Full wwPDB X-ray Structure Validation Report ⓘ

Jun 12, 2024 – 08:54 PM EDT

PDB ID	:	3FZ6
Title	:	Crystal structure of glutamate decarboxylase beta from Escherichia coli: complex with xenon
Authors	:	Malashkevich, V.N.; De Biase, D.; Bossa, F.
Deposited on	:	2009-01-23
Resolution	:	2.82 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:

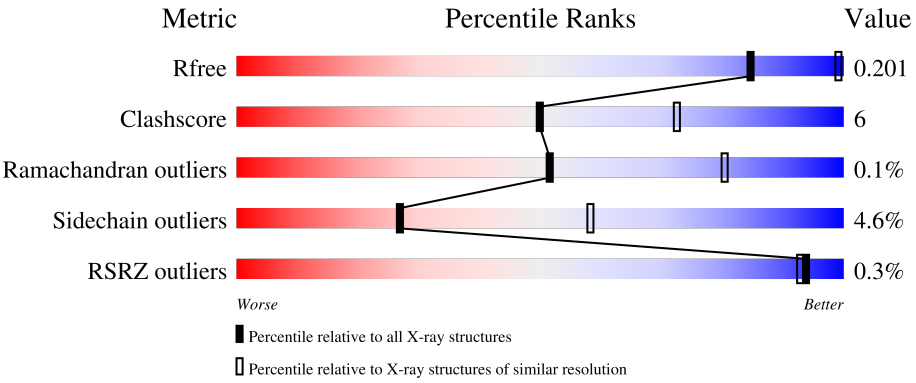
MolProbity	:	4.02b-467
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	1.20.1
EDS	:	2.36.2
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36.2

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 2.82 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	3617 (2.84-2.80)
Clashscore	141614	4060 (2.84-2.80)
Ramachandran outliers	138981	3978 (2.84-2.80)
Sidechain outliers	138945	3980 (2.84-2.80)
RSRZ outliers	127900	3552 (2.84-2.80)

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 <=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	466	85% 12%
1	B	466	% 81% 15%
1	C	466	82% 14%
1	D	466	81% 16%
1	E	466	86% 12%

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Mol	Chain	Length	Quality of chain
1	F	466	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
2	PMP	D	500	-	-	X	-
2	PMP	E	500	-	-	X	-

2 Entry composition

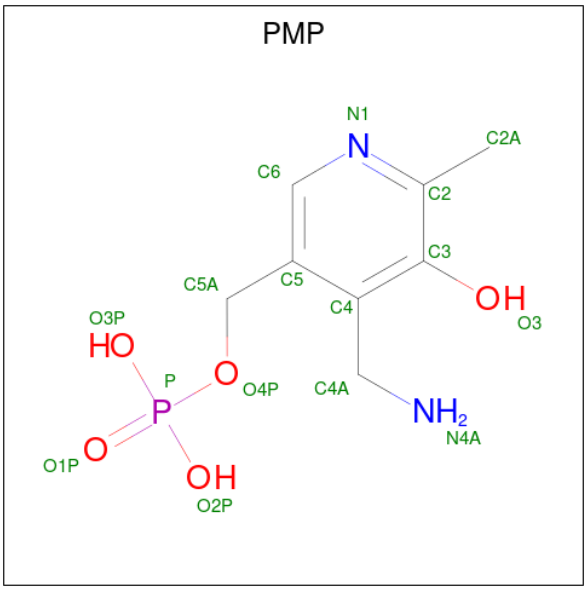
There are 4 unique types of molecules in this entry. The entry contains 22347 atoms, of which 0 are hydrogens and 0 are deuteriums.

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 Glutamate decarboxylase beta.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	455	Total	C	N	O	S	0	2	0
			3636	2325	618	669	24			
1	B	463	Total	C	N	O	S	0	1	0
			3690	2355	630	681	24			
1	C	455	Total	C	N	O	S	0	0	0
			3616	2308	617	667	24			
1	D	455	Total	C	N	O	S	0	1	0
			3625	2316	617	668	24			
1	E	464	Total	C	N	O	S	0	1	0
			3699	2361	632	682	24			
1	F	455	Total	C	N	O	S	0	0	0
			3616	2308	617	667	24			

- Molecule 2 is 4'-DEOXY-4'-AMINOPYRIDOXAL-5'-PHOSPHATE (three-letter code: PMP) (formula: $C_8H_{13}N_2O_5P$).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
2	A	1	Total	C	N	O	P	0	0
			16	8	2	5	1		
2	B	1	Total	C	N	O	P	0	0
			16	8	2	5	1		
2	C	1	Total	C	N	O	P	0	0
			16	8	2	5	1		
2	D	1	Total	C	N	O	P	0	0
			16	8	2	5	1		
2	E	1	Total	C	N	O	P	0	0
			16	8	2	5	1		
2	F	1	Total	C	N	O	P	0	0
			16	8	2	5	1		

- Molecule 3 is XENON (three-letter code: XE) (formula: Xe).

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

- Molecule 4 is water.

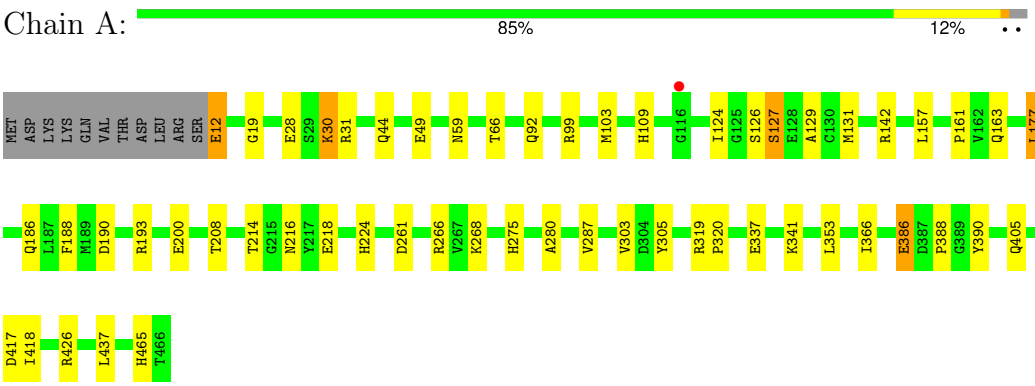
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	E	363	Total	O	0	0
			363	363		

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.

