Full wwPDB X-ray Structure Validation Report ⓘ

Aug 21, 2025 – 12:12 PM EDT

PDB ID	:	9PYF / pdb_00009pyf
Title	:	uPA Inhibitory Fab AB2 Complex
Authors	:	Anderson, K.J.; Bohn, M.F.
Deposited on	:	2025-08-07
Resolution	:	2.90 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:

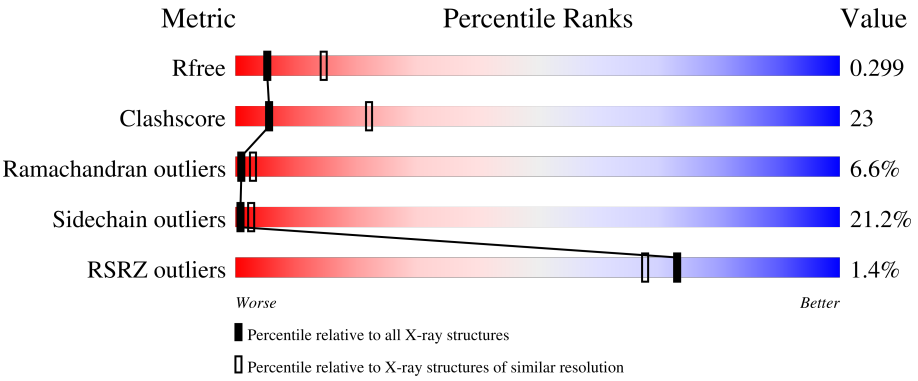
MolProbity	:	4-5-2 with Phenix2.0rc1
Xtriage (Phenix)	:	2.0rc1
EDS	:	3.0
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.006 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.45.1

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 2.90 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}	164625	2335 (2.90-2.90)
Clashscore	180529	2564 (2.90-2.90)
Ramachandran outliers	177936	2514 (2.90-2.90)
Sidechain outliers	177891	2516 (2.90-2.90)
RSRZ outliers	164620	2337 (2.90-2.90)

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	216	49% 41% 9%
1	I	216	3% 59% 32% 9%
2	F	284	44% 37% 5% 13%
3	D	213	52% 37% 10%
3	H	213	4% 53% 34% 12%

2 Entry composition (i)

There are 4 unique types of molecules in this entry. The entry contains 7644 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 AB2 Fab Light Chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	216	Total	C	N	O	S	0	0	0
			1624	1021	277	320	6			
1	I	216	Total	C	N	O	S	0	0	0
			1246	732	246	264	4			

- Molecule 2 is a protein called Urokinase-type plasminogen activator.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	F	247	Total	C	N	O	S	0	0	0
			1949	1231	341	362	15			

There are 16 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
F	-21	MET	-	initiating methionine	UNP P00749
F	-20	ARG	-	expression tag	UNP P00749
F	-19	GLY	-	expression tag	UNP P00749
F	-18	SER	-	expression tag	UNP P00749
F	-17	HIS	-	expression tag	UNP P00749
F	-16	HIS	-	expression tag	UNP P00749
F	-15	HIS	-	expression tag	UNP P00749
F	-14	HIS	-	expression tag	UNP P00749
F	-13	HIS	-	expression tag	UNP P00749
F	-12	HIS	-	expression tag	UNP P00749
F	-11	GLY	-	expression tag	UNP P00749
F	-10	SER	-	expression tag	UNP P00749
F	-9	ALA	-	expression tag	UNP P00749
F	-8	CYS	-	expression tag	UNP P00749
F	122	ALA	CYS	engineered mutation	UNP P00749
F	145	GLN	ASN	conflict	UNP P00749

- Molecule 3 is a protein called AB2 Fab Heavy Chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	D	213	Total	C	N	O	S	0	0	0
			1546	974	262	304	6			
3	H	213	Total	C	N	O	S	0	0	0
			1235	725	246	260	4			

- Molecule 4 is water.

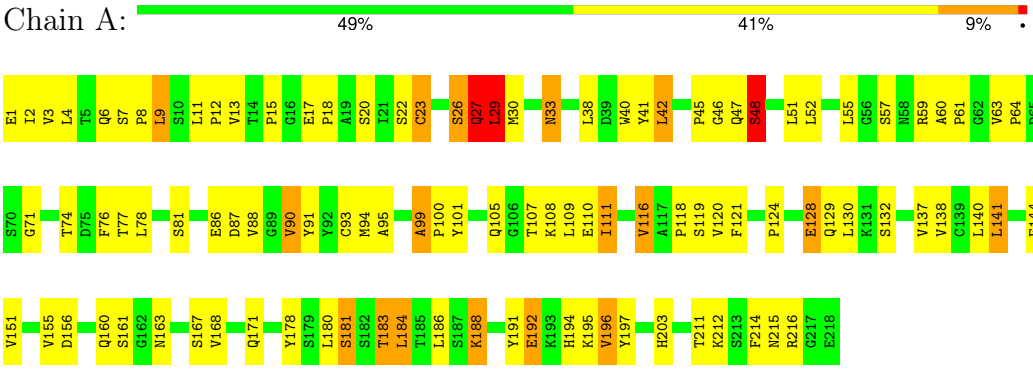
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	19	Total	O	0	0
			19	19		
4	F	8	Total	O	0	0
			8	8		
4	D	17	Total	O	0	0
			17	17		

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.

