



Full wwPDB X-ray Structure Validation Report ⓘ

Apr 2, 2024 – 06:27 PM JST

PDB ID : 8XRV
Title : The crystal structure of a GH3 enzyme CcBgl3B with glucose
Authors : Su, J.Y.
Deposited on : 2024-01-08
Resolution : 2.40 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 : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.36
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) : 2.36

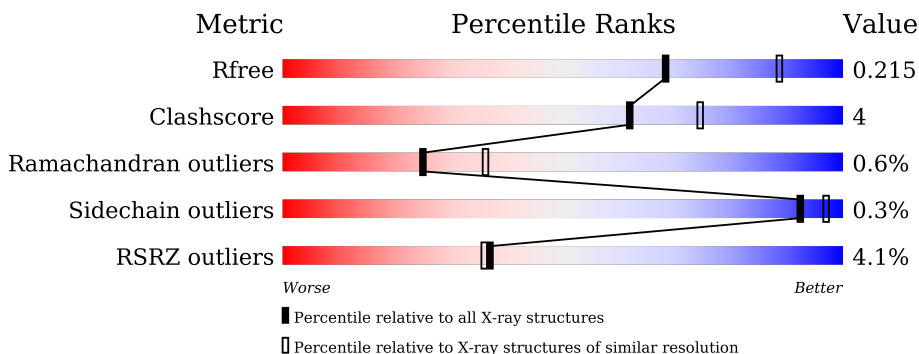
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.40 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 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	768	 3% 88% 9%
1	B	768	 4% 85% 12%
1	C	768	 4% 88% 9%
1	D	768	 3% 89% 9%
1	E	768	 8% 83% 13%
1	F	768	 2% 88% 9%

2 Entry composition [i](#)

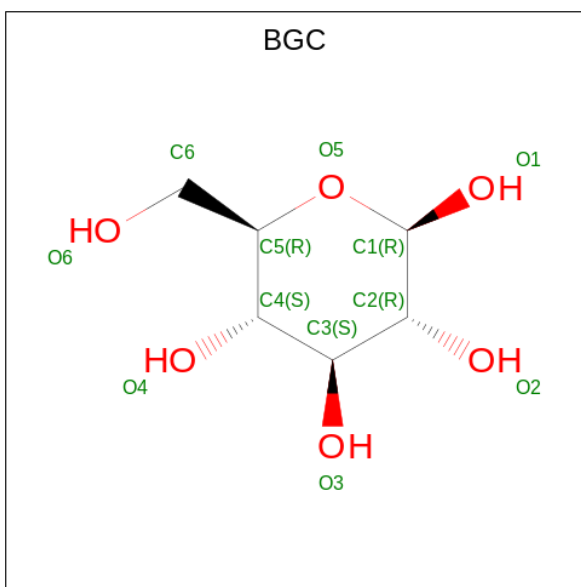
There are 4 unique types of molecules in this entry. The entry contains 35873 atoms, of which 0 are hydrogens and 0 are deuteriums.

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 GH3 enzyme CcBgl3B.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	749	Total 5623	C 3541	N 997	O 1070	S 15	0	0	0
1	B	746	Total 5596	C 3524	N 994	O 1063	S 15	0	0	0
1	C	747	Total 5609	C 3530	N 996	O 1068	S 15	0	0	0
1	F	747	Total 5598	C 3524	N 995	O 1064	S 15	0	0	0
1	D	748	Total 5605	C 3530	N 996	O 1064	S 15	0	0	0
1	E	740	Total 5547	C 3491	N 986	O 1055	S 15	0	0	0

- Molecule 2 is beta-D-glucopyranose (three-letter code: BGC) (formula: C₆H₁₂O₆).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
2	A	1	Total	C	O	0	0
			12	6	6		
2	B	1	Total	C	O	0	0
			12	6	6		
2	C	1	Total	C	O	0	0
			12	6	6		
2	F	1	Total	C	O	0	0
			12	6	6		
2	D	1	Total	C	O	0	0
			12	6	6		
2	E	1	Total	C	O	0	0
			12	6	6		

- Molecule 3 is CALCIUM ION (three-letter code: CA) (formula: Ca) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	1	Total	Ca	0	0
			1	1		
3	B	1	Total	Ca	0	0
			1	1		
3	C	1	Total	Ca	0	0
			1	1		
3	F	1	Total	Ca	0	0
			1	1		
3	D	1	Total	Ca	0	0
			1	1		
3	E	1	Total	Ca	0	0
			1	1		

- Molecule 4 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	391	Total	O	0	0
			391	391		
4	B	360	Total	O	0	0
			360	360		
4	C	398	Total	O	0	0
			398	398		
4	F	447	Total	O	0	0
			447	447		
4	D	353	Total	O	0	0
			353	353		

Continued on next page...

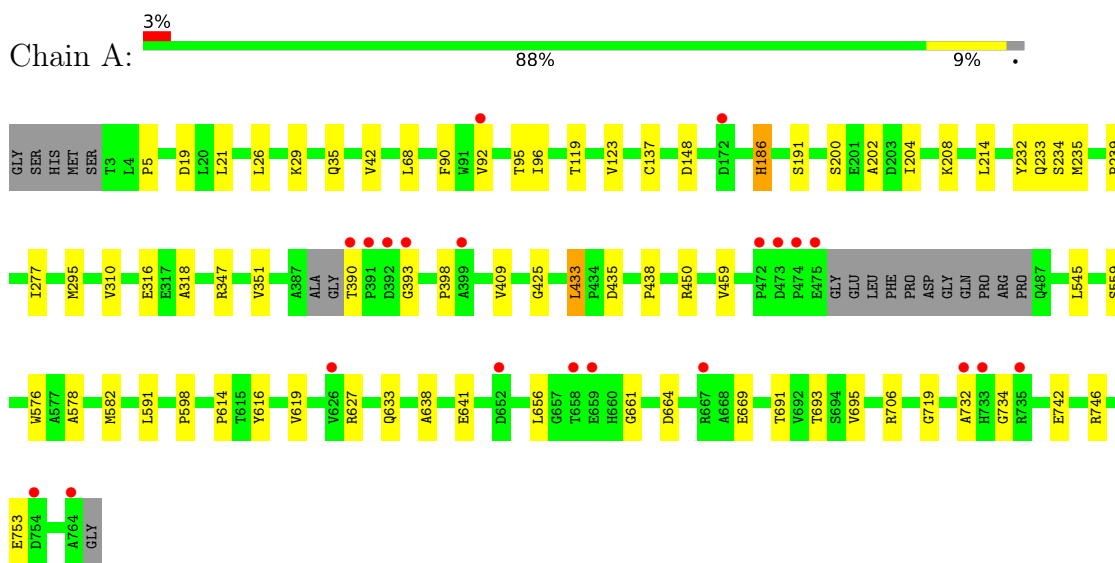
Continued from previous page...

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	E	268	Total 268	O 268	0	0

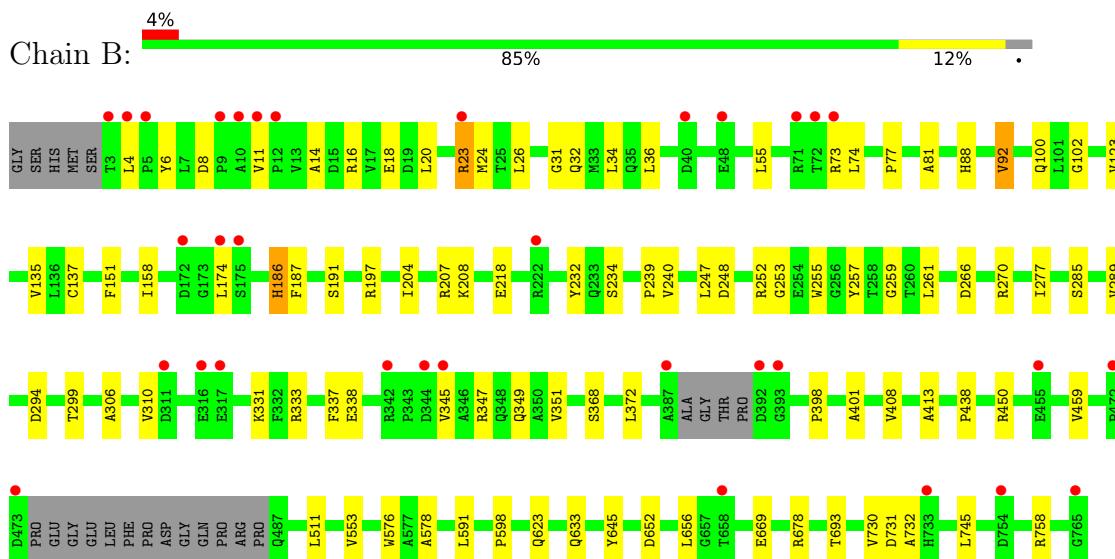
3 Residue-property plots [i](#)

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.