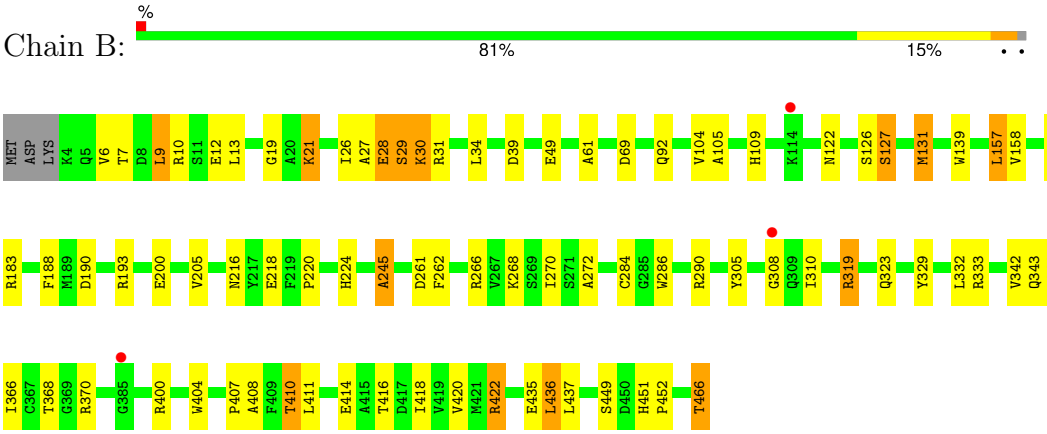
• Molecule 1: Glutamate decarboxylase beta

Chain A:



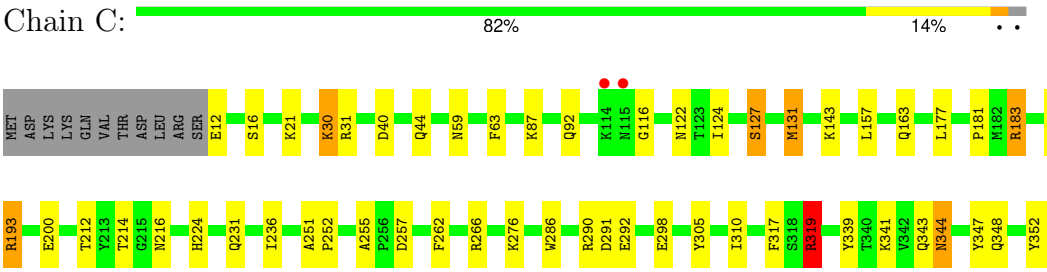
• Molecule 1: Glutamate decarboxylase beta

Chain B:



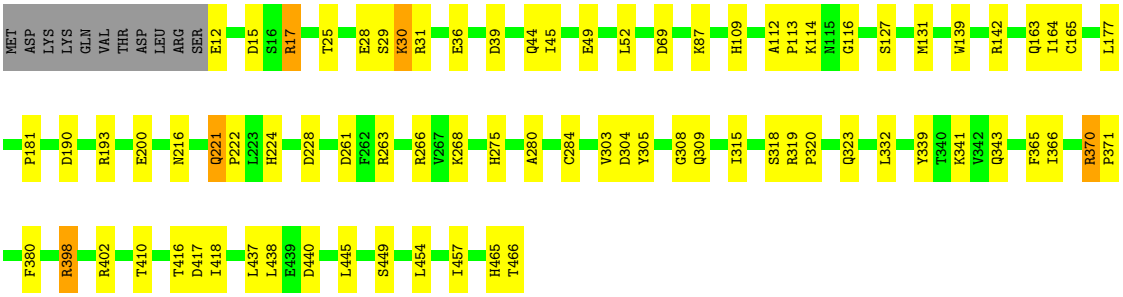
• Molecule 1: Glutamate decarboxylase beta

Chain C:



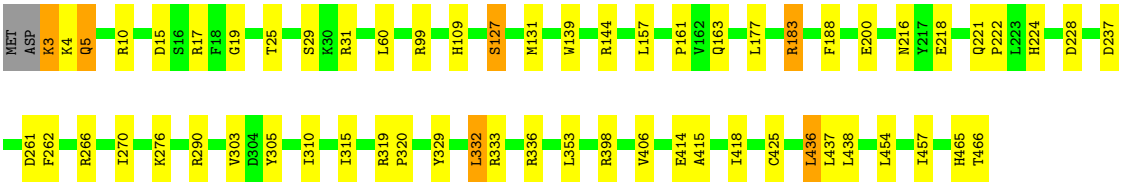
• Molecule 1: Glutamate decarboxylase beta

Chain D:



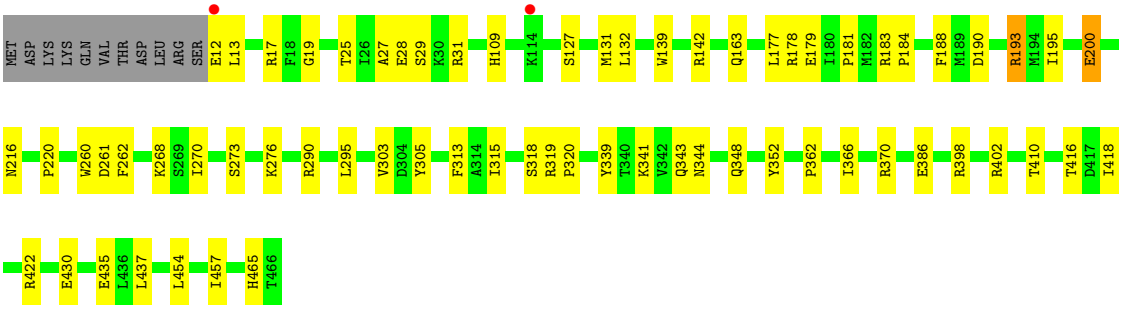
• Molecule 1: Glutamate decarboxylase beta

Chain E:



