	2.21	0.40
1:B:665:GLN:HB2	1:B:696:ASN:ND2	2.27	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	784/809 (97%)	659 (84%)	118 (15%)	7 (1%)	14	43
1	B	784/809 (97%)	693 (88%)	83 (11%)	8 (1%)	12	40

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
All	All	1568/1618 (97%)	1352 (86%)	201 (13%)	15 (1%)	12	40

All (15) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	757	LEU
1	A	181	ASP
1	A	435	GLY
1	A	516	SER
1	A	830	SER
1	B	76	ASP
1	B	681	PHE
1	B	730	GLU
1	A	674	SER
1	B	314	SER
1	B	680	LYS
1	A	752	PRO
1	B	568	LYS
1	B	593	ASP
1	B	498	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	692/706 (98%)	632 (91%)	60 (9%)	9	32
1	B	692/706 (98%)	637 (92%)	55 (8%)	11	36
All	All	1384/1412 (98%)	1269 (92%)	115 (8%)	10	34

All (115) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	24	VAL
1	A	30	SER
1	A	63	LEU

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Mol	Chain	Res	Type
1	A	95	LEU
1	A	100	ILE
1	A	128	ASP
1	A	136	LEU
1	A	150	LEU
1	A	205	LYS
1	A	209	THR
1	A	210	ASN
1	A	211	THR
1	A	213	THR
1	A	214	LYS
1	A	220	VAL
1	A	228	THR
1	A	237	THR
1	A	243	LEU
1	A	270	ASN
1	A	279	LEU
1	A	296	GLU
1	A	300	VAL
1	A	305	GLN
1	A	337	LEU
1	A	340	THR
1	A	379	VAL
1	A	382	GLU
1	A	390	ASP
1	A	391	LEU
1	A	406	ILE
1	A	433	GLU
1	A	457	LYS
1	A	486	ILE
1	A	487	THR
1	A	493	LEU
1	A	505	GLU
1	A	509	GLU
1	A	543	LEU
1	A	556	LYS
1	A	573	TYR
1	A	577	LEU
1	A	579	ASN
1	A	635	MET
1	A	636	VAL
1	A	649	ARG

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Mol	Chain	Res	Type
1	A	652	LEU
1	A	678	ASN
1	A	683	LEU
1	A	714	ARG
1	A	718	VAL
1	A	722	ASP
1	A	733	GLU
1	A	753	LYS
1	A	761	ILE
1	A	786	LYS
1	A	788	SER
1	A	795	LYS
1	A	799	THR
1	A	808	SER
1	A	827	VAL
1	B	34	HIS
1	B	63	LEU
1	B	90	TYR
1	B	94	THR
1	B	100	ILE
1	B	118	ASP
1	B	128	ASP
1	B	167	ASN
1	B	169	LYS
1	B	184	ARG
1	B	210	ASN
1	B	211	THR
1	B	213	THR
1	B	217	ASP
1	B	219	GLN
1	B	245	SER
1	B	274	ASN
1	B	287	GLU
1	B	300	VAL
1	B	305	GLN
1	B	325	VAL
1	B	337	LEU
1	B	353	PHE
1	B	363	LYS
1	B	371	THR
1	B	378	THR
1	B	382	GLU

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Mol	Chain	Res	Type
1	B	386	ARG
1	B	405	GLU
1	B	415	VAL
1	B	453	ASN
1	B	460	SER
1	B	463	VAL
1	B	473	GLU
1	B	489	ARG
1	B	502	LEU
1	B	507	ILE
1	B	560	SER
1	B	568	LYS
1	B	577	LEU
1	B	597	LEU
1	B	636	VAL
1	B	638	SER
1	B	652	LEU
1	B	683	LEU
1	B	688	THR
1	B	689	ILE
1	B	714	ARG
1	B	722	ASP
1	B	727	GLU
1	B	733	GLU
1	B	751	SER
1	B	763	ASN
1	B	782	LYS
1	B	828	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (48) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	32	ASN
1	A	34	HIS
1	A	36	HIS
1	A	62	HIS
1	A	96	GLN
1	A	114	GLN
1	A	167	ASN
1	A	219	GLN
1	A	264	GLN
1	A	270	ASN