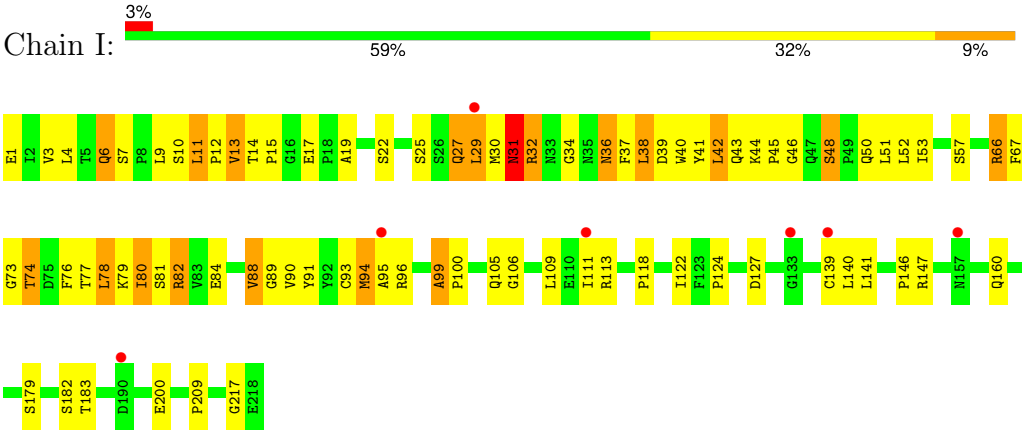
• Molecule 1: AB2 Fab Light Chain

Chain A:



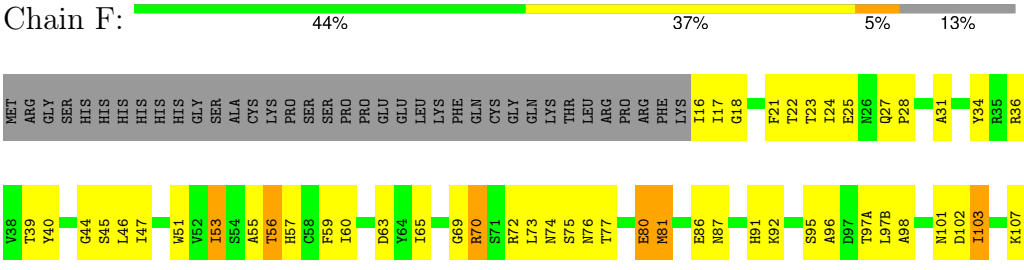
• Molecule 1: AB2 Fab Light Chain

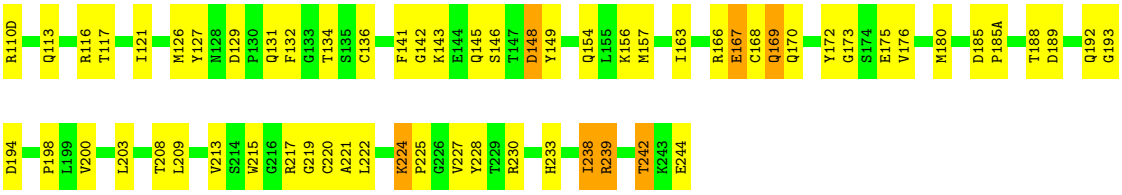
Chain I:



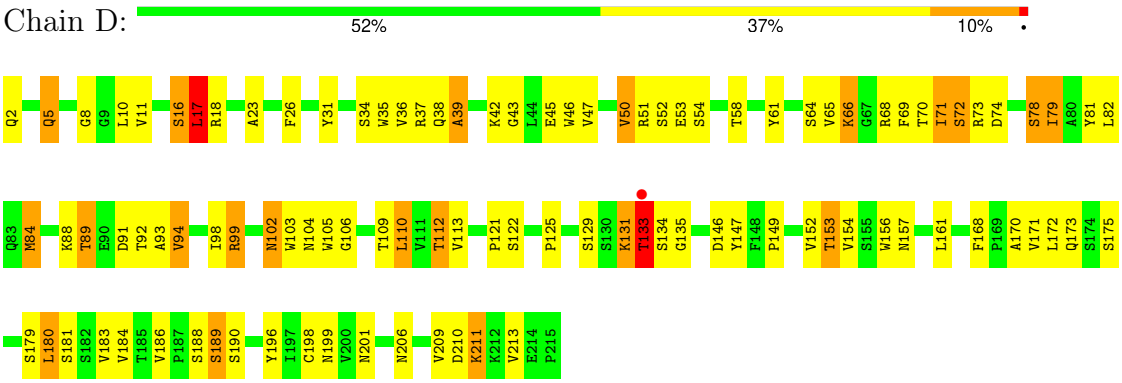
• Molecule 2: Urokinase-type plasminogen activator