• Molecule 1: Glutamate decarboxylase beta

Chain F:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 32	Depositor
Cell constants a, b, c, α, β, γ	116.73Å 116.73Å 208.42Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	19.85 – 2.82 19.80 – 2.82	Depositor EDS
% Data completeness (in resolution range)	97.8 (19.85-2.82) 97.9 (19.80-2.82)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	3.65 (at 2.83Å)	Xtriage
Refinement program	REFMAC	Depositor
R, R_{free}	0.135 , 0.203 0.137 , 0.201	Depositor DCC
R_{free} test set	3768 reflections (5.02%)	wwPDB-VP
Wilson B-factor (Å^2)	30.0	Xtriage
Anisotropy	0.032	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.30 , 29.9	EDS
L-test for twinning[2]	$< \|L\| > = 0.49$, $< L^2 > = 0.32$	Xtriage
Estimated twinning fraction	0.009 for -h,-k,l 0.030 for h,-h-k,-l 0.022 for -k,-h,-l	Xtriage
F_o,F_c correlation	0.96	EDS
Total number of atoms	22347	wwPDB-VP
Average B, all atoms (Å^2)	16.0	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.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: XE, PMP

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	0.70	0/3735	0.80	1/5062 (0.0%)
1	B	0.72	0/3788	0.81	5/5133 (0.1%)
1	C	0.78	0/3710	0.85	5/5028 (0.1%)
1	D	0.74	1/3723 (0.0%)	0.83	5/5046 (0.1%)
1	E	0.78	1/3797 (0.0%)	0.82	3/5144 (0.1%)
1	F	0.76	0/3710	0.80	4/5028 (0.1%)
All	All	0.75	2/22463 (0.0%)	0.82	23/30441 (0.1%)

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	D	165	CYS	CB-SG	-5.47	1.73	1.81
1	E	425	CYS	CB-SG	-5.18	1.73	1.81

All (23) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	422	ARG	NE-CZ-NH2	7.07	123.83	120.30
1	C	40	ASP	CB-CG-OD1	6.85	124.47	118.30
1	E	157	LEU	CA-CB-CG	6.78	130.89	115.30
1	F	290	ARG	NE-CZ-NH2	-6.58	117.01	120.30
1	E	436	LEU	CA-CB-CG	6.46	130.16	115.30
1	B	157	LEU	CA-CB-CG	6.42	130.07	115.30
1	E	332	LEU	CB-CG-CD1	-5.78	101.17	111.00
1	C	319	ARG	NE-CZ-NH1	-5.72	117.44	120.30
1	B	319	ARG	NE-CZ-NH1	-5.38	117.61	120.30
1	D	398	ARG	NE-CZ-NH2	-5.38	117.61	120.30
1	B	39	ASP	CB-CG-OD1	5.34	123.11	118.30
1	F	17	ARG	NE-CZ-NH2	-5.34	117.63	120.30
1	F	178	ARG	NE-CZ-NH2	-5.33	117.64	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	C	291	ASP	CB-CG-OD1	5.26	123.04	118.30
1	F	193	ARG	NE-CZ-NH2	-5.23	117.69	120.30
1	C	193	ARG	NE-CZ-NH1	5.21	122.90	120.30
1	B	436	LEU	CA-CB-CG	5.18	127.22	115.30
1	A	177	LEU	CA-CB-CG	5.11	127.06	115.30
1	D	69	ASP	CB-CG-OD1	5.11	122.90	118.30
1	D	39	ASP	CB-CG-OD2	-5.10	113.71	118.30
1	C	436	LEU	CB-CG-CD2	-5.08	102.37	111.00
1	D	17	ARG	NE-CZ-NH2	-5.06	117.77	120.30
1	D	304	ASP	CB-CG-OD1	5.02	122.82	118.30

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts (i)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	3636	0	3533	36	0
1	B	3690	0	3595	46	0
1	C	3616	0	3516	51	0
1	D	3625	0	3525	48	0
1	E	3699	0	3608	42	0
1	F	3616	0	3516	45	0
2	A	16	0	11	2	0
2	B	16	0	11	5	0
2	C	16	0	11	5	0
2	D	16	0	11	7	0
2	E	16	0	11	6	0
2	F	16	0	11	4	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	E	363	0	0	10	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
All	All	22347	0	21359	252	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 6.