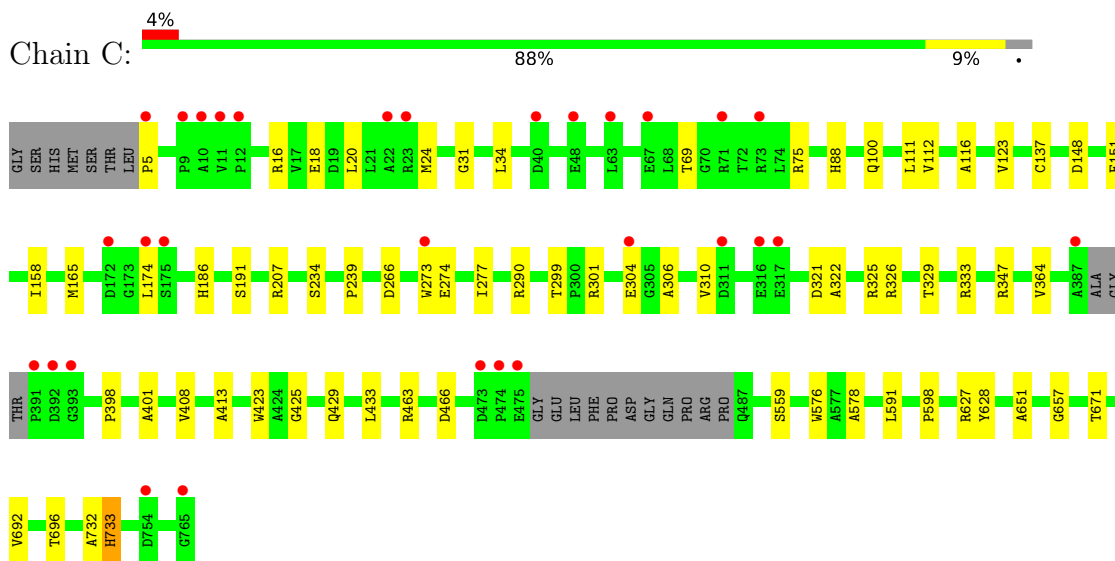
- Molecule 1: GH3 enzyme CcBgl3B



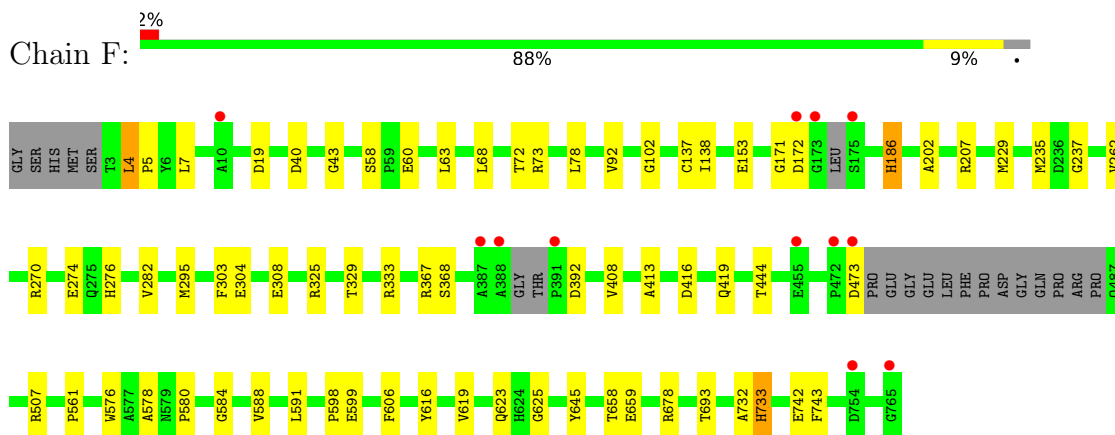
- Molecule 1: GH3 enzyme CcBgl3B



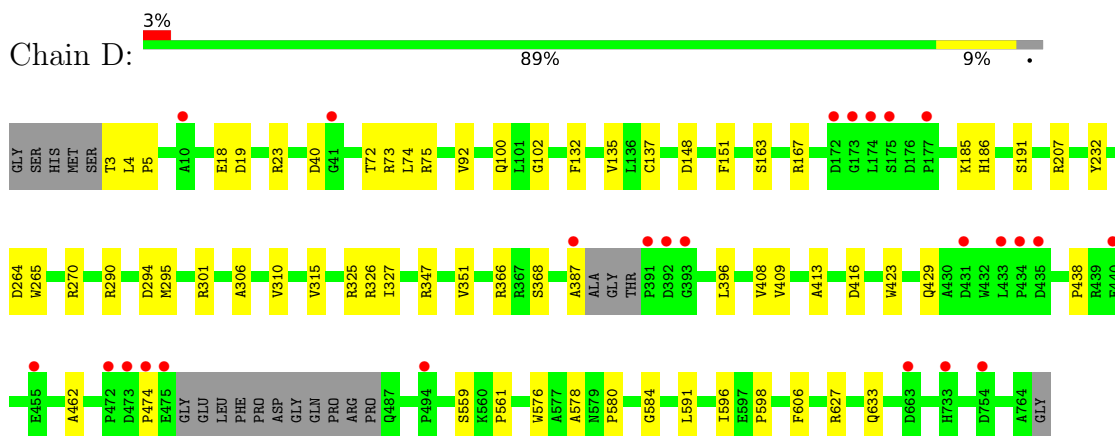
- Molecule 1: GH3 enzyme CcBgl3B



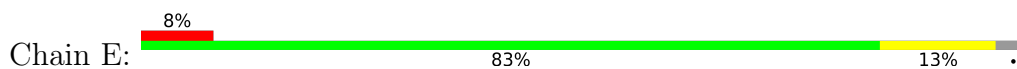
- Molecule 1: GH3 enzyme CcBgl3B

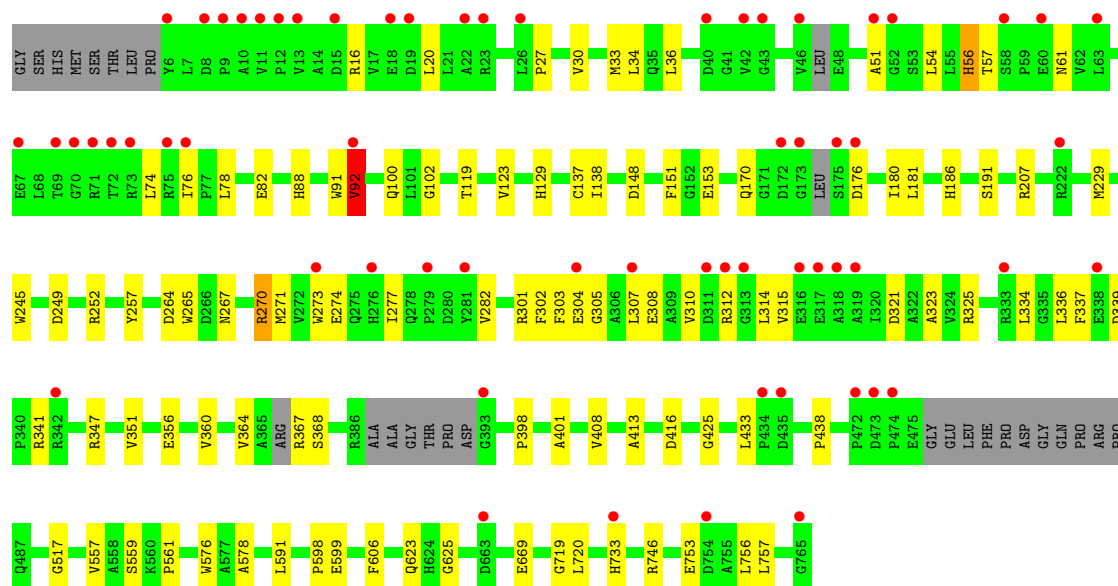


- Molecule 1: GH3 enzyme CcBgl3B



- Molecule 1: GH3 enzyme CcBgl3B





4 Data and refinement statistics

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α , β , γ	163.33Å 177.57Å 265.79Å 90.00° 100.86° 90.00°	Depositor
Resolution (Å)	19.97 – 2.40 19.97 – 2.40	Depositor EDS
% Data completeness (in resolution range)	99.6 (19.97-2.40) 99.6 (19.97-2.40)	Depositor EDS
R_{merge}	0.12	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.16 (at 2.41Å)	Xtrriage
Refinement program	PHENIX (1.18.2_3874: ???)	Depositor
R, R_{free}	0.176 , 0.215 0.178 , 0.215	Depositor DCC
R_{free} test set	1999 reflections (0.69%)	wwPDB-VP
Wilson B-factor (Å ²)	38.7	Xtrriage
Anisotropy	0.432	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.35 , 49.1	EDS
L-test for twinning ²	$\langle L \rangle = 0.48$, $\langle L^2 \rangle = 0.31$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.95	EDS
Total number of atoms	35873	wwPDB-VP
Average B, all atoms (Å ²)	42.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 5.61% 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: CA, BGC

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	0.45	0/5746	0.65	0/7859
1	B	0.44	0/5717	0.65	0/7816
1	C	0.46	0/5732	0.65	0/7837
1	D	0.44	0/5727	0.66	0/7832
1	E	0.41	0/5665	0.63	0/7741
1	F	0.46	0/5718	0.68	0/7816
All	All	0.44	0/34305	0.65	0/46901

There are no bond length outliers.

There are no bond angle outliers.

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	5623	0	5536	48	0
1	B	5596	0	5512	63	0
1	C	5609	0	5519	49	0
1	D	5605	0	5508	40	0
1	E	5547	0	5445	62	0
1	F	5598	0	5507	40	0
2	A	12	0	12	1	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	B	12	0	11	1	0
2	C	12	0	11	0	0
2	D	12	0	12	1	0
2	E	12	0	12	3	0
2	F	12	0	11	0	0
3	A	1	0	0	0	0
3	B	1	0	0	0	0
3	C	1	0	0	0	0
3	D	1	0	0	0	0
3	E	1	0	0	0	0
3	F	1	0	0	0	0
4	A	391	0	0	4	0
4	B	360	0	0	2	0
4	C	398	0	0	3	0
4	D	353	0	0	3	0
4	E	268	0	0	2	0
4	F	447	0	0	6	0
All	All	35873	0	33096	296	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 4.