Chain F:

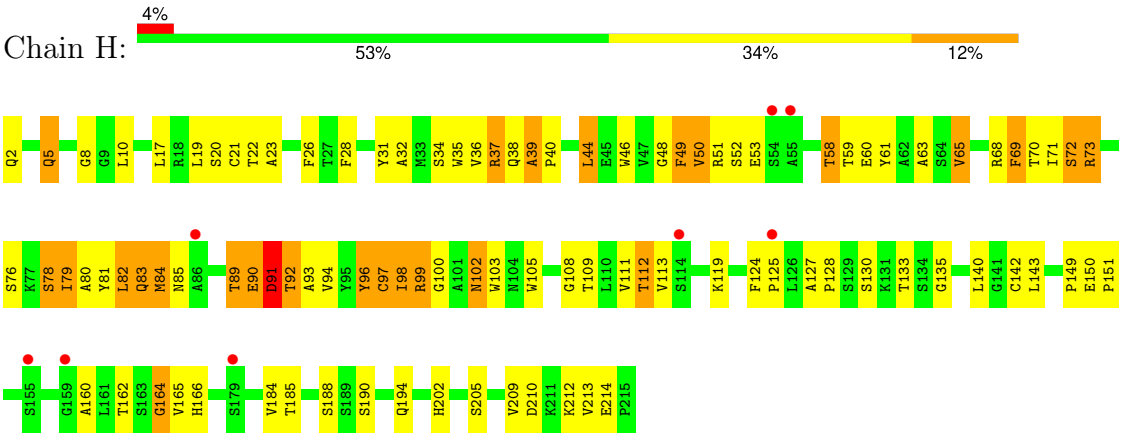




• Molecule 3: AB2 Fab Heavy Chain



• Molecule 3: AB2 Fab Heavy Chain



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 43	Depositor
Cell constants a, b, c, α, β, γ	86.75Å 86.75Å 172.42Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	86.75 – 2.90 86.75 – 2.90	Depositor EDS
% Data completeness (in resolution range)	93.6 (86.75-2.90) 93.6 (86.75-2.90)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.40 (at 2.91Å)	Xtriage
Refinement program	PHENIX 1.11.1_2575	Depositor
R, R_{free}	0.228 , 0.300 0.229 , 0.299	Depositor DCC
R_{free} test set	1545 reflections (4.78%)	wwPDB-VP
Wilson B-factor (Å^2)	69.6	Xtriage
Anisotropy	0.421	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.29 , 75.0	EDS
L-test for twinning[2]	$< \|L\| > = 0.53$, $< L^2 > = 0.37$	Xtriage
Estimated twinning fraction	0.035 for h,-k,-l	Xtriage
F_o,F_c correlation	0.93	EDS
Total number of atoms	7644	wwPDB-VP
Average B, all atoms (Å^2)	93.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.02% 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 (i)

5.1 Standard geometry (i)

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	0.58	0/1659	0.86	4/2257 (0.2%)
1	I	0.42	0/1263	0.75	0/1668
2	F	0.53	2/1998 (0.1%)	0.78	2/2707 (0.1%)
3	D	0.55	0/1583	0.82	0/2161
3	H	0.35	0/1253	0.73	0/1657
All	All	0.50	2/7756 (0.0%)	0.79	6/10450 (0.1%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand.A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	1
3	D	0	2
All	All	0	3

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	F	37(A)	ARG	CG-CD	6.45	1.71	1.52
2	F	37(A)	ARG	CB-CG	5.34	1.68	1.52

All (6) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	29	LEU	N-CA-C	10.13	132.37	110.80
2	F	37(A)	ARG	CB-CG-CD	8.74	131.40	111.30
1	A	47	GLN	CA-C-N	6.34	137.26	121.80
1	A	47	GLN	C-N-CA	6.34	137.26	121.80
1	A	46	GLY	N-CA-C	-5.25	100.73	113.18
2	F	37(A)	ARG	CB-CA-C	5.20	120.76	110.42

There are no chirality outliers.

All (3) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	27	GLN	Peptide
3	D	131	LYS	Peptide
3	D	133	THR	Peptide

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	1624	0	1566	66	0
1	I	1246	0	905	61	1
2	F	1949	0	1898	87	2
3	D	1546	0	1479	64	0
3	H	1235	0	892	63	1
4	A	19	0	0	3	0
4	D	17	0	0	3	0
4	F	8	0	0	2	0
All	All	7644	0	6740	333	2

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 23.