All (252) 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)
2:B:500:PMP:HNA1	2:B:500:PMP:H5A1	0.97	1.09
2:B:500:PMP:HNA1	2:B:500:PMP:C5A	1.63	1.04
1:D:163:GLN:HG3	2:D:500:PMP:HNA1	1.23	1.02
1:E:305[A]:TYR:HE1	1:E:310:ILE:HG13	1.28	0.97
1:E:305[A]:TYR:CE1	1:E:310:ILE:HG13	2.03	0.93
2:B:500:PMP:H5A1	2:B:500:PMP:N4A	1.82	0.92
1:C:190:ASP:OD1	1:C:193:ARG:HD3	1.75	0.87
1:C:163:GLN:HG3	2:C:500:PMP:HNA1	1.40	0.85
1:A:59:ASN:O	1:A:426:ARG:NH2	2.12	0.82
1:C:30:LYS:HE3	1:D:116:GLY:O	1.81	0.80
1:F:190:ASP:OD1	1:F:193:ARG:HD3	1.82	0.80
1:F:303:VAL:HG23	1:F:305:TYR:CE1	2.16	0.79
2:B:500:PMP:C5A	2:B:500:PMP:N4A	2.43	0.77
1:E:303:VAL:HG23	1:E:305[B]:TYR:CE2	2.20	0.76
1:B:352:TYR:OH	1:B:435:GLU:OE1	2.03	0.76
1:B:368:THR:O	1:B:370:ARG:NH2	2.18	0.76
1:B:27:ALA:O	1:B:28:GLU:HB2	1.85	0.76
1:E:465:HIS:ND1	4:E:804:HOH:O	2.11	0.74
1:C:131:MET:CE	1:D:315:ILE:HG23	2.18	0.73
1:D:190:ASP:OD1	1:D:193:ARG:HD3	1.87	0.73
1:A:188[A]:PHE:HZ	1:A:216:ASN:HD22	1.32	0.73
1:F:465:HIS:O	2:F:500:PMP:N4A	2.23	0.71
1:D:163:GLN:CG	2:D:500:PMP:HNA1	2.00	0.70
1:A:99:ARG:HD3	1:B:29:SER:HB2	1.71	0.70
1:E:127:SER:O	1:E:131:MET:HG2	1.91	0.70
1:D:12:GLU:HB2	4:E:818:HOH:O	1.92	0.69
1:E:144:ARG:NH2	4:E:667:HOH:O	2.24	0.69
1:C:466:THR:HG23	1:C:466:THR:OXT	1.91	0.68
1:B:19:GLY:O	1:C:341:LYS:HE3	1.94	0.68
1:C:183:ARG:HG3	1:C:186:GLN:HB3	1.76	0.66
1:E:415:ALA:HB1	1:E:418:ILE:HD12	1.76	0.66
1:E:163:GLN:HG3	2:E:500:PMP:C4	2.26	0.66
1:D:181:PRO:O	1:D:193:ARG:NH2	2.30	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:25:THR:O	1:E:29:SER:HB3	1.97	0.65
1:C:30:LYS:CE	1:D:116:GLY:O	2.45	0.64
1:A:181:PRO:O	1:A:193:ARG:NH2	2.31	0.64
1:C:415:ALA:HB1	1:C:418:ILE:HD12	1.78	0.64
1:E:144:ARG:CZ	4:E:667:HOH:O	2.46	0.64
1:A:190:ASP:OD1	1:A:193:ARG:HD3	1.97	0.64
1:B:190:ASP:OD1	1:B:193:ARG:HD3	1.96	0.64
1:E:303:VAL:HG23	1:E:305[B]:TYR:HE2	1.61	0.63
1:A:386:GLU:HG3	4:E:673:HOH:O	1.97	0.63
1:B:343:GLN:HA	1:B:343:GLN:OE1	1.98	0.63
1:C:131:MET:HE3	1:D:315:ILE:HG23	1.80	0.62
1:A:341:LYS:HE3	1:F:19:GLY:O	2.00	0.61
1:E:319:ARG:HB2	1:E:320:PRO:HD2	1.82	0.61
1:C:131:MET:HE2	1:D:315:ILE:HG23	1.81	0.61
1:C:305:TYR:HE1	1:C:310:ILE:HG13	1.64	0.61
1:D:305[A]:TYR:CD1	1:D:308:GLY:O	2.53	0.61
1:A:49:GLU:O	1:B:92:GLN:HG2	2.00	0.61
1:C:214:THR:OG1	1:C:216:ASN:ND2	2.33	0.60
1:A:465:HIS:O	2:A:500:PMP:N4A	2.35	0.60
1:C:116:GLY:O	1:D:30:LYS:HE2	2.02	0.59
1:D:25:THR:O	1:D:29:SER:HB3	2.02	0.59
1:F:352:TYR:OH	1:F:435:GLU:OE1	2.14	0.59
1:F:303:VAL:HG23	1:F:305:TYR:HE1	1.66	0.59
1:F:362:PRO:HB2	1:F:386:GLU:HG2	1.85	0.59
2:E:500:PMP:C5A	2:E:500:PMP:N4A	2.67	0.58
1:D:216:ASN:HD21	1:D:366:ILE:HG22	1.67	0.58
1:A:224:HIS:CD2	1:A:266:ARG:HB2	2.39	0.57
1:F:25:THR:O	1:F:29:SER:HB3	2.03	0.57
1:B:109:HIS:HD2	1:B:261:ASP:OD2	1.86	0.57
1:D:303:VAL:HG23	1:D:305[B]:TYR:CE2	2.40	0.57
1:A:19:GLY:O	1:F:341:LYS:HE3	2.05	0.56
1:B:158:VAL:HB	1:B:205:VAL:HG22	1.87	0.56
1:B:181:PRO:O	1:B:193:ARG:NH2	2.39	0.56
1:C:163:GLN:CG	2:C:500:PMP:HNA1	2.13	0.56
1:C:181:PRO:O	1:C:193:ARG:NH2	2.37	0.56
1:F:127:SER:O	1:F:131:MET:HG2	2.05	0.56
1:A:303:VAL:HG23	1:A:305[B]:TYR:CE2	2.40	0.56
1:B:27:ALA:O	1:B:28:GLU:CB	2.53	0.55
1:B:12:GLU:OE1	1:B:21:LYS:NZ	2.39	0.55
1:A:127:SER:O	1:A:131:MET:HG2	2.07	0.55
1:D:15:ASP:OD1	1:D:17:ARG:HB2	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:276:LYS:NZ	2:F:500:PMP:H4A2	2.21	0.55
1:A:319:ARG:HB2	1:A:320:PRO:HD2	1.89	0.54
1:D:163:GLN:NE2	1:D:164:ILE:HG22	2.21	0.54
1:E:228:ASP:HA	1:E:266:ARG:HH21	1.72	0.54
1:D:224:HIS:CD2	1:D:266:ARG:HB2	2.43	0.54
1:E:224:HIS:CD2	1:E:266:ARG:HB2	2.42	0.54
1:C:317:PHE:O	1:C:319:ARG:HG2	2.08	0.54
1:E:262:PHE:CE2	1:E:270:ILE:HD12	2.43	0.53
1:E:329:TYR:CZ	1:E:333:ARG:HD3	2.43	0.53
1:A:66:THR:OG1	1:A:426:ARG:NH1	2.42	0.53
1:C:63:PHE:HB3	1:C:276:LYS:HG2	1.91	0.53