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Mol	Chain	Res	Type
1	A	274	ASN
1	A	284	ASN
1	A	376	ASN
1	A	408	GLN
1	A	410	HIS
1	A	450	HIS
1	A	453	ASN
1	A	480	GLN
1	A	481	ASN
1	A	541	ASN
1	A	579	ASN
1	A	696	ASN
1	A	707	ASN
1	A	793	ASN
1	A	822	GLN
1	B	34	HIS
1	B	96	GLN
1	B	114	GLN
1	B	167	ASN
1	B	239	ASN
1	B	270	ASN
1	B	274	ASN
1	B	284	ASN
1	B	305	GLN
1	B	341	HIS
1	B	408	GLN
1	B	410	HIS
1	B	459	HIS
1	B	481	ASN
1	B	522	HIS
1	B	541	ASN
1	B	547	GLN
1	B	566	GLN
1	B	579	ASN
1	B	763	ASN
1	B	768	HIS
1	B	798	ASN
1	B	804	ASN

5.3.3 RNA ⓘ

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](#)

6 ligands are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# $ Z > 2$	Counts	RMSZ	# $ Z > 2$
2	NBG	B	2	-	15,15,15	0.69	0	21,21,21	1.46	4 (19%)
3	PLP	B	832	1	16,16,16	2.22	5 (31%)	20,23,23	1.55	5 (25%)
4	AVF	A	833	-	33,33,33	1.33	5 (15%)	46,47,47	1.61	6 (13%)
4	AVF	B	833	-	33,33,33	1.29	4 (12%)	46,47,47	1.57	8 (17%)
2	NBG	A	1	-	15,15,15	0.49	0	21,21,21	0.76	0
3	PLP	A	832	1	16,16,16	1.23	1 (6%)	20,23,23	1.05	2 (10%)

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	NBG	B	2	-	-	1/6/26/26	0/1/1/1
3	PLP	B	832	1	-	4/8/8/8	0/1/1/1
4	AVF	A	833	-	-	0/20/30/30	0/3/3/3
4	AVF	B	833	-	-	0/20/30/30	0/3/3/3
2	NBG	A	1	-	-	0/6/26/26	0/1/1/1
3	PLP	A	832	1	-	2/8/8/8	0/1/1/1

All (15) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	B	832	PLP	C3-C2	-5.75	1.35	1.41
3	B	832	PLP	C4-C5	-3.55	1.37	1.42
4	A	833	AVF	C13-N12	-3.32	1.35	1.41
3	B	832	PLP	C4-C3	-3.20	1.35	1.41
4	A	833	AVF	C28-C29	3.16	1.57	1.51
4	B	833	AVF	C11-N10	-3.05	1.32	1.39
4	B	833	AVF	C13-N12	-2.86	1.36	1.41
4	B	833	AVF	C18-N21	-2.83	1.35	1.41
4	B	833	AVF	C7-N10	-2.71	1.33	1.37
3	A	832	PLP	C2-N1	2.58	1.38	1.33
4	A	833	AVF	C7-N10	-2.50	1.33	1.37
3	B	832	PLP	P-O3P	-2.46	1.45	1.54
4	A	833	AVF	C11-N10	-2.38	1.34	1.39
4	A	833	AVF	C18-N21	-2.28	1.36	1.41
3	B	832	PLP	P-O2P	-2.28	1.46	1.54

All (25) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	A	833	AVF	C7-N10-C11	-5.46	122.95	128.13
4	B	833	AVF	C17-C18-N21	-5.43	113.91	122.42
4	B	833	AVF	C7-N10-C11	-4.65	123.72	128.13
4	A	833	AVF	C17-C18-N21	-4.45	115.45	122.42
2	B	2	NBG	C3-C2-C1	3.71	115.31	109.86
3	B	832	PLP	O4A-C4A-C4	-3.22	117.17	124.80
4	A	833	AVF	C16-C15-C14	-3.19	119.03	123.23
2	B	2	NBG	C4-C3-C2	3.17	116.39	110.83
3	B	832	PLP	C2A-C2-C3	-2.82	117.50	120.80
4	B	833	AVF	C5-C6-C1	2.68	120.44	118.42
3	B	832	PLP	C2A-C2-N1	2.67	122.66	117.64
4	A	833	AVF	C13-C14-C15	2.66	122.20	117.62
3	B	832	PLP	O4P-P-O1P	2.61	113.48	106.44
2	B	2	NBG	O5-C5-C6	2.59	112.86	106.44
4	B	833	AVF	C25-N21-C18	-2.38	110.52	116.19
3	A	832	PLP	C5-C6-N1	-2.31	120.07	123.83
4	A	833	AVF	C18-C13-N12	2.26	122.78	118.61
2	B	2	NBG	O5-C1-C2	2.23	112.24	109.72
4	A	833	AVF	C3-C4-C5	2.19	120.26	117.84
4	B	833	AVF	C13-C14-C15	2.18	121.37	117.62
4	B	833	AVF	C16-C15-C14	-2.08	120.49	123.23
3	B	832	PLP	C5-C6-N1	-2.04	120.51	123.83
4	B	833	AVF	O20-C7-N10	2.03	125.24	122.27

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	B	833	AVF	C14-C13-C18	-2.03	117.58	119.80
3	A	832	PLP	O4A-C4A-C4	-2.02	120.00	124.80

There are no chirality outliers.