All (333) 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:I:66:ARG:HH12	1:I:81:SER:HB2	1.08	1.09
1:I:66:ARG:HG3	1:I:66:ARG:HH11	1.22	1.02
3:D:31:TYR:O	3:D:73:ARG:NH2	1.93	1.01
1:I:39:ASP:OD2	3:H:102:ASN:ND2	1.92	1.01
1:I:66:ARG:NH1	1:I:81:SER:HB2	1.80	0.94
1:I:13:VAL:HG12	1:I:17:GLU:HB3	1.52	0.91
1:I:42:LEU:HD21	1:I:90:VAL:O	1.69	0.90
3:H:36:VAL:HG23	3:H:98:ILE:HD11	1.53	0.90
1:A:183:THR:O	4:A:301:HOH:O	1.91	0.89
1:I:30:MET:HE2	1:I:34:GLY:HA2	1.52	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:66:ARG:HH12	1:I:81:SER:CB	1.85	0.89
2:F:86:GLU:OE1	2:F:107:LYS:NZ	2.08	0.86
3:H:83:GLN:H	3:H:83:GLN:NE2	1.77	0.82
1:I:66:ARG:HH11	1:I:66:ARG:CG	1.92	0.82
2:F:143:LYS:NZ	2:F:192:GLN:OE1	2.12	0.81
3:D:2:GLN:NE2	4:D:301:HOH:O	2.11	0.81
1:A:130:LEU:HD22	1:A:188:LYS:HG3	1.63	0.81
2:F:176:VAL:HG23	2:F:180:MET:HE2	1.64	0.80
3:D:11:VAL:HG23	3:D:113:VAL:HG12	1.63	0.80
1:A:147:ARG:HH21	1:A:168:VAL:HG11	1.48	0.79
3:H:5:GLN:HE21	3:H:108:GLY:H	1.32	0.78
1:I:66:ARG:HG3	1:I:66:ARG:NH1	1.89	0.78
2:F:70:ARG:NH1	2:F:80:GLU:OE1	2.16	0.78
3:D:153:THR:HG23	3:D:201:ASN:HB3	1.64	0.77
2:F:98:ALA:HB2	2:F:175:GLU:HG3	1.66	0.77
1:A:128:GLU:OE2	1:A:128:GLU:N	2.17	0.76
3:H:8:GLY:HA2	3:H:17:LEU:HD21	1.68	0.76
1:A:66:ARG:NH1	1:A:87:ASP:OD2	2.18	0.76
3:H:90:GLU:O	3:H:92:THR:N	2.20	0.75
1:I:6:GLN:NE2	1:I:93:CYS:SG	2.61	0.73
2:F:180:MET:HE3	2:F:227:VAL:HG11	1.72	0.72
2:F:129:ASP:OD2	2:F:230:ARG:HD2	1.89	0.72
3:H:92:THR:HG23	3:H:113:VAL:H	1.54	0.71
1:A:99:ALA:HB1	1:A:100:PRO:HD2	1.71	0.71
3:H:36:VAL:HG11	3:H:44:LEU:HD23	1.71	0.71
2:F:86:GLU:OE2	2:F:109:ARG:HG3	1.91	0.71
2:F:53:ILE:HD11	2:F:103:ILE:HD11	1.73	0.71
3:D:2:GLN:NE2	4:D:303:HOH:O	2.25	0.70
2:F:172:TYR:CE2	2:F:225:PRO:HD2	2.27	0.69
1:I:31:ASN:OD1	1:I:31:ASN:N	2.26	0.69
1:A:194:HIS:O	1:A:216:ARG:NH2	2.25	0.69
3:D:8:GLY:HA2	3:D:17:LEU:HD21	1.73	0.68
2:F:109:ARG:HB3	2:F:109:ARG:HH11	1.57	0.68
3:H:5:GLN:NE2	3:H:108:GLY:H	1.92	0.68
1:I:99:ALA:HB1	1:I:100:PRO:HD2	1.75	0.68
1:I:42:LEU:HD22	1:I:43:GLN:N	2.09	0.67
3:H:83:GLN:H	3:H:83:GLN:HE21	1.40	0.67
2:F:24:ILE:HG12	2:F:69:GLY:HA2	1.77	0.67
1:A:9:LEU:HD22	1:A:9:LEU:H	1.60	0.67
3:H:79:ILE:HD11	3:H:81:TYR:CZ	2.30	0.67
1:I:6:GLN:HG3	1:I:106:GLY:H	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:27:GLN:HE21	2:F:157:MET:HE3	1.60	0.66
1:A:26:SER:C	1:A:27:GLN:HE21	2.03	0.66
3:D:52:SER:O	3:D:73:ARG:NH1	2.29	0.65