All (296) 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:623:GLN:HE22	1:B:633:GLN:HE22	1.15	0.94
1:B:26:LEU:HD21	1:B:310:VAL:HG21	1.53	0.90
1:F:282:VAL:HG21	1:F:308:GLU:OE1	1.75	0.86
1:D:100:GLN:HG3	1:D:151:PHE:CE1	2.17	0.79
1:A:95:THR:HA	1:A:582:MET:HE1	1.65	0.78
1:F:658:THR:HG23	1:F:659:GLU:HG2	1.69	0.73
1:A:691:THR:HB	1:A:742:GLU:HG3	1.71	0.72
1:C:329:THR:HG22	1:C:333:ARG:HE	1.52	0.72
1:E:271:MET:HG2	1:E:277:ILE:HD11	1.69	0.72
1:C:207:ARG:NH2	4:C:903:HOH:O	2.24	0.70
1:B:100:GLN:HG3	1:B:151:PHE:CE1	2.26	0.70
1:E:207:ARG:NH2	4:E:901:HOH:O	2.23	0.70
1:E:100:GLN:HG3	1:E:151:PHE:CE1	2.26	0.70
1:D:301:ARG:HG2	1:D:301:ARG:HH11	1.57	0.69
1:A:233:GLN:HE21	1:A:235:MET:HE3	1.57	0.69
1:B:591:LEU:HD11	1:B:598:PRO:HG3	1.75	0.68