1:C:344:ASN:O	1:C:348:GLN:HG3	2.09	0.53
1:A:188[A]:PHE:HZ	1:A:216:ASN:ND2	2.03	0.53
1:A:188[A]:PHE:CZ	1:A:216:ASN:ND2	2.77	0.53
1:D:465:HIS:O	2:D:500:PMP:N4A	2.35	0.52
1:C:224:HIS:CD2	1:C:266:ARG:HB2	2.43	0.52
1:C:410:THR:HA	1:C:418:ILE:O	2.09	0.52
1:F:177:LEU:CD1	1:F:179:GLU:HB2	2.39	0.52
1:C:122:ASN:HB2	1:C:286:TRP:CZ3	2.44	0.52
1:B:224:HIS:CD2	1:B:266:ARG:HB2	2.44	0.52
1:F:402:ARG:HG2	1:F:402:ARG:HH11	1.75	0.52
1:F:410:THR:HA	1:F:418:ILE:O	2.10	0.52
1:C:292:GLU:OE2	4:E:534:HOH:O	2.19	0.51
1:C:212:THR:O	1:C:422:ARG:NH1	2.42	0.51
1:F:303:VAL:CG2	1:F:305:TYR:CE1	2.91	0.51
1:E:3:LYS:C	1:E:5:GLN:H	2.14	0.51
1:E:221:GLN:HB3	1:E:222:PRO:HD3	1.93	0.51
1:D:339:TYR:O	1:D:343:GLN:HG2	2.11	0.51
1:C:63:PHE:CD1	1:C:466:THR:HA	2.46	0.50
1:E:60:LEU:HD12	1:E:406:VAL:HG22	1.93	0.50
1:D:163:GLN:HG3	2:D:500:PMP:N4A	2.07	0.50
1:E:183:ARG:HB3	1:E:414:GLU:HB2	1.93	0.50
1:F:295:LEU:HD11	1:F:313:PHE:CD2	2.46	0.50
1:F:319:ARG:HB2	1:F:320:PRO:HD2	1.92	0.50
1:A:12:GLU:CD	1:A:12:GLU:N	2.65	0.49
1:A:275:HIS:HA	1:A:280:ALA:O	2.12	0.49
1:E:109:HIS:HD2	1:E:261:ASP:OD2	1.95	0.49
1:B:216:ASN:HD21	1:B:366:ILE:HG22	1.76	0.49
1:B:122:ASN:HB2	1:B:286:TRP:CZ3	2.48	0.49
1:C:163:GLN:HG3	2:C:500:PMP:N4A	2.20	0.49
1:F:163:GLN:HG3	2:F:500:PMP:C4	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:218:GLU:O	1:B:220:PRO:HD3	2.13	0.49
1:F:109:HIS:HD2	1:F:261:ASP:OD2	1.95	0.49
1:B:262:PHE:CE2	1:B:270:ILE:HD12	2.48	0.49
1:A:129:ALA:HB1	1:A:287:VAL:HB	1.95	0.48
1:C:411:LEU:O	1:C:416:THR:HA	2.12	0.48
2:E:500:PMP:C5A	2:E:500:PMP:HNA1	2.24	0.48
1:A:465:HIS:ND1	4:E:807:HOH:O	2.24	0.48
1:B:245:ALA:HA	1:B:272:ALA:HA	1.95	0.48
1:C:465:HIS:O	1:C:466:THR:HB	2.13	0.48
1:F:177:LEU:HD12	1:F:179:GLU:HB2	1.96	0.48
1:F:181:PRO:O	1:F:193:ARG:NH2	2.44	0.48
1:D:402:ARG:HD3	1:D:440:ASP:OD1	2.14	0.47
1:B:262:PHE:O	1:B:290:ARG:NH2	2.47	0.47
1:C:12:GLU:OE2	1:C:12:GLU:HA	2.14	0.47
1:E:144:ARG:NE	4:E:667:HOH:O	2.48	0.47
1:B:26:ILE:O	1:B:29:SER:HB3	2.15	0.47
1:B:61:ALA:HB2	1:B:407:PRO:HD3	1.97	0.47
1:D:221:GLN:HB3	1:D:222:PRO:HD3	1.95	0.47
1:B:466:THR:OXT	1:B:466:THR:HG23	2.14	0.47
1:A:410:THR:HA	1:A:418:ILE:O	2.15	0.47
1:A:216:ASN:HD21	1:A:366:ILE:HG22	1.79	0.47
1:C:387:ASP:OD1	1:C:387:ASP:C	2.52	0.47
1:B:19:GLY:O	1:C:341:LYS:CE	2.63	0.46
1:B:224:HIS:NE2	1:B:266:ARG:HB2	2.30	0.46
1:C:353:LEU:HD23	1:C:353:LEU:HA	1.69	0.46
1:F:339:TYR:O	1:F:343:GLN:HG2	2.16	0.46
1:B:9:LEU:HD21	1:C:371:PRO:HG2	1.96	0.46
1:B:305[A]:TYR:CD1	1:B:308:GLY:O	2.69	0.46
1:E:466:THR:HG21	1:F:318:SER:OG	2.16	0.46
1:B:343:GLN:OE1	1:B:343:GLN:CA	2.63	0.46
1:A:109:HIS:HD2	1:A:261:ASP:OD2	1.98	0.46
1:F:132:LEU:HD22	1:F:313:PHE:CE1	2.51	0.46
1:B:411:LEU:O	1:B:416:THR:HA	2.16	0.46
2:E:500:PMP:N4A	2:E:500:PMP:H5A1	2.31	0.46
1:B:408:ALA:HA	1:B:420:VAL:O	2.17	0.45
1:E:303:VAL:CG2	1:E:305[B]:TYR:CE2	2.95	0.45
1:E:336:ARG:HD3	4:E:726:HOH:O	2.15	0.45
1:C:262:PHE:O	1:C:290:ARG:NH2	2.49	0.45
1:D:112:ALA:HA	1:D:113:PRO:HD3	1.84	0.45
1:F:362:PRO:CB	1:F:386:GLU:HG2	2.47	0.45
1:B:284:CYS:HB2	1:B:323:GLN:HB3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:305[A]:TYR:CE1	1:B:310:ILE:HG13	2.52	0.45
1:C:92:GLN:HG2	1:D:49:GLU:O	2.16	0.45
1:C:352:TYR:OH	1:C:435:GLU:OE1	2.23	0.45
1:D:341:LYS:HE3	1:E:19:GLY:O	2.17	0.45
1:F:276:LYS:CE	2:F:500:PMP:H4A2	2.47	0.45
1:B:183:ARG:HB3	1:B:414:GLU:HB2	1.97	0.45
4:E:558:HOH:O	1:F:430:GLU:HB3	2.17	0.45
2:C:500:PMP:O2P	1:D:318:SER:HB2	2.17	0.45
1:D:163:GLN:HG3	2:D:500:PMP:C4	2.46	0.45
1:D:228:ASP:HA	1:D:266:ARG:HH21	1.82	0.45
1:E:221:GLN:O	1:E:222:PRO:C	2.54	0.45
1:C:400:ARG:HA	1:C:404:TRP:O	2.17	0.45
1:A:337:GLU:O	1:A:341:LYS:HD3	2.17	0.44
1:E:315:ILE:HG21	1:F:315:ILE:HG21	1.98	0.44
1:A:388:PRO:HB2	1:A:390:TYR:CE2	2.53	0.44
1:A:183:ARG:NH1	1:A:186:GLN:OE1	2.51	0.44
1:B:400:ARG:HA	1:B:404:TRP:O	2.18	0.44