All (7) torsion outliers are listed below:

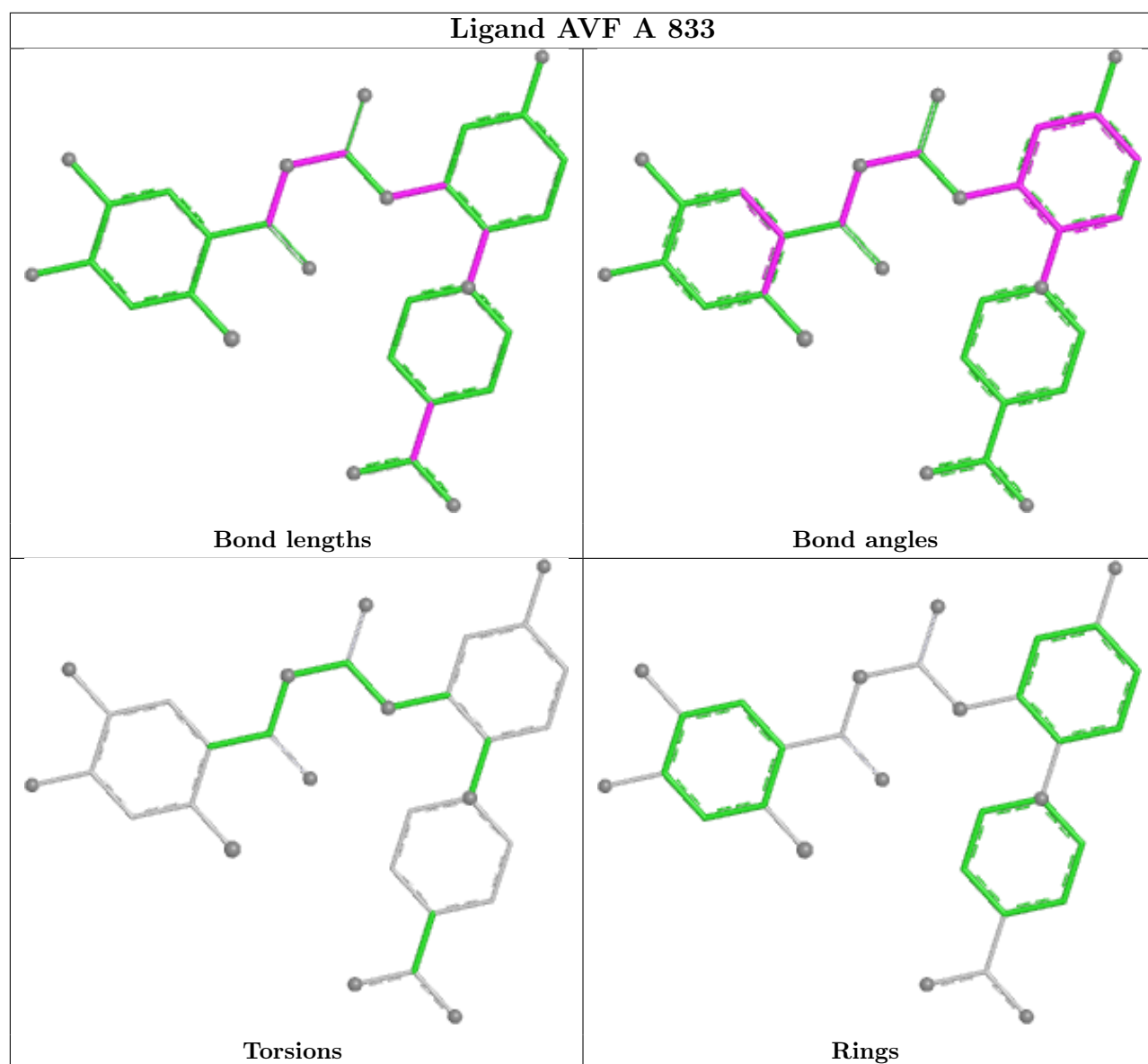
Mol	Chain	Res	Type	Atoms
3	B	832	PLP	C5A-O4P-P-O1P
3	B	832	PLP	C5A-O4P-P-O2P
3	B	832	PLP	C5A-O4P-P-O3P
3	A	832	PLP	C3-C4-C4A-O4A
3	B	832	PLP	C3-C4-C4A-O4A
2	B	2	NBG	O5-C5-C6-O6
3	A	832	PLP	C5-C4-C4A-O4A