1:A:64:PRO:HG2	1:A:67:PHE:CE2	2.31	0.65
1:I:82:ARG:HH21	1:I:84:GLU:HG3	1.61	0.65
3:D:36:VAL:HG22	3:D:46:TRP:HA	1.79	0.63
1:I:66:ARG:NH1	1:I:82:ARG:N	2.47	0.63
1:A:17:GLU:HG2	1:A:18:PRO:HD2	1.79	0.62
3:H:5:GLN:HE21	3:H:108:GLY:N	1.97	0.62
1:A:128:GLU:CD	1:A:128:GLU:H	2.06	0.62
2:F:219:GLY:HA3	2:F:222:LEU:HG	1.81	0.62
1:A:88:VAL:HG23	1:A:108:LYS:NZ	2.14	0.62
3:H:38:GLN:OE1	3:H:96:TYR:OH	2.17	0.62
2:F:238:ILE:O	2:F:242:THR:N	2.26	0.62
1:A:64:PRO:HG2	1:A:67:PHE:HE2	1.65	0.62
1:I:42:LEU:CD2	1:I:91:TYR:HA	2.30	0.62
2:F:27:GLN:HE21	2:F:157:MET:CE	2.13	0.61
2:F:77:THR:O	4:F:301:HOH:O	2.16	0.61
1:I:42:LEU:HD21	1:I:90:VAL:C	2.25	0.61
1:A:66:ARG:HH12	1:A:87:ASP:CG	2.08	0.61
1:I:48:SER:O	1:I:50:GLN:NE2	2.34	0.61
1:A:15:PRO:HG3	1:A:111:ILE:HD12	1.81	0.61
1:A:57:SER:HA	1:A:69:GLY:HA3	1.82	0.61
1:I:139:CYS:N	1:I:182:SER:O	2.33	0.60
1:I:9:LEU:HD12	1:I:9:LEU:H	1.67	0.60
3:D:121:PRO:HB3	3:D:147:TYR:HB3	1.83	0.60
1:I:42:LEU:HD23	1:I:91:TYR:HA	1.84	0.60
1:A:26:SER:O	1:A:27:GLN:NE2	2.32	0.59
3:H:35:TRP:CE2	3:H:82:LEU:HB2	2.37	0.59
1:A:118:PRO:HB3	1:A:141:LEU:HB3	1.84	0.59
3:D:125:PRO:HB3	3:D:213:VAL:HG22	1.85	0.58
3:D:78:SER:O	3:D:78:SER:OG	2.21	0.58
1:A:12:PRO:HA	1:A:110:GLU:O	2.04	0.58
1:I:169:THR:N	1:I:179:SER:O	2.36	0.58
3:D:89:THR:HA	3:D:113:VAL:CG2	2.34	0.58
2:F:146:SER:HB3	2:F:220:CYS:HB2	1.84	0.58
1:I:36:ASN:HB3	1:I:76:PHE:HZ	1.69	0.58
1:I:39:ASP:OD2	1:I:96:ARG:NH2	2.36	0.58
3:H:19:LEU:HD13	3:H:84:MET:HE3	1.86	0.58
2:F:110(D):ARG:HG3	2:F:110(D):ARG:HH11	1.69	0.58
2:F:56:THR:HG23	2:F:103:ILE:H	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:146:ASP:OD1	3:D:173:GLN:NE2	2.38	0.57
3:D:10:LEU:HB2	3:D:149:PRO:HG3	1.87	0.57
2:F:163:ILE:CG2	2:F:167:GLU:HG2	2.34	0.57
2:F:238:ILE:HG23	2:F:242:THR:OG1	2.05	0.57
2:F:142:GLY:HA2	2:F:193:GLY:HA3	1.87	0.56
1:I:70:SER:O	1:I:77:THR:HG22	2.05	0.56
1:I:72:SER:O	1:I:74:THR:N	2.39	0.56
1:A:41:TYR:OH	3:D:102:ASN:HB2	2.06	0.56
3:H:79:ILE:HD11	3:H:81:TYR:CE1	2.41	0.56
3:H:90:GLU:O	3:H:92:THR:OG1	2.22	0.56
2:F:126:MET:HB3	2:F:127:TYR:CD1	2.41	0.55
1:I:40:TRP:HB2	1:I:53:ILE:HB	1.87	0.55
1:I:27:GLN:O	1:I:29:LEU:N	2.40	0.55
1:A:188:LYS:NZ	1:A:188:LYS:HB3	2.21	0.55
2:F:16:ILE:N	2:F:194:ASP:OD2	2.39	0.55
1:A:101:TYR:HB2	3:D:46:TRP:CD2	2.42	0.55
1:A:90:VAL:HA	1:A:107:THR:O	2.07	0.54
3:D:2:GLN:OE1	4:D:302:HOH:O	2.18	0.54