1:E:353:LEU:HD23	1:E:353:LEU:HA	1.88	0.44
1:D:109:HIS:HD2	1:D:261:ASP:OD2	2.01	0.44
1:F:220:PRO:HG2	1:F:260:TRP:HB2	1.99	0.44
1:F:454:LEU:HA	1:F:457:ILE:HD12	2.00	0.44
1:D:319:ARG:HB2	1:D:320:PRO:HD2	2.00	0.44
1:B:126:SER:HB2	2:B:500:PMP:O4P	2.18	0.43
1:D:163:GLN:HG3	2:D:500:PMP:C3	2.48	0.43
1:E:99:ARG:HG2	1:F:29:SER:HB2	2.00	0.43
1:E:237:ASP:OD1	1:E:266:ARG:NH1	2.51	0.43
1:D:52:LEU:HD23	1:D:52:LEU:HA	1.79	0.43
1:A:59:ASN:HA	1:A:405:GLN:HB3	2.01	0.43
1:E:131:MET:HG2	1:E:131:MET:H	1.63	0.43
1:F:195:ILE:HD13	1:F:195:ILE:HA	1.92	0.43
1:D:45:ILE:O	1:D:49:GLU:HG3	2.19	0.43
1:D:454:LEU:HD23	1:D:454:LEU:HA	1.93	0.43
1:E:161:PRO:HD2	1:E:218:GLU:OE2	2.19	0.43
1:F:200:GLU:H	1:F:200:GLU:HG3	1.59	0.43
1:B:104:VAL:O	1:B:105:ALA:C	2.56	0.42
1:B:127:SER:O	1:B:131:MET:HG2	2.18	0.42
1:C:347:TYR:CE1	1:C:371:PRO:HA	2.53	0.42
1:B:329:TYR:CZ	1:B:333:ARG:HD3	2.55	0.42
1:B:451:HIS:N	1:B:452:PRO:HD3	2.33	0.42
1:D:163:GLN:HB2	2:D:500:PMP:C2	2.48	0.42
1:D:454:LEU:HA	1:D:457:ILE:HD12	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:15:ASP:OD1	1:E:17:ARG:HB2	2.20	0.42
1:E:465:HIS:O	2:E:500:PMP:H4A2	2.19	0.42
1:D:28:GLU:O	1:D:28:GLU:HG2	2.19	0.42
1:D:275:HIS:HA	1:D:280:ALA:O	2.19	0.42
1:D:365:PHE:CD2	1:D:380:PHE:HB3	2.54	0.42
1:D:465:HIS:O	1:D:466:THR:HB	2.19	0.42
1:E:99:ARG:HD3	1:F:29:SER:HB2	2.01	0.42
1:F:402:ARG:HG2	1:F:402:ARG:NH1	2.33	0.42
1:D:261:ASP:CG	1:D:263:ARG:HH21	2.23	0.42
1:F:343:GLN:OE1	1:F:343:GLN:HA	2.19	0.42
1:D:303:VAL:HG23	1:D:305[B]:TYR:HE2	1.83	0.42
1:F:27:ALA:O	1:F:28:GLU:HB3	2.19	0.42
1:F:422:ARG:HE	1:F:422:ARG:HB3	1.54	0.42
1:C:339:TYR:O	1:C:343:GLN:HG2	2.19	0.42
1:C:395:LEU:HD21	1:C:441:TYR:CZ	2.54	0.42
1:F:273:SER:HB2	1:F:276:LYS:HD2	2.01	0.42
1:A:92:GLN:HG2	1:B:49:GLU:O	2.20	0.42
1:C:127:SER:O	1:C:131:MET:HG2	2.19	0.42
1:A:353:LEU:HD23	1:A:353:LEU:HA	1.86	0.41
1:B:30:LYS:HD2	1:B:30:LYS:HA	1.74	0.41
1:C:59:ASN:OD1	1:C:59:ASN:C	2.58	0.41
1:C:251:ALA:N	1:C:252:PRO:CD	2.83	0.41
1:D:410:THR:HA	1:D:418:ILE:O	2.21	0.41
1:E:188:PHE:HZ	1:E:216:ASN:HD22	1.68	0.41
1:C:143:LYS:HE2	1:C:298:GLU:OE1	2.20	0.41
1:E:454:LEU:HA	1:E:457:ILE:HD12	2.02	0.41
1:F:188:PHE:HZ	1:F:216:ASN:ND2	2.18	0.41
1:A:161:PRO:HD2	1:A:218:GLU:OE2	2.20	0.41
1:E:262:PHE:O	1:E:290:ARG:NH2	2.52	0.41
1:F:216:ASN:HD21	1:F:366:ILE:HG22	1.84	0.41
1:C:231:GLN:HB2	1:C:236:ILE:O	2.21	0.41
1:F:344:ASN:O	1:F:348:GLN:HG3	2.20	0.41
1:A:208:THR:O	1:A:218:GLU:HB2	2.20	0.41
1:B:188:PHE:HZ	1:B:216:ASN:HD22	1.69	0.41
1:A:30:LYS:HD3	1:A:30:LYS:HA	1.87	0.41
1:F:183:ARG:O	1:F:184:PRO:C	2.59	0.41
1:A:188[A]:PHE:HE1	1:A:214:THR:HG1	1.68	0.41
1:F:188:PHE:CZ	1:F:216:ASN:ND2	2.89	0.41
1:E:221:GLN:O	1:E:224:HIS:N	2.53	0.41
1:E:438:LEU:HD23	1:E:438:LEU:HA	1.76	0.41
1:C:124:ILE:HD13	1:C:124:ILE:HA	1.95	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:224:HIS:NE2	1:C:266:ARG:HB2	2.35	0.40
1:D:284:CYS:HB2	1:D:323:GLN:HB3	2.01	0.40
1:D:370:ARG:HA	1:D:371:PRO:HD3	1.89	0.40
1:E:276:LYS:NZ	2:E:500:PMP:N4A	2.70	0.40
1:B:7:THR:HA	1:C:255:ALA:HA	2.03	0.40
1:B:342:VAL:HG13	1:C:16:SER:HB2	2.04	0.40
1:D:438:LEU:HD23	1:D:438:LEU:HA	1.92	0.40
1:D:445:LEU:HD23	1:D:445:LEU:HA	1.84	0.40
1:F:262:PHE:CE2	1:F:270:ILE:HD12	2.56	0.40
1:A:99:ARG:O	1:A:103:MET:HG3	2.21	0.40
1:A:163:GLN:HG3	2:A:500:PMP:HNA1	1.87	0.40
1:B:6:VAL:HA	1:C:257:ASP:HB2	2.02	0.40
1:B:410:THR:HA	1:B:418:ILE:O	2.21	0.40
1:C:466:THR:HB	2:C:500:PMP:HNA2	1.87	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	455/466 (98%)	436 (96%)	18 (4%)	1 (0%)	47	76
1	B	462/466 (99%)	436 (94%)	24 (5%)	2 (0%)	34	64
1	C	453/466 (97%)	432 (95%)	21 (5%)	0	100	100
1	D	454/466 (97%)	436 (96%)	18 (4%)	0	100	100
1	E	463/466 (99%)	446 (96%)	17 (4%)	0	100	100
1	F	453/466 (97%)	439 (97%)	13 (3%)	1 (0%)	47	76
All	All	2740/2796 (98%)	2625 (96%)	111 (4%)	4 (0%)	51	80