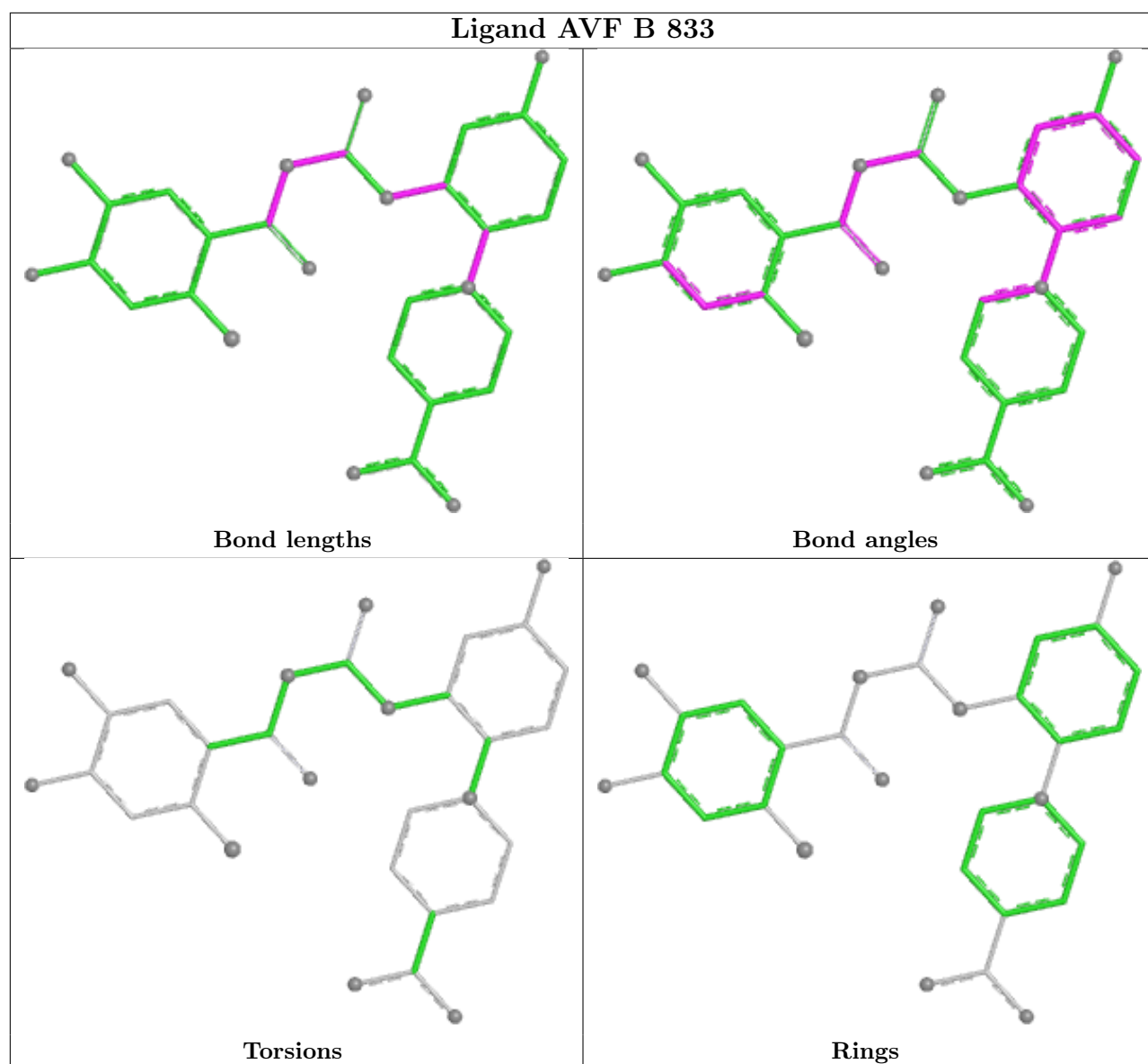
There are no ring outliers.

4 monomers are involved in 19 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	B	832	PLP	2	0
4	A	833	AVF	3	0
4	B	833	AVF	6	0
3	A	832	PLP	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 [i](#)

6.1 Protein, DNA and RNA chains [i](#)

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	790/809 (97%)	-1.88	0 100 100	41, 56, 79, 86	0
1	B	790/809 (97%)	-1.89	0 100 100	38, 52, 68, 75	0
All	All	1580/1618 (97%)	-1.89	0 100 100	38, 54, 76, 86	0

There are no RSRZ outliers to report.