1:I:66:ARG:NH1	1:I:82:ARG:H	2.06	0.54
2:F:136:CYS:HB3	2:F:200:VAL:O	2.08	0.54
3:H:51:ARG:NH2	3:H:58:THR:OG1	2.38	0.54
1:I:43:GLN:OE1	3:H:38:GLN:NE2	2.41	0.54
2:F:51:TRP:CZ2	2:F:107:LYS:HD2	2.43	0.54
1:I:68:SER:O	1:I:79:LYS:N	2.40	0.53
3:D:89:THR:HA	3:D:113:VAL:HG23	1.91	0.53
2:F:108:ILE:O	2:F:109:ARG:HG2	2.09	0.53
3:H:32:ALA:O	3:H:100:GLY:N	2.36	0.53
1:A:119:SER:HB3	1:A:121:PHE:HE2	1.74	0.52
3:D:18:ARG:NH1	3:D:81:TYR:CE2	2.77	0.52
1:I:66:ARG:HH12	1:I:82:ARG:N	2.07	0.52
3:H:69:PHE:N	3:H:69:PHE:CD1	2.78	0.52
3:H:164:GLY:HA3	3:H:185:THR:O	2.09	0.52
1:I:11:LEU:HD23	1:I:12:PRO:HD2	1.90	0.52
1:A:156:ASP:HA	1:A:196:VAL:HG13	1.91	0.52
1:I:45:PRO:HG3	1:I:88:VAL:HG13	1.92	0.52
3:D:199:ASN:HA	3:D:210:ASP:OD2	2.10	0.52
3:H:61:TYR:HE2	3:H:71:ILE:H	1.58	0.52
3:H:92:THR:CG2	3:H:113:VAL:H	2.22	0.52
2:F:16:ILE:HB	2:F:156:LYS:HD3	1.92	0.51
2:F:168:CYS:C	2:F:170:GLN:H	2.18	0.51
2:F:46:LEU:O	2:F:121:ILE:HG22	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:176:VAL:HA	2:F:180:MET:HE1	1.93	0.50
3:H:92:THR:HG22	3:H:112:THR:HA	1.92	0.50
3:D:16:SER:O	3:D:17:LEU:HB2	2.10	0.50
2:F:217:ARG:HD3	2:F:224:LYS:HG2	1.93	0.50
2:F:17:ILE:O	2:F:188:THR:OG1	2.20	0.50
2:F:22:THR:HG21	2:F:157:MET:SD	2.52	0.50
1:A:171:GLN:HG3	1:A:178:TYR:CZ	2.47	0.50
2:F:31:ALA:N	2:F:44:GLY:O	2.36	0.50
3:D:35:TRP:CG	3:D:82:LEU:HD12	2.46	0.50
3:D:72:SER:OG	3:D:73:ARG:N	2.44	0.50
1:I:44:LYS:O	1:I:46:GLY:N	2.44	0.50
3:D:11:VAL:O	3:D:113:VAL:HA	2.12	0.50
3:D:68:ARG:HH11	3:D:68:ARG:HG2	1.77	0.50
3:H:49:PHE:HE2	3:H:60:GLU:HG3	1.76	0.50
2:F:34:TYR:CE2	2:F:40:TYR:HD1	2.30	0.49
2:F:56:THR:HG22	2:F:103:ILE:O	2.13	0.49
3:D:110:LEU:HD21	3:D:112:THR:HG23	1.94	0.49
2:F:86:GLU:N	2:F:107:LYS:O	2.45	0.49
3:D:69:PHE:CE1	3:D:84:MET:HB3	2.46	0.49
3:D:51:ARG:NH2	3:D:58:THR:HB	2.28	0.49
3:H:61:TYR:CE2	3:H:70:THR:HA	2.47	0.49
1:A:167:SER:OG	3:D:168:PHE:HB3	2.12	0.49
3:D:50:VAL:HG22	3:D:71:ILE:HG12	1.95	0.49
3:H:164:GLY:C	3:H:185:THR:H	2.21	0.49
3:D:88:LYS:N	3:D:91:ASP:OD1	2.36	0.49
1:A:124:PRO:HB3	1:A:214:PHE:CE1	2.48	0.49
3:H:19:LEU:O	3:H:81:TYR:HA	2.13	0.49
2:F:81:MET:HE1	2:F:110(B):GLU:OE2	2.12	0.48
1:I:38:LEU:HD13	1:I:76:PHE:CD2	2.48	0.48
1:I:99:ALA:CB	1:I:100:PRO:HD2	2.42	0.48
2:F:70:ARG:HD3	2:F:80:GLU:OE1	2.13	0.48
2:F:36:ARG:HE	2:F:65:ILE:HD11	1.78	0.48
3:D:73:ARG:HG2	3:D:74:ASP:N	2.28	0.48
3:D:152:VAL:HG22	3:D:180:LEU:HD21	1.94	0.48