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:398:PRO:HG2	1:B:401:ALA:HB3	1.78	0.66
1:F:207:ARG:NH2	4:F:903:HOH:O	2.28	0.65
1:E:181:LEU:HD21	1:E:334:LEU:HD21	1.79	0.65
1:B:285:SER:O	1:B:289:VAL:HG23	1.97	0.65
1:B:266:ASP:HB3	1:B:270:ARG:HH21	1.64	0.63
1:C:347:ARG:NH1	4:C:909:HOH:O	2.31	0.63
1:D:265:TRP:O	1:D:270:ARG:NH2	2.32	0.62
1:B:137:CYS:HB3	1:B:191:SER:HB3	1.79	0.62
1:F:5:PRO:HG2	1:F:19:ASP:CG	2.20	0.62
1:F:262:VAL:HG23	1:F:295:MET:HG2	1.82	0.61
1:B:207:ARG:NH1	1:B:730:VAL:O	2.33	0.61
1:C:325:ARG:HB2	1:C:326:ARG:HH11	1.66	0.61
1:E:367:ARG:NH1	1:E:599:GLU:OE1	2.33	0.61
1:E:252:ARG:NH2	1:E:257:TYR:O	2.27	0.60
1:B:34:LEU:HD13	1:B:36:LEU:HD11	1.83	0.60
1:D:207:ARG:NH2	4:D:902:HOH:O	2.21	0.60
1:C:329:THR:HG21	1:C:333:ARG:HH21	1.65	0.60
1:B:232:TYR:OH	2:B:801:BGC:O1	2.20	0.60
1:C:591:LEU:HD11	1:C:598:PRO:HG3	1.82	0.60
1:A:576:TRP:CZ2	1:A:578:ALA:HB2	2.37	0.59
1:C:306:ALA:O	1:C:310:VAL:HG23	2.01	0.59
1:E:301:ARG:NH2	4:E:903:HOH:O	2.28	0.59
1:B:266:ASP:HB3	1:B:270:ARG:NH2	2.17	0.59
1:E:137:CYS:HB3	1:E:191:SER:HB3	1.84	0.59
1:B:174:LEU:HD13	1:B:333:ARG:HB3	1.84	0.59
1:C:322:ALA:O	1:C:326:ARG:NH1	2.36	0.59
1:F:591:LEU:HD11	1:F:598:PRO:HG3	1.85	0.58
1:A:96:ILE:H	1:A:582:MET:CE	2.16	0.58
1:C:277:ILE:HA	1:F:693:THR:O	2.04	0.58
1:C:651:ALA:HB3	1:C:671:THR:HB	1.86	0.58
1:B:32:GLN:OE1	1:B:331:LYS:NZ	2.38	0.57
1:C:88:HIS:CD2	1:C:123:VAL:HA	2.39	0.57
1:B:88:HIS:CD2	1:B:123:VAL:HA	2.40	0.56
1:A:627:ARG:HA	1:A:633:GLN:HG3	1.86	0.56
1:D:408:VAL:HG12	1:D:413:ALA:HB1	1.86	0.56
1:D:366:ARG:HG2	1:D:596:ILE:HD13	1.87	0.56
1:E:425:GLY:HA2	1:E:433:LEU:HD22	1.87	0.56
1:D:137:CYS:SG	1:D:186:HIS:HB2	2.46	0.56
1:F:202:ALA:HB3	1:F:235:MET:HG2	1.88	0.55
1:A:693:THR:O	1:B:277:ILE:HA	2.06	0.55
1:C:408:VAL:HG12	1:C:413:ALA:HB1	1.88	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:34:LEU:HB3	1:B:36:LEU:CD1	2.37	0.55
1:C:116:ALA:HB2	1:C:165:MET:HG2	1.88	0.55
1:C:273:TRP:CE3	1:C:274:GLU:HB2	2.42	0.55
1:D:100:GLN:HG3	1:D:151:PHE:CD1	2.42	0.55
1:C:329:THR:O	1:C:333:ARG:HG3	2.06	0.55
1:F:137:CYS:SG	1:F:186:HIS:HB2	2.47	0.54
1:F:137:CYS:SG	4:F:1236:HOH:O	2.27	0.54
1:E:267:ASN:O	1:E:270:ARG:HB2	2.08	0.54
1:E:273:TRP:CZ3	1:E:274:GLU:HB2	2.42	0.54
1:D:294:ASP:OD1	1:D:326:ARG:NH1	2.40	0.54
1:A:137:CYS:SG	4:A:1184:HOH:O	2.26	0.54
1:B:338:GLU:N	1:B:338:GLU:OE2	2.40	0.54
1:B:576:TRP:CZ2	1:B:578:ALA:HB2	2.43	0.54
1:B:678:ARG:NH2	4:B:902:HOH:O	2.31	0.54
1:C:463:ARG:NH2	1:C:466:ASP:OD1	2.41	0.53
1:A:591:LEU:HD11	1:A:598:PRO:HG3	1.89	0.53
1:C:20:LEU:O	1:C:24:MET:HG3	2.08	0.53
1:F:561:PRO:HB3	1:F:606:PHE:CD1	2.43	0.53
1:B:100:GLN:NE2	1:B:135:VAL:O	2.41	0.53
1:A:706:ARG:NH1	1:A:719:GLY:O	2.41	0.53
1:D:100:GLN:NE2	1:D:135:VAL:O	2.42	0.53
1:E:282:VAL:HG22	1:E:305:GLY:HA2	1.88	0.53
1:A:42:VAL:HG12	1:A:68:LEU:HD12	1.90	0.53
1:A:390:THR:HG22	1:A:393:GLY:H	1.72	0.53
1:D:75:ARG:NH2	4:D:904:HOH:O	2.24	0.53
1:C:692:VAL:HG22	1:F:276:HIS:HB3	1.91	0.53
1:C:576:TRP:CZ2	1:C:578:ALA:HB2	2.43	0.53
1:D:591:LEU:HD11	1:D:598:PRO:HG3	1.91	0.53
1:A:96:ILE:H	1:A:582:MET:HE2	1.74	0.52
1:A:656:LEU:HD11	1:A:669:GLU:HG3	1.90	0.52
1:F:329:THR:O	1:F:333:ARG:HG3	2.09	0.52
1:A:661:GLY:N	1:A:664:ASP:OD2	2.39	0.52
1:B:102:GLY:O	1:B:368:SER:HB2	2.09	0.52
1:F:229:MET:HG3	1:F:262:VAL:HG13	1.91	0.52
1:E:517:GLY:HA3	1:E:557:VAL:O	2.09	0.52
1:B:77:PRO:HD2	1:B:337:PHE:CZ	2.45	0.52
1:A:5:PRO:HG2	1:A:19:ASP:CG	2.30	0.52
1:C:234:SER:HA	1:C:239:PRO:HA	1.92	0.52
1:D:18:GLU:OE2	1:D:325:ARG:NE	2.34	0.52
1:D:5:PRO:HG2	1:D:19:ASP:OD1	2.10	0.52
1:A:35:GLN:HB2	1:A:295:MET:HE3	1.92	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:137:CYS:SG	1:E:186:HIS:HB2	2.49	0.52
1:E:270:ARG:HD3	1:E:274:GLU:OE1	2.11	0.51
1:C:627:ARG:HG2	1:C:628:TYR:O	2.10	0.51
1:A:693:THR:OG1	1:A:695:VAL:O	2.20	0.51
1:A:26:LEU:HD21	1:A:310:VAL:HG11	1.91	0.51
1:B:345:VAL:O	1:B:349:GLN:HG3	2.11	0.51
1:F:43:GLY:HA2	1:F:68:LEU:HD13	1.92	0.51
1:D:72:THR:O	1:D:74:LEU:N	2.44	0.51
1:B:100:GLN:HG3	1:B:151:PHE:CD1	2.45	0.51
1:F:367:ARG:NH1	1:F:599:GLU:OE1	2.37	0.51
1:E:408:VAL:HG12	1:E:413:ALA:HB1	1.93	0.51
1:B:204:ILE:HG23	1:B:208:LYS:HD3	1.92	0.51
1:C:111:LEU:HG	1:C:364:VAL:HG22	1.92	0.51
1:D:580:PRO:HG2	1:D:584:GLY:HA3	1.93	0.51
1:B:266:ASP:HA	1:B:299:THR:OG1	2.11	0.51
1:C:266:ASP:HA	1:C:299:THR:OG1	2.11	0.51
1:B:576:TRP:CE2	1:B:578:ALA:HB2	2.47	0.50
1:F:60:GLU:CD	1:F:60:GLU:H	2.14	0.50
1:D:290:ARG:HG3	1:D:315:VAL:HG12	1.93	0.50
1:A:202:ALA:HB1	1:A:204:ILE:HD12	1.92	0.50
1:C:112:VAL:HG12	1:C:165:MET:HG3	1.93	0.50
1:F:419:GLN:OE1	1:F:444:THR:HA	2.12	0.50
1:E:304:GLU:O	1:E:308:GLU:HG3	2.12	0.50
1:A:576:TRP:CE2	1:A:578:ALA:HB2	2.46	0.50
1:D:3:THR:O	4:D:901:HOH:O	2.20	0.50
1:E:148:ASP:HB3	1:E:559:SER:HB2	1.93	0.50
1:E:264:ASP:OD1	2:E:801:BGC:H1	2.12	0.50
1:A:95:THR:HA	1:A:582:MET:CE	2.40	0.50
1:F:576:TRP:CZ2	1:F:578:ALA:HB2	2.47	0.50
1:A:137:CYS:SG	1:A:186:HIS:HB2	2.51	0.49
1:C:321:ASP:HB3	1:C:325:ARG:HH12	1.76	0.49
1:A:347:ARG:O	1:A:351:VAL:HG22	2.13	0.49
1:D:347:ARG:O	1:D:351:VAL:HG22	2.12	0.49
1:E:129:HIS:HD2	1:E:341:ARG:HD3	1.76	0.49
1:F:580:PRO:HG2	1:F:584:GLY:HA3	1.95	0.49
1:E:591:LEU:HD11	1:E:598:PRO:HG3	1.92	0.49
1:A:232:TYR:OH	2:A:801:BGC:H1	2.13	0.49
1:A:92:VAL:O	1:A:438:PRO:HD3	2.13	0.49
1:D:137:CYS:HB3	1:D:191:SER:HB3	1.94	0.49
1:A:277:ILE:HA	1:B:693:THR:O	2.11	0.49
1:E:34:LEU:HD21	1:E:302:PHE:CD2	2.48	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:234:SER:HA	1:B:239:PRO:HA	1.94	0.49
1:E:336:LEU:HA	1:E:339:ASP:O	2.12	0.49
1:C:69:THR:O	1:C:75:ARG:HG2	2.13	0.49
1:F:742:GLU:HG2	1:F:743:PHE:N	2.28	0.49
1:C:100:GLN:HG2	1:C:151:PHE:CE1	2.48	0.48
1:D:576:TRP:CZ2	1:D:578:ALA:HB2	2.47	0.48
1:E:100:GLN:HG3	1:E:151:PHE:CD1	2.48	0.48
1:E:669:GLU:HG2	1:E:719:GLY:HA2	1.93	0.48
1:C:425:GLY:HA2	1:C:433:LEU:HD11	1.95	0.48
1:D:102:GLY:O	1:D:368:SER:HB2	2.14	0.48
1:A:409:VAL:HG21	1:A:545:LEU:HD11	1.96	0.48
1:B:408:VAL:HG12	1:B:413:ALA:HB1	1.95	0.48
1:E:57:THR:HG23	1:E:61:ASN:HB2	1.96	0.48
1:C:137:CYS:HB3	1:C:191:SER:HB3	1.96	0.48
1:C:301:ARG:HG2	1:C:304:GLU:OE1	2.13	0.48
1:F:645:TYR:HB3	1:F:678:ARG:HD2	1.96	0.48
1:E:561:PRO:HB3	1:E:606:PHE:CD1	2.49	0.48
1:A:137:CYS:HB3	1:A:191:SER:HB3	1.96	0.48
1:B:92:VAL:O	1:B:438:PRO:HD3	2.13	0.48
1:A:234:SER:HA	1:A:239:PRO:HA	1.95	0.48
1:C:88:HIS:CD2	1:C:123:VAL:HG22	2.49	0.48
1:F:576:TRP:CE2	1:F:578:ALA:HB2	2.48	0.48
1:E:360:VAL:O	1:E:364:VAL:HG23	2.14	0.48
1:E:312:ARG:HB2	1:E:314:LEU:HG	1.94	0.47
1:E:398:PRO:HG2	1:E:401:ALA:HB3	1.95	0.47
1:E:576:TRP:CE2	1:E:578:ALA:HB2	2.49	0.47
1:B:6:TYR:HA	1:B:16:ARG:HB3	1.96	0.47
1:D:19:ASP:O	1:D:23:ARG:HG3	2.15	0.47
1:A:425:GLY:HA2	1:A:433:LEU:HD12	1.96	0.47
1:E:229:MET:HE3	2:E:801:BGC:H3	1.97	0.47
1:E:92:VAL:O	1:E:438:PRO:HD3	2.14	0.47
1:E:229:MET:CE	2:E:801:BGC:H3	2.45	0.47
1:F:63:LEU:HB3	4:F:1137:HOH:O	2.14	0.46
1:B:73:ARG:CZ	1:B:74:LEU:HD11	2.45	0.46
1:A:316:GLU:HG3	1:A:318:ALA:H	1.80	0.46
1:E:27:PRO:HB3	1:E:307:LEU:HD11	1.97	0.46
1:B:218:GLU:HB2	1:B:255:TRP:CZ2	2.50	0.46
1:E:88:HIS:CD2	1:E:91:TRP:HB2	2.50	0.46
1:A:746:ARG:NH2	1:A:753:GLU:OE2	2.47	0.46
1:C:696:THR:OG1	1:F:237:GLY:HA2	2.16	0.46
1:D:5:PRO:HG2	1:D:19:ASP:CG	2.36	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:325:ARG:HD2	4:F:998:HOH:O	2.16	0.45
1:E:102:GLY:O	1:E:368:SER:HB2	2.16	0.45
1:E:176:ASP:O	1:E:341:ARG:NH2	2.49	0.45
1:D:163:SER:OG	1:D:167:ARG:NH1	2.49	0.45
1:B:20:LEU:O	1:B:24:MET:HG3	2.17	0.45
1:E:347:ARG:O	1:E:351:VAL:HG22	2.16	0.45
1:D:561:PRO:HB3	1:D:606:PHE:CD1	2.51	0.45
1:B:8:ASP:HB3	1:B:11:VAL:HG23	1.99	0.45
1:A:450:ARG:NH1	1:A:459:VAL:O	2.50	0.45
1:C:329:THR:CG2	1:C:333:ARG:HE	2.24	0.45
1:D:264:ASP:OD1	2:D:801:BGC:H1	2.17	0.45
1:B:333:ARG:NH1	4:B:924:HOH:O	2.46	0.45
1:C:112:VAL:CG1	1:C:165:MET:HG3	2.47	0.45
1:F:408:VAL:HG12	1:F:413:ALA:HB1	1.98	0.45
1:E:576:TRP:CZ2	1:E:578:ALA:HB2	2.51	0.45
1:C:18:GLU:OE1	1:C:325:ARG:NE	2.46	0.44
1:E:356:GLU:H	1:E:356:GLU:HG2	1.46	0.44
1:A:5:PRO:HG2	1:A:19:ASP:OD1	2.17	0.44
1:A:638:ALA:O	1:A:641:GLU:HG2	2.17	0.44
1:B:450:ARG:NH1	1:B:459:VAL:O	2.49	0.44
1:D:387:ALA:N	1:D:396:LEU:HD23	2.32	0.44
1:C:151:PHE:HB2	1:C:158:ILE:HG12	1.98	0.44
1:D:232:TYR:OH	1:D:265:TRP:HB3	2.17	0.44
1:D:576:TRP:CE2	1:D:578:ALA:HB2	2.53	0.44
1:B:645:TYR:HB3	1:B:678:ARG:HD2	1.99	0.44
1:B:731:ASP:OD1	1:B:732:ALA:O	2.36	0.44
1:E:54:LEU:HG	1:E:78:LEU:HD12	1.98	0.44
1:A:119:THR:O	1:A:123:VAL:HG23	2.17	0.44
1:C:290:ARG:NH2	4:C:915:HOH:O	2.38	0.44
1:B:34:LEU:HB3	1:B:36:LEU:HD11	2.00	0.44
1:C:423:TRP:CZ3	1:C:429:GLN:HG2	2.52	0.44
1:F:623:GLN:HG3	1:F:625:GLY:O	2.18	0.44
1:E:310:VAL:HG22	1:E:315:VAL:HG23	2.00	0.44
1:A:21:LEU:HD11	1:A:29:LYS:HD3	1.99	0.43
1:B:26:LEU:HD21	1:B:310:VAL:CG2	2.37	0.43
1:B:187:PHE:O	1:B:240:VAL:HG11	2.18	0.43
1:D:295:MET:HE2	1:D:327:ILE:HG12	2.00	0.43
1:E:76:ILE:HG23	1:E:337:PHE:CZ	2.53	0.43
1:B:257:TYR:CZ	1:B:259:GLY:HA3	2.53	0.43
1:E:265:TRP:O	1:E:270:ARG:NH1	2.52	0.43
1:B:306:ALA:O	1:B:310:VAL:HG22	2.18	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:90:PHE:HA	1:A:433:LEU:HD11	2.01	0.43
1:C:398:PRO:HG2	1:C:401:ALA:HB3	2.00	0.43
1:E:170:GLN:HG2	1:E:180:ILE:O	2.19	0.43
1:C:273:TRP:CZ3	1:C:274:GLU:HB2	2.54	0.43
1:E:138:ILE:HD11	1:E:153:GLU:O	2.19	0.43
1:A:148:ASP:HB3	1:A:559:SER:HB2	2.01	0.42
1:B:20:LEU:HD11	1:B:74:LEU:HD23	2.01	0.42
1:B:347:ARG:HE	1:B:351:VAL:HG11	1.84	0.42
1:F:138:ILE:HD11	1:F:153:GLU:O	2.19	0.42
1:E:119:THR:O	1:E:123:VAL:HG23	2.19	0.42
1:F:102:GLY:O	1:F:368:SER:HB2	2.20	0.42
1:D:301:ARG:HG2	1:D:301:ARG:NH1	2.26	0.42
1:B:656:LEU:HD11	1:B:669:GLU:HG3	2.01	0.42
1:F:507:ARG:HD3	4:F:1264:HOH:O	2.19	0.42
1:E:301:ARG:HA	1:E:304:GLU:OE2	2.18	0.42
1:E:20:LEU:HD11	1:E:74:LEU:HD13	2.01	0.42
1:F:304:GLU:H	1:F:304:GLU:CD	2.22	0.42
1:B:372:LEU:HA	1:B:372:LEU:HD23	1.83	0.42
1:B:511:LEU:HD11	1:B:553:VAL:HG23	2.01	0.42
1:F:171:GLY:O	4:F:901:HOH:O	2.21	0.42
1:E:33:MET:CE	1:E:323:ALA:HB3	2.50	0.42
1:A:398:PRO:O	4:A:901:HOH:O	2.21	0.42
1:B:4:LEU:HD22	1:B:23:ARG:HH12	1.84	0.42
1:B:137:CYS:SG	1:B:186:HIS:HB2	2.60	0.42
1:E:321:ASP:HB3	1:E:325:ARG:NH2	2.35	0.42
1:C:174:LEU:HD13	1:C:333:ARG:HB2	2.01	0.41
1:D:423:TRP:CH2	1:D:429:GLN:HG2	2.55	0.41
1:E:746:ARG:HA	1:E:757:LEU:O	2.20	0.41
1:E:753:GLU:HA	1:E:756:LEU:HD12	2.02	0.41
1:C:5:PRO:O	1:C:16:ARG:HG2	2.20	0.41
1:C:148:ASP:HB3	1:C:559:SER:HB2	2.02	0.41
1:A:200:SER:HB2	4:A:1142:HOH:O	2.20	0.41
1:E:245:TRP:O	1:E:249:ASP:HB2	2.20	0.41
1:E:623:GLN:HG2	1:E:625:GLY:O	2.20	0.41
1:B:247:LEU:O	1:B:252:ARG:HG2	2.21	0.41
1:C:325:ARG:HB2	1:C:326:ARG:NH1	2.34	0.41
1:D:148:ASP:HB3	1:D:559:SER:HB2	2.01	0.41
1:E:30:VAL:HG12	1:E:303:PHE:HD1	1.85	0.41
1:C:100:GLN:HG2	1:C:151:PHE:CD1	2.56	0.41
1:B:745:LEU:O	1:B:758:ARG:HA	2.20	0.41
1:F:333:ARG:HH21	1:F:333:ARG:HD2	1.76	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:132:PHE:HB3	1:D:185:LYS:HE3	2.03	0.41
1:E:33:MET:HE1	1:E:323:ALA:HB3	2.01	0.41
1:E:36:LEU:HD12	1:E:51:ALA:HB2	2.02	0.41
1:E:57:THR:CG2	1:E:61:ASN:HB2	2.50	0.41
1:C:326:ARG:N	1:C:326:ARG:HD2	2.36	0.41
1:F:732:ALA:O	1:F:733:HIS:CG	2.73	0.41
1:B:14:ALA:O	1:B:18:GLU:HG2	2.21	0.41
1:B:20:LEU:CD1	1:B:74:LEU:HD23	2.51	0.41
1:B:261:LEU:O	1:B:294:ASP:HB2	2.21	0.41
1:C:732:ALA:O	1:C:733:HIS:HB2	2.21	0.41
1:F:58:SER:HB2	1:F:60:GLU:OE2	2.21	0.41
1:D:387:ALA:HB2	1:D:396:LEU:HD21	2.02	0.41
1:D:627:ARG:HA	1:D:633:GLN:HG3	2.03	0.41
1:E:56:HIS:HA	1:E:82:GLU:OE1	2.20	0.41
1:E:321:ASP:HB3	1:E:325:ARG:HH21	1.86	0.41
1:A:214:LEU:HA	1:A:214:LEU:HD23	1.84	0.41
1:A:732:ALA:C	1:A:734:GLY:H	2.24	0.41
1:F:584:GLY:O	1:F:588:VAL:HG23	2.21	0.41
1:D:92:VAL:O	1:D:438:PRO:HD3	2.21	0.41
1:F:270:ARG:NH2	1:F:274:GLU:OE1	2.54	0.40
1:D:409:VAL:HG12	1:D:462:ALA:HB3	2.04	0.40
1:B:31:GLY:O	1:B:34:LEU:HB2	2.21	0.40
1:C:31:GLY:HA2	1:C:34:LEU:HD12	2.03	0.40
1:F:4:LEU:HD23	1:F:7:LEU:HD23	2.03	0.40
1:B:248:ASP:O	1:B:253:GLY:N	2.48	0.40
1:D:306:ALA:O	1:D:310:VAL:HG23	2.21	0.40
1:A:42:VAL:HG12	1:A:68:LEU:CD1	2.50	0.40
1:A:208:LYS:NZ	4:A:908:HOH:O	2.54	0.40
1:B:55:LEU:HA	1:B:81:ALA:O	2.21	0.40
1:F:616:TYR:O	1:F:619:VAL:HG23	2.20	0.40
1:A:614:PRO:HD2	1:B:197:ARG:CZ	2.51	0.40
1:A:616:TYR:O	1:A:619:VAL:HG23	2.20	0.40
1:B:151:PHE:HB2	1:B:158:ILE:HG12	2.03	0.40
1:C:433:LEU:HG	1:C:433:LEU:O	2.22	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	743/768 (97%)	711 (96%)	31 (4%)	1 (0%)	51	68
1	B	740/768 (96%)	703 (95%)	36 (5%)	1 (0%)	51	68
1	C	741/768 (96%)	700 (94%)	38 (5%)	3 (0%)	34	48
1	D	742/768 (97%)	705 (95%)	32 (4%)	5 (1%)	22	32
1	E	728/768 (95%)	687 (94%)	36 (5%)	5 (1%)	22	32
1	F	739/768 (96%)	714 (97%)	15 (2%)	10 (1%)	11	15
All	All	4433/4608 (96%)	4220 (95%)	188 (4%)	25 (1%)	25	36