All (4) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	28	GLU
1	F	416	THR
1	B	245	ALA
1	A	412	GLY

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	381/390 (98%)	364 (96%)	17 (4%)	27	59
1	B	388/390 (100%)	363 (94%)	25 (6%)	17	44
1	C	379/390 (97%)	362 (96%)	17 (4%)	27	59
1	D	380/390 (97%)	358 (94%)	22 (6%)	20	48
1	E	389/390 (100%)	375 (96%)	14 (4%)	35	67
1	F	379/390 (97%)	369 (97%)	10 (3%)	46	78
All	All	2296/2340 (98%)	2191 (95%)	105 (5%)	27	58

All (105) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	12	GLU
1	A	28	GLU
1	A	30	LYS
1	A	31	ARG
1	A	44	GLN
1	A	124	ILE
1	A	126	SER
1	A	127	SER
1	A	142	ARG
1	A	157	LEU
1	A	177	LEU
1	A	183	ARG
1	A	200	GLU
1	A	268	LYS
1	A	386	GLU

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Mol	Chain	Res	Type
1	A	417	ASP
1	A	437	LEU
1	B	9	LEU
1	B	10	ARG
1	B	13	LEU
1	B	21	LYS
1	B	29	SER
1	B	30	LYS
1	B	31	ARG
1	B	34	LEU
1	B	69	ASP
1	B	127	SER
1	B	131	MET
1	B	139	TRP
1	B	157	LEU
1	B	177	LEU
1	B	200	GLU
1	B	268	LYS
1	B	319	ARG
1	B	332	LEU
1	B	344	ASN
1	B	410	THR
1	B	422	ARG
1	B	436	LEU
1	B	437	LEU
1	B	449	SER
1	B	466	THR
1	C	21	LYS
1	C	30	LYS
1	C	31	ARG
1	C	44	GLN
1	C	87	LYS
1	C	127	SER
1	C	131	MET
1	C	157	LEU
1	C	177	LEU
1	C	183	ARG
1	C	200	GLU
1	C	319	ARG
1	C	344	ASN
1	C	437	LEU
1	C	449	SER

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Mol	Chain	Res	Type
1	C	459	GLN
1	C	466	THR
1	D	30	LYS
1	D	31	ARG
1	D	36	GLU
1	D	44	GLN
1	D	87	LYS
1	D	114	LYS
1	D	127	SER
1	D	131	MET
1	D	139	TRP
1	D	142	ARG
1	D	177	LEU
1	D	200	GLU
1	D	221	GLN
1	D	268	LYS
1	D	309	GLN
1	D	332	LEU
1	D	370	ARG
1	D	398	ARG
1	D	416	THR
1	D	417	ASP
1	D	437	LEU
1	D	449	SER
1	E	3	LYS
1	E	4	LYS
1	E	5	GLN
1	E	10	ARG
1	E	31	ARG
1	E	127	SER
1	E	139	TRP
1	E	177	LEU
1	E	183	ARG
1	E	200	GLU
1	E	332	LEU
1	E	398	ARG
1	E	436	LEU
1	E	437	LEU
1	F	12	GLU
1	F	13	LEU
1	F	31	ARG
1	F	139	TRP

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Mol	Chain	Res	Type
1	F	142	ARG
1	F	200	GLU
1	F	268	LYS
1	F	370	ARG
1	F	398	ARG
1	F	437	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (26) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	109	HIS
1	A	216	ASN
1	A	309	GLN
1	A	459	GLN
1	B	109	HIS
1	B	167	HIS
1	B	216	ASN
1	B	309	GLN
1	B	459	GLN
1	C	216	ASN
1	C	309	GLN
1	C	459	GLN
1	D	109	HIS
1	D	216	ASN
1	D	309	GLN
1	D	344	ASN
1	D	460	GLN
1	E	109	HIS
1	E	216	ASN
1	E	316	ASN
1	E	344	ASN
1	F	109	HIS
1	F	216	ASN
1	F	309	GLN
1	F	316	ASN
1	F	459	GLN

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 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	PMP	C	500	-	16,16,16	1.06	2 (12%)	22,23,23	1.49	3 (13%)
2	PMP	E	500	-	16,16,16	1.24	2 (12%)	22,23,23	1.83	7 (31%)
2	PMP	D	500	-	16,16,16	1.25	2 (12%)	22,23,23	1.87	6 (27%)
2	PMP	A	500	-	16,16,16	1.24	2 (12%)	22,23,23	1.69	8 (36%)
2	PMP	B	500	-	16,16,16	1.25	2 (12%)	22,23,23	1.85	6 (27%)
2	PMP	F	500	-	16,16,16	1.41	1 (6%)	22,23,23	1.49	3 (13%)

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	PMP	C	500	-	-	0/8/8/8	0/1/1/1
2	PMP	E	500	-	-	4/8/8/8	0/1/1/1
2	PMP	D	500	-	-	0/8/8/8	0/1/1/1
2	PMP	A	500	-	-	2/8/8/8	0/1/1/1
2	PMP	B	500	-	-	2/8/8/8	0/1/1/1
2	PMP	F	500	-	-	0/8/8/8	0/1/1/1