1:A:60:ALA:HB1	1:A:61:PRO:HD2	1.96	0.48
3:D:36:VAL:HB	3:D:98:ILE:HD11	1.94	0.48
1:A:2:ILE:HG12	1:A:27:GLN:CD	2.38	0.48
1:A:42:LEU:HD13	1:A:91:TYR:CZ	2.48	0.48
2:F:24:ILE:HG12	2:F:69:GLY:CA	2.42	0.48
2:F:180:MET:HE1	2:F:215:TRP:HZ2	1.79	0.48
2:F:45:SER:OG	2:F:198:PRO:HB3	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:99:ALA:HB1	1:I:100:PRO:CD	2.44	0.48
2:F:37(A):ARG:O	2:F:37(C):GLY:N	2.47	0.48
3:H:190:SER:O	3:H:194:GLN:N	2.47	0.48
2:F:57:HIS:O	2:F:60:ILE:HG22	2.14	0.47
1:A:15:PRO:HG3	1:A:111:ILE:CD1	2.43	0.47
2:F:56:THR:HG21	2:F:91:HIS:H	1.77	0.47
1:I:9:LEU:O	1:I:10:SER:OG	2.29	0.47
3:D:51:ARG:HH21	3:D:58:THR:HB	1.80	0.47
1:A:71:GLY:HA3	1:A:76:PHE:HA	1.95	0.47
2:F:97(A):THR:HG22	2:F:97(B):LEU:N	2.29	0.47
3:D:79:ILE:HB	3:D:81:TYR:CE1	2.49	0.47
3:H:61:TYR:HE2	3:H:70:THR:HA	1.79	0.47
2:F:97(B):LEU:HD12	2:F:97(B):LEU:HA	1.59	0.47
3:H:83:GLN:H	3:H:83:GLN:CD	2.22	0.47
1:A:137:VAL:CG1	1:A:184:LEU:HD23	2.44	0.47
1:A:150:LYS:NZ	4:A:307:HOH:O	2.47	0.47
1:I:90:VAL:HG12	1:I:91:TYR:H	1.79	0.47
1:I:105:GLN:HG3	1:I:106:GLY:O	2.15	0.47
3:H:98:ILE:O	3:H:99:ARG:HB3	2.14	0.47
1:A:212:LYS:N	4:A:302:HOH:O	2.21	0.47
1:A:163:ASN:OD1	1:A:163:ASN:N	2.48	0.47
1:A:23:CYS:N	1:A:76:PHE:O	2.46	0.47
2:F:18:GLY:O	2:F:156:LYS:NZ	2.43	0.47
3:H:46:TRP:CH2	3:H:48:GLY:HA2	2.50	0.47
3:H:72:SER:HB3	3:H:81:TYR:HB2	1.97	0.47
3:H:135:GLY:N	3:H:188:SER:O	2.48	0.47
2:F:109:ARG:HD2	2:F:110(C):GLY:O	2.16	0.46
3:D:39:ALA:HA	3:D:93:ALA:HA	1.97	0.46
3:D:173:GLN:NE2	3:D:179:SER:HB2	2.29	0.46
2:F:233:HIS:O	4:F:302:HOH:O	2.20	0.46
1:I:42:LEU:N	1:I:50:GLN:O	2.43	0.46
1:I:90:VAL:HG12	1:I:91:TYR:N	2.30	0.46
1:I:39:ASP:CG	1:I:96:ARG:HH22	2.23	0.46
2:F:91:HIS:HB2	2:F:103:ILE:HG23	1.95	0.46
3:H:34:SER:HB2	3:H:98:ILE:HD12	1.98	0.46
2:F:213:VAL:HG22	2:F:228:TYR:HE2	1.81	0.46
3:D:170:ALA:HA	3:D:180:LEU:HB3	1.96	0.46
1:A:42:LEU:HB2	1:A:52:LEU:HD11	1.98	0.46
2:F:97(A):THR:HG22	2:F:97(B):LEU:H	1.79	0.46
1:A:22:SER:HB2	1:A:77:THR:HG22	1.97	0.46
2:F:121:ILE:HG12	2:F:209:LEU:HB2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:61:TYR:CE1	3:D:71:ILE:HG22	2.51	0.46
1:I:69:GLY:HA2	1:I:78:LEU:HA	1.98	0.45
1:A:59:ARG:HD2	1:A:63:VAL:O	2.15	0.45
2:F:96:ALA:C	2:F:97(A):THR:H	2.24	0.45
1:I:52:LEU:HD13	1:I:67:PHE:CD1	2.52	0.45
3:D:94:VAL:HA	3:D:110:LEU:HA	1.99	0.45
3:D:186:VAL:HG11	3:D:196:TYR:CE1	2.52	0.45
1:A:18:PRO:HB3	1:A:81:SER:O	2.17	0.45