All (25) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	C	186	HIS
1	F	416	ASP
1	D	73	ARG
1	D	416	ASP
1	E	270	ARG
1	B	186	HIS
1	F	4	LEU
1	F	73	ARG
1	F	392	ASP
1	E	92	VAL
1	A	186	HIS
1	F	40	ASP
1	F	72	THR
1	F	172	ASP
1	F	186	HIS
1	F	733	HIS
1	D	4	LEU
1	E	416	ASP
1	E	733	HIS
1	C	657	GLY

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	C	733	HIS
1	F	303	PHE
1	D	40	ASP
1	E	56	HIS
1	D	474	PRO

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	574/589 (98%)	572 (100%)	2 (0%)	92	97
1	B	570/589 (97%)	567 (100%)	3 (0%)	88	95
1	C	573/589 (97%)	573 (100%)	0	100	100
1	D	569/589 (97%)	569 (100%)	0	100	100
1	E	564/589 (96%)	561 (100%)	3 (0%)	88	95
1	F	569/589 (97%)	566 (100%)	3 (0%)	88	95
All	All	3419/3534 (97%)	3408 (100%)	11 (0%)	92	97

All (11) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	433	LEU
1	A	435	ASP
1	B	23	ARG
1	B	92	VAL
1	B	652	ASP
1	F	78	LEU
1	F	92	VAL
1	F	473	ASP
1	E	16	ARG
1	E	92	VAL
1	E	720	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (8) such

sidechains are listed below:

Mol	Chain	Res	Type
1	A	349	GLN
1	B	417	HIS
1	B	633	GLN
1	F	293	ASN
1	F	349	GLN
1	D	88	HIS
1	D	293	ASN
1	E	186	HIS

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 monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 12 ligands modelled in this entry, 6 are monoatomic - leaving 6 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	BGC	E	801	-	12,12,12	1.24	0	17,17,17	0.78	0
2	BGC	D	801	-	12,12,12	1.20	0	17,17,17	0.63	0
2	BGC	C	801	-	12,12,12	1.31	1 (8%)	17,17,17	1.63	2 (11%)
2	BGC	B	801	-	12,12,12	1.21	1 (8%)	17,17,17	1.95	4 (23%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	BGC	A	801	-	12,12,12	1.47	3 (25%)	17,17,17	1.62	5 (29%)
2	BGC	F	801	-	12,12,12	1.22	0	17,17,17	1.37	3 (17%)

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	BGC	E	801	-	-	2/2/22/22	0/1/1/1
2	BGC	D	801	-	-	2/2/22/22	0/1/1/1
2	BGC	C	801	-	-	2/2/22/22	0/1/1/1
2	BGC	B	801	-	-	2/2/22/22	0/1/1/1
2	BGC	A	801	-	-	0/2/22/22	0/1/1/1
2	BGC	F	801	-	-	2/2/22/22	0/1/1/1

All (5) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	801	BGC	O5-C5	2.34	1.50	1.44
2	B	801	BGC	C3-C2	-2.33	1.46	1.52
2	A	801	BGC	C1-C2	2.19	1.57	1.52
2	C	801	BGC	C3-C2	-2.04	1.47	1.52
2	A	801	BGC	O5-C1	2.02	1.48	1.42

All (14) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	801	BGC	C1-O5-C5	-4.74	104.72	113.66
2	C	801	BGC	O5-C1-C2	4.33	118.02	110.28
2	B	801	BGC	O5-C1-C2	4.03	117.47	110.28
2	B	801	BGC	O3-C3-C2	-3.47	102.32	110.35
2	A	801	BGC	O5-C1-C2	3.07	115.76	110.28
2	A	801	BGC	C1-O5-C5	2.89	119.11	113.66
2	A	801	BGC	O5-C5-C6	2.74	113.25	106.44
2	F	801	BGC	O5-C1-C2	2.73	115.17	110.28
2	C	801	BGC	O5-C5-C4	2.58	114.38	109.69
2	F	801	BGC	O3-C3-C2	-2.33	104.95	110.35
2	F	801	BGC	C1-O5-C5	-2.31	109.30	113.66
2	A	801	BGC	O5-C5-C4	2.23	113.75	109.69

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	801	BGC	O1-C1-C2	2.17	115.14	109.03
2	A	801	BGC	O1-C1-C2	2.07	114.86	109.03

There are no chirality outliers.

All (10) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	C	801	BGC	O5-C5-C6-O6
2	C	801	BGC	C4-C5-C6-O6
2	E	801	BGC	C4-C5-C6-O6
2	B	801	BGC	O5-C5-C6-O6
2	B	801	BGC	C4-C5-C6-O6
2	E	801	BGC	O5-C5-C6-O6
2	F	801	BGC	C4-C5-C6-O6
2	F	801	BGC	O5-C5-C6-O6
2	D	801	BGC	O5-C5-C6-O6
2	D	801	BGC	C4-C5-C6-O6

There are no ring outliers.