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](#)

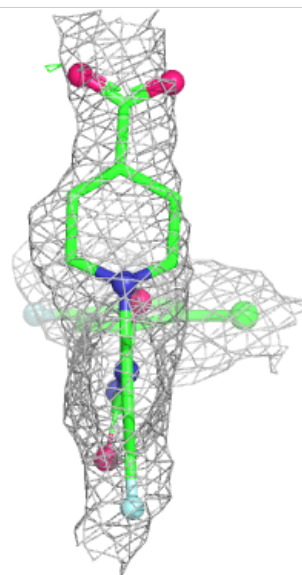
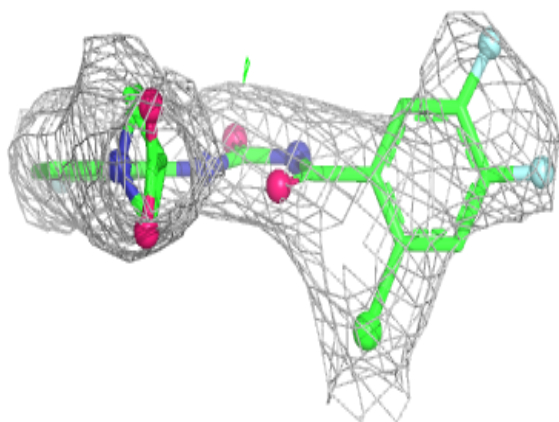
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled ‘Q< 0.9’ lists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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
2	NBG	A	1	15/15	1.00	0.03	52,53,55,56	0
2	NBG	B	2	15/15	1.00	0.03	57,58,60,61	0
3	PLP	A	832	16/16	1.00	0.02	43,46,49,49	0
3	PLP	B	832	16/16	1.00	0.03	42,45,47,47	0
4	AVF	A	833	31/31	1.00	0.02	52,55,56,58	0
4	AVF	B	833	31/31	1.00	0.02	51,53,56,56	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.

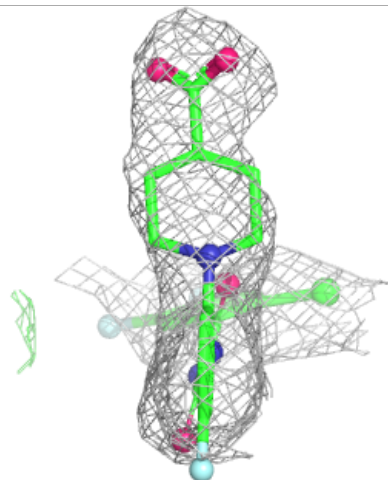
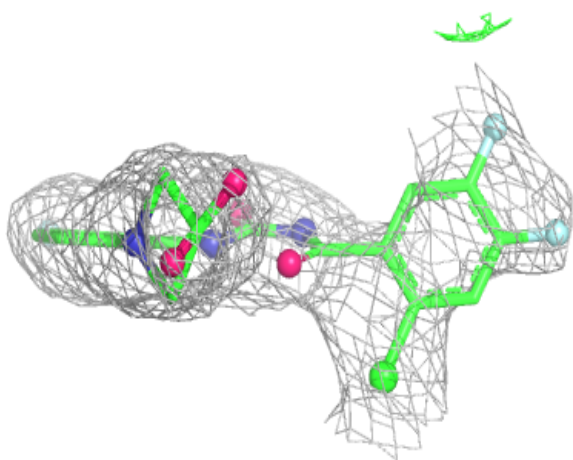
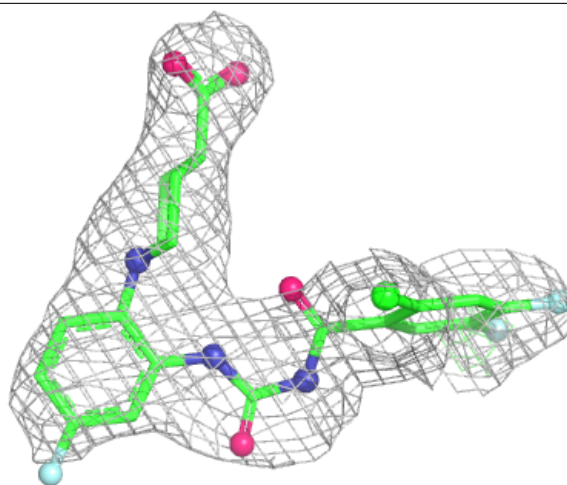
Electron density around AVF A 833:

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



Electron density around AVF B 833:

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



6.5 Other polymers [i](#)

There are no such residues in this entry.