All (11) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	D	500	PMP	C2-N1	3.55	1.40	1.33
2	F	500	PMP	C2-N1	3.50	1.40	1.33
2	A	500	PMP	C2-N1	3.15	1.39	1.33
2	B	500	PMP	C2-N1	3.00	1.39	1.33
2	E	500	PMP	C2-N1	2.93	1.39	1.33
2	E	500	PMP	C3-C2	-2.73	1.38	1.41
2	C	500	PMP	C2-N1	2.66	1.38	1.33
2	A	500	PMP	C3-C2	-2.34	1.38	1.41
2	C	500	PMP	C3-C2	-2.27	1.38	1.41
2	D	500	PMP	C3-C2	-2.20	1.38	1.41
2	B	500	PMP	C5-C4	2.02	1.43	1.40

All (33) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	E	500	PMP	C4-C4A-N4A	-4.04	93.85	114.85
2	B	500	PMP	C4A-C4-C3	-3.91	113.59	120.22
2	D	500	PMP	C4-C4A-N4A	-3.69	95.66	114.85
2	F	500	PMP	C2A-C2-C3	-3.50	116.70	120.80
2	C	500	PMP	C4-C4A-N4A	-3.42	97.05	114.85
2	D	500	PMP	C2A-C2-C3	-3.28	116.96	120.80
2	A	500	PMP	C3-C4-C5	3.27	121.70	118.73
2	F	500	PMP	C2A-C2-N1	3.20	123.66	117.64
2	A	500	PMP	C2A-C2-C3	-3.18	117.08	120.80
2	D	500	PMP	O3P-P-O4P	3.14	114.85	106.67
2	E	500	PMP	C2A-C2-C3	-3.12	117.14	120.80
2	D	500	PMP	C3-C4-C5	3.07	121.52	118.73
2	D	500	PMP	C2A-C2-N1	3.07	123.43	117.64
2	B	500	PMP	C4-C4A-N4A	-3.05	99.02	114.85
2	A	500	PMP	C5-C6-N1	-2.76	119.35	123.83
2	E	500	PMP	O4P-P-O1P	-2.69	99.18	106.44
2	F	500	PMP	C3-C4-C5	2.67	121.15	118.73
2	C	500	PMP	C5-C6-N1	-2.66	119.50	123.83
2	B	500	PMP	C4A-C4-C5	2.59	125.46	120.27
2	B	500	PMP	C3-C4-C5	2.43	120.94	118.73
2	E	500	PMP	O3P-P-O4P	2.38	112.88	106.67
2	B	500	PMP	C5-C6-N1	-2.36	120.00	123.83
2	A	500	PMP	O4P-P-O1P	-2.33	100.14	106.44
2	E	500	PMP	O4P-C5A-C5	2.27	113.61	109.36
2	A	500	PMP	C2A-C2-N1	2.25	121.89	117.64
2	E	500	PMP	C5-C6-N1	-2.20	120.26	123.83
2	C	500	PMP	O4P-C5A-C5	2.17	113.43	109.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	A	500	PMP	O3P-P-O4P	2.10	112.16	106.67
2	D	500	PMP	C5-C6-N1	-2.08	120.44	123.83
2	B	500	PMP	O2P-P-O4P	2.08	112.09	106.67
2	E	500	PMP	C4A-C4-C3	-2.03	116.79	120.22
2	A	500	PMP	C4-C4A-N4A	-2.01	104.38	114.85
2	A	500	PMP	O3-C3-C4	2.00	123.99	118.18

There are no chirality outliers.

All (8) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	B	500	PMP	C3-C4-C4A-N4A
2	B	500	PMP	C5-C4-C4A-N4A
2	E	500	PMP	C5-C4-C4A-N4A
2	A	500	PMP	C3-C4-C4A-N4A
2	E	500	PMP	C4-C5-C5A-O4P
2	E	500	PMP	C3-C4-C4A-N4A
2	E	500	PMP	C6-C5-C5A-O4P
2	A	500	PMP	C5-C4-C4A-N4A

There are no ring outliers.

6 monomers are involved in 29 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	C	500	PMP	5	0
2	E	500	PMP	6	0
2	D	500	PMP	7	0
2	A	500	PMP	2	0
2	B	500	PMP	5	0
2	F	500	PMP	4	0

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95^{th} percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q< 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
1	A	455/466 (97%)	-0.94	1 (0%)	95	94	4, 14, 42, 62	0
1	B	463/466 (99%)	-0.88	3 (0%)	89	86	4, 14, 40, 66	0
1	C	455/466 (97%)	-1.01	2 (0%)	92	91	3, 12, 42, 64	0
1	D	455/466 (97%)	-0.93	0	100	100	4, 14, 43, 65	0
1	E	464/466 (99%)	-1.02	0	100	100	2, 12, 39, 63	0
1	F	455/466 (97%)	-1.00	2 (0%)	92	91	2, 12, 42, 63	0
All	All	2747/2796 (98%)	-0.97	8 (0%)	94	93	2, 13, 42, 66	0

All (8) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	308	GLY	3.1
1	C	115	ASN	2.6
1	F	114	LYS	2.5
1	B	114	LYS	2.4
1	F	12	GLU	2.1
1	C	114	LYS	2.1
1	A	116	GLY	2.0
1	B	385	GLY	2.0

6.2 Non-standard residues in protein, DNA, RNA chains

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

6.3 Carbohydrates

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, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
2	PMP	D	500	16/16	0.97	0.15	10,20,24,25	11
3	XE	B	501	1/1	0.97	0.13	18,18,18,18	1
2	PMP	C	500	16/16	0.98	0.13	2,10,15,15	11
2	PMP	A	500	16/16	0.98	0.13	11,15,20,20	11
2	PMP	E	500	16/16	0.98	0.14	8,15,20,26	11
2	PMP	F	500	16/16	0.98	0.14	6,15,19,21	11
2	PMP	B	500	16/16	0.98	0.12	6,15,22,24	11
3	XE	A	501	1/1	0.99	0.08	11,11,11,11	1
3	XE	C	501	1/1	0.99	0.14	2,2,2,2	1
3	XE	D	501	1/1	0.99	0.13	14,14,14,14	1
3	XE	E	501	1/1	0.99	0.13	7,7,7,7	1
3	XE	F	501	1/1	0.99	0.11	22,22,22,22	1

6.5 Other polymers (i)

There are no such residues in this entry.