4 monomers are involved in 6 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	E	801	BGC	3	0
2	D	801	BGC	1	0
2	B	801	BGC	1	0
2	A	801	BGC	1	0

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled ‘#RSRZ > 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 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	749/768 (97%)	-0.37	21 (2%) 53 51	24, 36, 56, 99	0
1	B	746/768 (97%)	-0.19	33 (4%) 34 33	25, 39, 79, 95	0
1	C	747/768 (97%)	-0.26	30 (4%) 38 37	23, 35, 74, 94	0
1	D	748/768 (97%)	-0.33	25 (3%) 46 45	28, 39, 60, 100	0
1	E	740/768 (96%)	0.07	62 (8%) 11 10	28, 45, 108, 125	0
1	F	747/768 (97%)	-0.41	12 (1%) 72 70	23, 34, 54, 89	0
All	All	4477/4608 (97%)	-0.25	183 (4%) 37 36	23, 38, 78, 125	0

All (183) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	10	ALA	4.9
1	E	75	ARG	4.9
1	D	172	ASP	4.9
1	C	11	VAL	4.9
1	E	765	GLY	4.8
1	E	10	ALA	4.8
1	C	391	PRO	4.8
1	E	15	ASP	4.8
1	A	391	PRO	4.7
1	F	765	GLY	4.7
1	D	391	PRO	4.6
1	E	42	VAL	4.6
1	D	175	SER	4.6
1	B	4	LEU	4.6
1	E	9	PRO	4.5
1	F	175	SER	4.5
1	E	175	SER	4.5
1	B	3	THR	4.4
1	E	393	GLY	4.4

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	C	475	GLU	4.4
1	A	659	GLU	4.4
1	B	473	ASP	4.3
1	B	387	ALA	4.2
1	E	67	GLU	4.2
1	B	472	PRO	4.2
1	E	22	ALA	4.2
1	A	475	GLU	4.2
1	D	393	GLY	4.2
1	E	60	GLU	4.1
1	E	73	ARG	4.1
1	E	26	LEU	4.0
1	D	473	ASP	4.0
1	B	765	GLY	4.0
1	E	172	ASP	3.9
1	A	390	THR	3.9
1	A	658	THR	3.9
1	E	72	THR	3.8
1	C	174	LEU	3.8
1	E	71	ARG	3.7
1	F	391	PRO	3.7
1	C	71	ARG	3.7
1	C	392	ASP	3.7
1	B	311	ASP	3.6
1	E	51	ALA	3.6
1	D	472	PRO	3.5
1	E	472	PRO	3.5
1	F	388	ALA	3.5
1	D	474	PRO	3.5
1	C	316	GLU	3.5
1	E	473	ASP	3.4
1	B	12	PRO	3.4
1	E	8	ASP	3.4
1	E	316	GLU	3.4
1	E	474	PRO	3.3
1	C	317	GLU	3.3
1	D	173	GLY	3.3
1	D	387	ALA	3.3
1	E	43	GLY	3.3
1	E	319	ALA	3.3
1	F	473	ASP	3.3
1	E	19	ASP	3.3

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	A	392	ASP	3.2
1	E	312	ARG	3.2
1	C	5	PRO	3.2
1	E	333	ARG	3.2
1	B	317	GLU	3.2
1	E	92	VAL	3.2
1	B	174	LEU	3.2
1	C	175	SER	3.2
1	B	175	SER	3.2
1	E	307	LEU	3.2
1	B	71	ARG	3.2
1	C	765	GLY	3.2
1	C	67	GLU	3.1
1	C	12	PRO	3.1
1	F	472	PRO	3.1
1	F	172	ASP	3.1
1	A	393	GLY	3.1
1	E	434	PRO	3.0
1	D	663	ASP	3.0
1	A	764	ALA	3.0
1	E	304	GLU	3.0
1	E	11	VAL	2.9
1	E	63	LEU	2.9
1	B	172	ASP	2.9
1	C	393	GLY	2.9
1	A	733	HIS	2.9
1	E	281	TYR	2.9
1	B	40	ASP	2.9
1	D	392	ASP	2.9
1	B	9	PRO	2.9
1	E	311	ASP	2.8
1	E	342	ARG	2.8
1	E	273	TRP	2.8
1	A	473	ASP	2.8
1	E	13	VAL	2.8
1	B	48	GLU	2.8
1	D	431	ASP	2.8
1	B	342	ARG	2.8
1	D	434	PRO	2.8
1	B	222	ARG	2.8
1	A	472	PRO	2.8
1	D	455	GLU	2.7

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	A	652	ASP	2.7
1	E	70	GLY	2.7
1	B	316	GLU	2.7
1	E	18	GLU	2.7
1	C	172	ASP	2.7
1	C	473	ASP	2.7
1	E	318	ALA	2.6
1	B	393	GLY	2.6
1	B	455	GLU	2.6
1	D	433	LEU	2.6
1	D	475	GLU	2.6
1	D	733	HIS	2.6
1	A	754	ASP	2.6
1	E	40	ASP	2.6
1	C	474	PRO	2.6
1	C	311	ASP	2.6
1	E	176	ASP	2.6
1	B	72	THR	2.6
1	E	46	VAL	2.6
1	F	455	GLU	2.6
1	E	317	GLU	2.6
1	D	41	GLY	2.6
1	D	174	LEU	2.5
1	B	344	ASP	2.5
1	B	733	HIS	2.5
1	B	392	ASP	2.5
1	E	338	GLU	2.5
1	E	313	GLY	2.5
1	A	735	ARG	2.5
1	B	73	ARG	2.5
1	E	279	PRO	2.5
1	E	6	TYR	2.5
1	E	173	GLY	2.5
1	E	12	PRO	2.4
1	C	10	ALA	2.4
1	F	10	ALA	2.4
1	E	76	ILE	2.4
1	A	474	PRO	2.4
1	C	23	ARG	2.4
1	B	11	VAL	2.4
1	E	733	HIS	2.4
1	D	435	ASP	2.4

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	F	387	ALA	2.4
1	E	52	GLY	2.3
1	A	92	VAL	2.3
1	B	23	ARG	2.3
1	C	273	TRP	2.3
1	C	387	ALA	2.3
1	A	667	ARG	2.3
1	D	177	PRO	2.3
1	D	10	ALA	2.3
1	A	172	ASP	2.3
1	B	754	ASP	2.3
1	C	304	GLU	2.3
1	C	754	ASP	2.2
1	E	222	ARG	2.2
1	C	73	ARG	2.2
1	F	173	GLY	2.2
1	C	63	LEU	2.2
1	A	732	ALA	2.2
1	D	494	PRO	2.2
1	E	276	HIS	2.1
1	A	399	ALA	2.1
1	A	626	VAL	2.1
1	B	658	THR	2.1
1	E	69	THR	2.1
1	F	754	ASP	2.1
1	C	22	ALA	2.1
1	E	754	ASP	2.1
1	D	754	ASP	2.0
1	E	435	ASP	2.0
1	B	5	PRO	2.0
1	B	345	VAL	2.0
1	C	48	GLU	2.0
1	D	440	GLU	2.0
1	E	23	ARG	2.0
1	E	58	SER	2.0
1	C	40	ASP	2.0
1	E	663	ASP	2.0
1	C	9	PRO	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 monosaccharides in this entry.

6.4 Ligands [i](#)

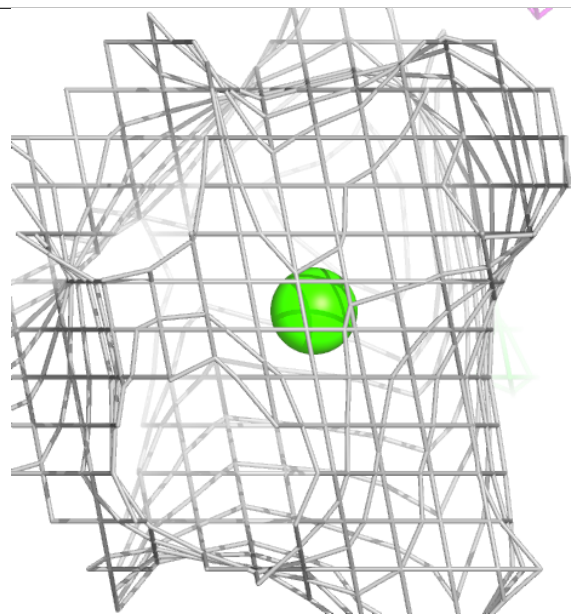
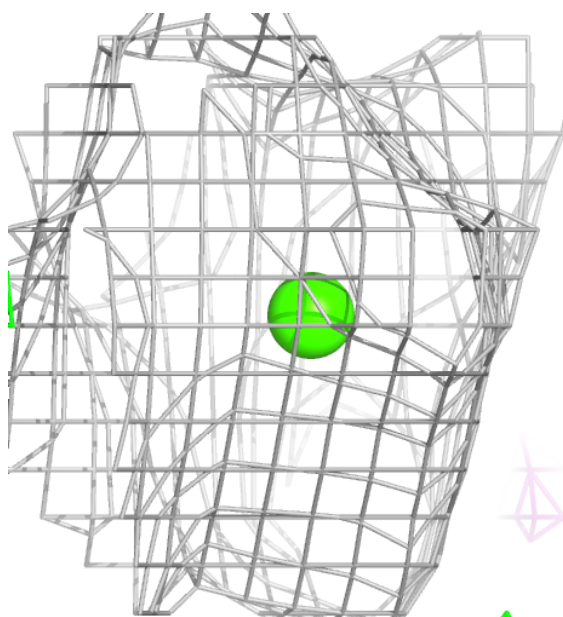
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists 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	BGC	B	801	12/12	0.89	0.22	38,45,50,56	0
2	BGC	E	801	12/12	0.92	0.14	45,51,56,59	0
3	CA	A	802	1/1	0.92	0.03	60,60,60,60	0
2	BGC	C	801	12/12	0.95	0.14	30,39,46,47	0
2	BGC	A	801	12/12	0.96	0.18	34,35,43,45	0
2	BGC	F	801	12/12	0.96	0.10	28,36,39,39	0
3	CA	E	802	1/1	0.96	0.04	58,58,58,58	0
3	CA	F	802	1/1	0.97	0.05	52,52,52,52	0
2	BGC	D	801	12/12	0.97	0.08	34,40,46,47	0
3	CA	B	802	1/1	0.98	0.04	48,48,48,48	0
3	CA	D	802	1/1	0.98	0.03	58,58,58,58	0
3	CA	C	802	1/1	0.98	0.05	50,50,50,50	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.

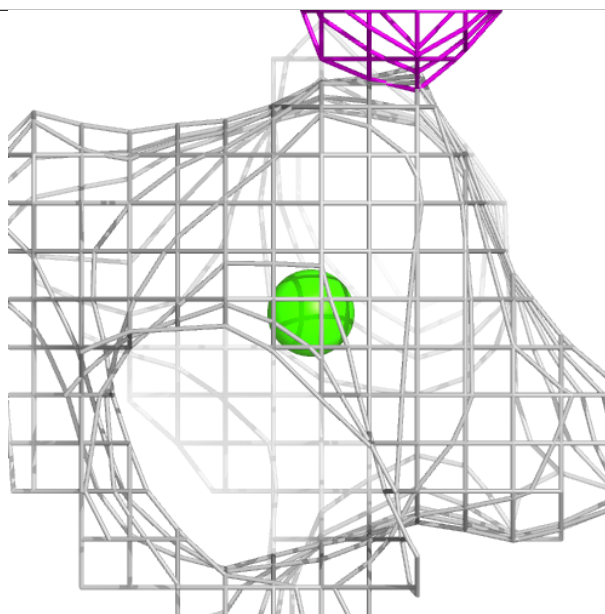
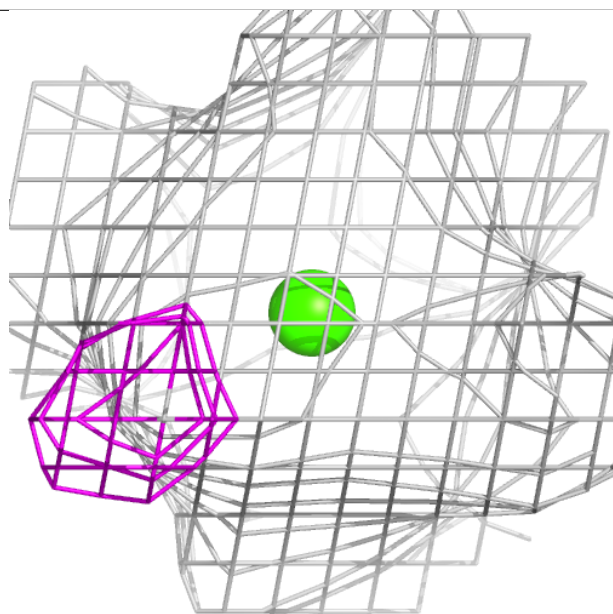
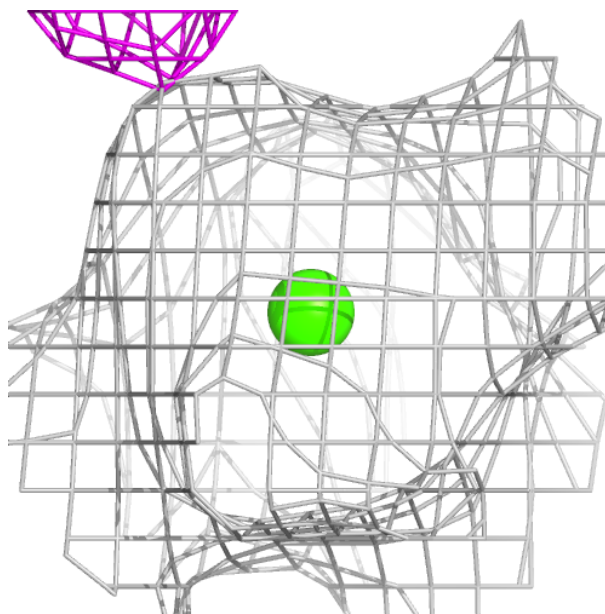
Electron density around CA A 802:

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



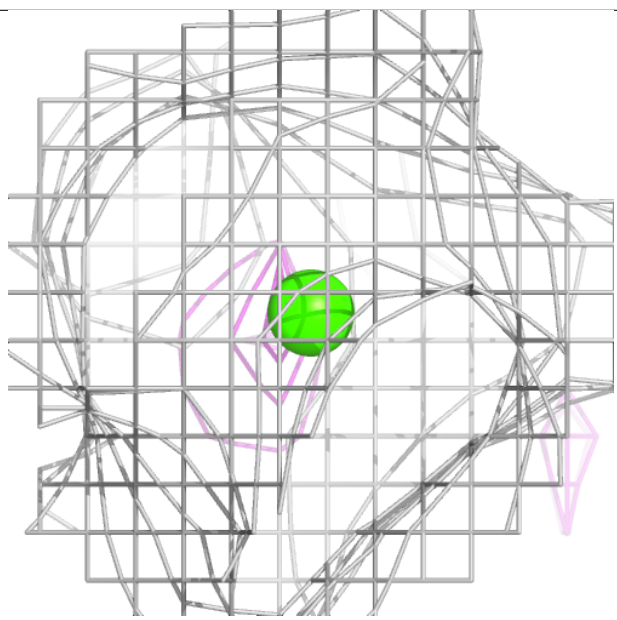
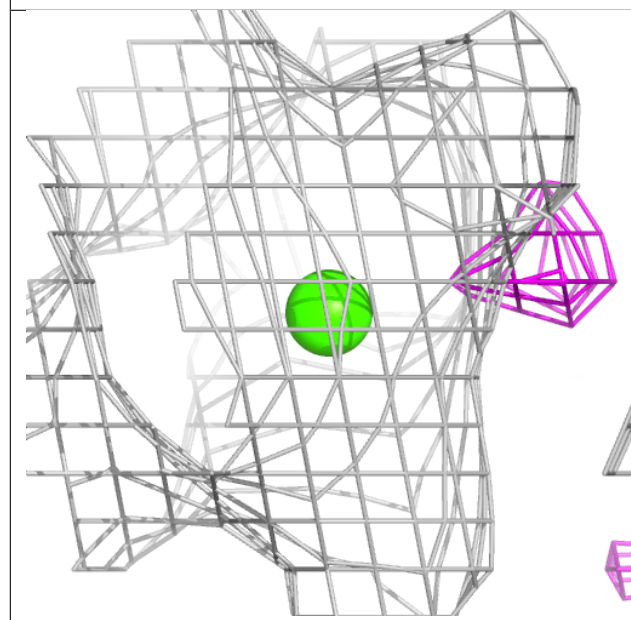
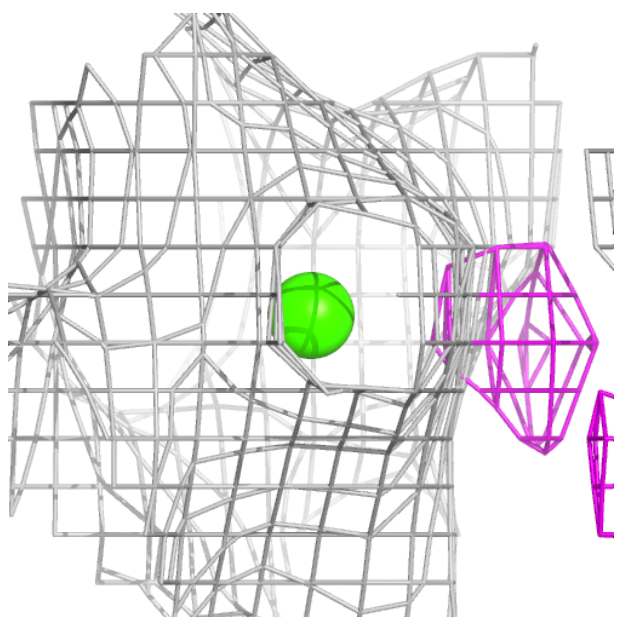
Electron density around CA E 802:

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



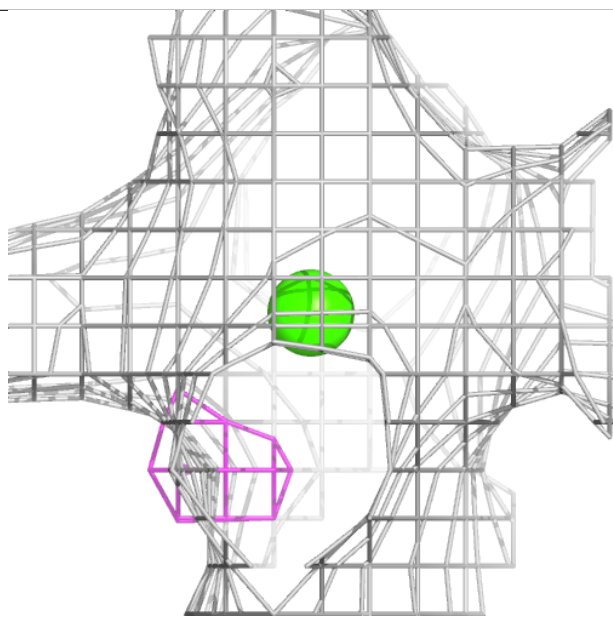
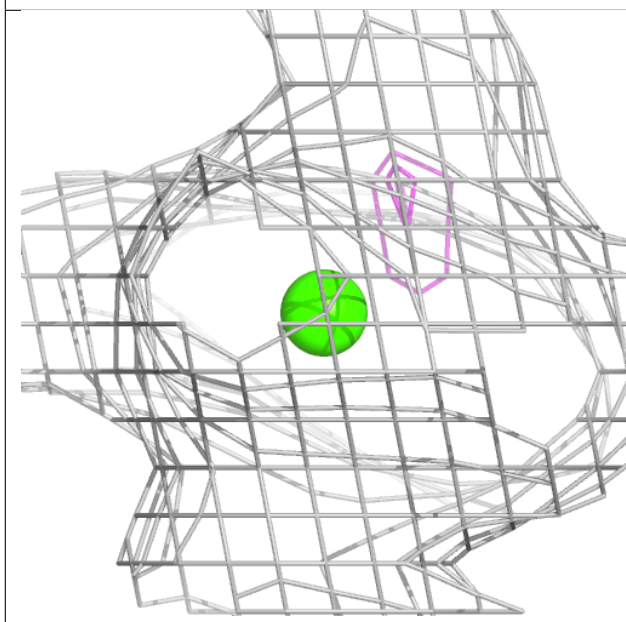
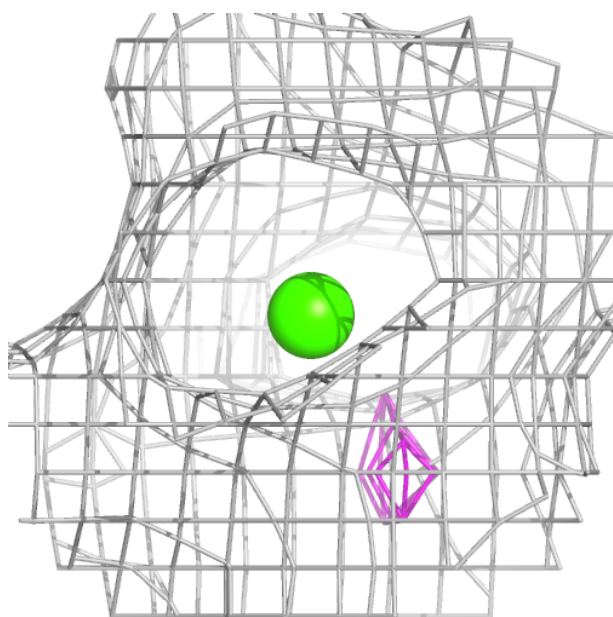
Electron density around CA F 802:

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



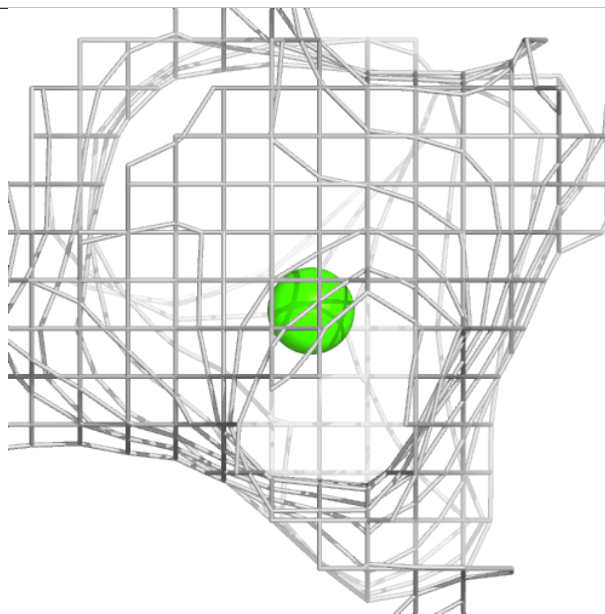
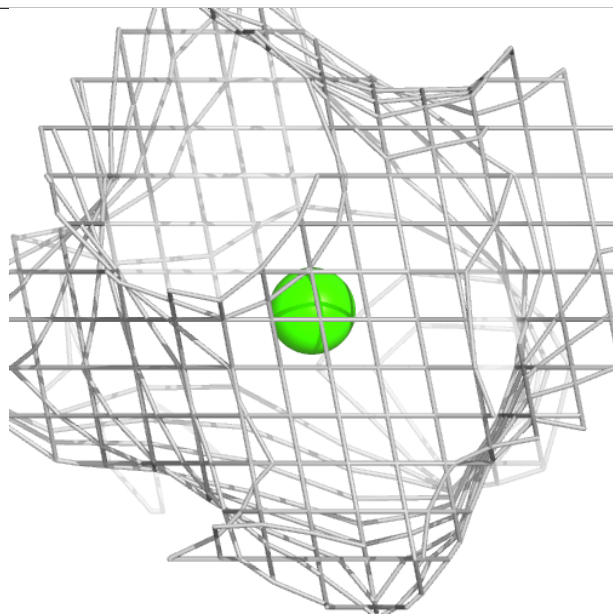
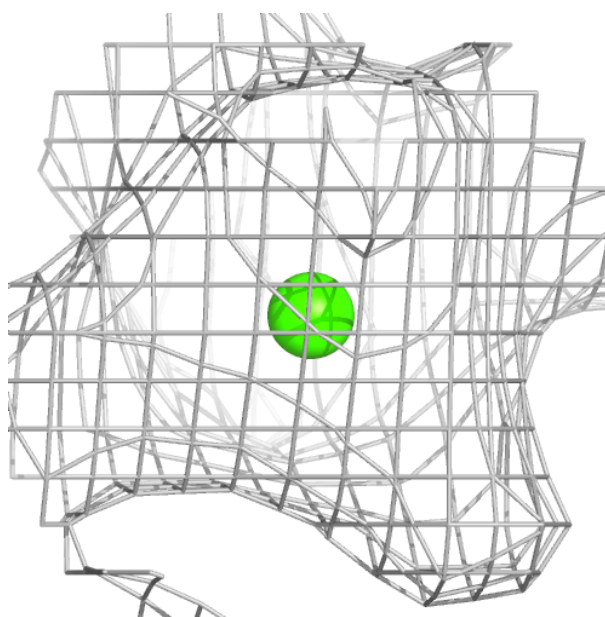
Electron density around CA B 802:

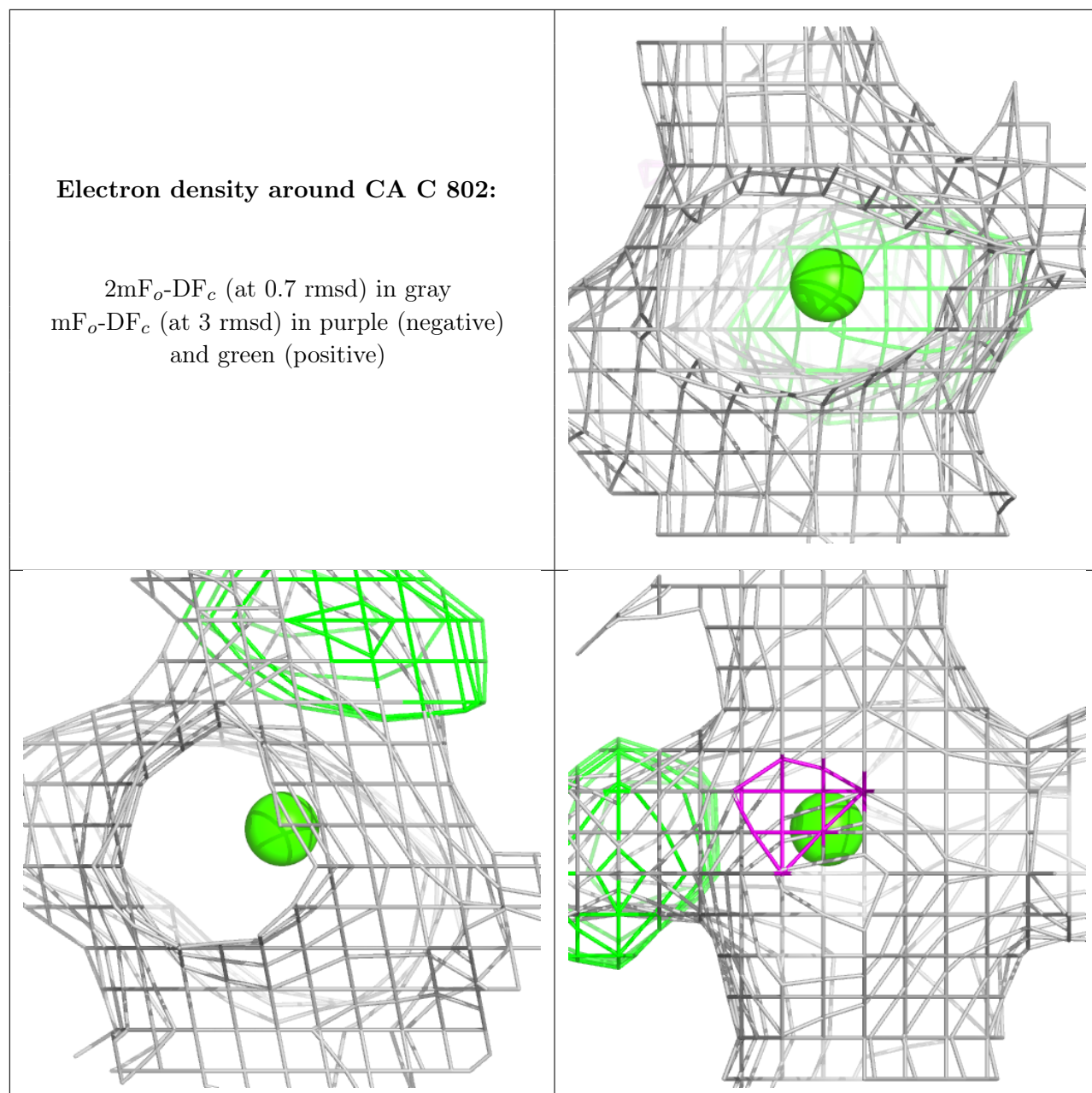
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



Electron density around CA D 802:

$2mF_o-DF_c$ (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.