3:D:156:TRP:CH2	3:D:198:CYS:HB3	2.52	0.45
3:H:98:ILE:HG23	3:H:105:TRP:CG	2.51	0.45
1:A:108:LYS:NZ	1:A:109:LEU:O	2.44	0.45
2:F:110(D):ARG:HG3	2:F:110(D):ARG:NH1	2.31	0.45
3:H:84:MET:H	3:H:84:MET:HG2	1.29	0.45
1:A:180:LEU:HD23	1:A:181:SER:N	2.32	0.45
1:I:91:TYR:O	1:I:106:GLY:HA2	2.17	0.45
3:D:105:TRP:N	3:D:105:TRP:CD1	2.85	0.45
1:A:188:LYS:O	1:A:192:GLU:HG2	2.17	0.45
2:F:51:TRP:CZ3	2:F:107:LYS:HB2	2.52	0.45
1:A:129:GLN:O	1:A:132:SER:HB2	2.17	0.45
1:I:41:TYR:CE1	1:I:51:LEU:HD13	2.52	0.45
3:H:39:ALA:H	3:H:93:ALA:HB1	1.81	0.45
1:A:137:VAL:HG11	1:A:184:LEU:HD23	1.99	0.44
1:A:191:TYR:CE2	1:A:216:ARG:HD2	2.53	0.44
2:F:176:VAL:HG23	2:F:180:MET:CE	2.42	0.44
3:H:65:VAL:HB	3:H:69:PHE:CE1	2.53	0.44
2:F:86:GLU:CD	2:F:107:LYS:NZ	2.75	0.44
3:D:99:ARG:NH1	3:D:104:ASN:OD1	2.49	0.44
3:D:134:SER:HA	3:D:135:GLY:HA2	1.59	0.44
1:A:141:LEU:N	1:A:141:LEU:HD12	2.33	0.44
3:H:52:SER:O	3:H:53:GLU:HB2	2.18	0.44
1:A:45:PRO:HD3	1:A:88:VAL:O	2.18	0.44
2:F:37(A):ARG:O	2:F:37(D):SER:N	2.46	0.44
1:I:89:GLY:O	1:I:109:LEU:N	2.51	0.44
3:D:69:PHE:CD2	3:D:82:LEU:HD21	2.52	0.44
3:D:5:GLN:HE21	3:D:5:GLN:HB3	1.57	0.44
3:H:26:PHE:CE2	3:H:99:ARG:HD2	2.52	0.44
2:F:149:TYR:CD2	3:D:190:SER:HA	2.53	0.44
2:F:200:VAL:HA	2:F:208:THR:O	2.18	0.44
1:I:66:ARG:HH12	1:I:81:SER:CA	2.29	0.44
2:F:51:TRP:CH2	2:F:107:LYS:HB2	2.53	0.43
1:A:41:TYR:CD2	1:A:51:LEU:HA	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:34:TYR:HE2	2:F:40:TYR:HD1	1.65	0.43
1:A:7:SER:HA	1:A:8:PRO:HA	1.86	0.43
1:I:111:ILE:HG21	1:I:113:ARG:N	2.34	0.43
3:H:53:GLU:HG2	3:H:73:ARG:HD3	2.00	0.43
3:H:90:GLU:CD	3:H:90:GLU:H	2.25	0.43
2:F:70:ARG:NH1	2:F:76:ASN:HA	2.33	0.43
3:D:92:THR:HG23	3:D:112:THR:HA	2.01	0.43
2:F:189:ASP:HB2	2:F:221:ALA:HB2	2.00	0.43
1:A:120:VAL:C	1:A:121:PHE:CD2	2.97	0.43
3:D:89:THR:HA	3:D:113:VAL:HG21	2.01	0.43
2:F:121:ILE:CG1	2:F:209:LEU:HB2	2.49	0.43
1:A:118:PRO:HD3	1:A:203:HIS:ND1	2.34	0.43
3:H:37:ARG:NH2	3:H:91:ASP:HB3	2.34	0.43
1:A:1:GLU:HG3	1:A:100:PRO:CG	2.49	0.42
2:F:109:ARG:HH11	2:F:109:ARG:CB	2.30	0.42
1:I:6:GLN:HA	1:I:22:SER:O	2.19	0.42
2:F:238:ILE:O	2:F:239:ARG:C	2.62	0.42
1:I:39:ASP:CG	1:I:96:ARG:HH12	2.26	0.42
3:D:103:TRP:HB3	3:D:104:ASN:OD1	2.19	0.42
3:H:28:PHE:HZ	3:H:80:ALA:HB2	1.84	0.42
3:D:172:LEU:HA	3:D:172:LEU:HD12	1.73	0.42
3:H:202:HIS:C	3:H:205:SER:H	2.27	0.42
2:F:21:PHE:HB3	2:F:154:GLN:HG2	2.01	0.42
2:F:47:ILE:HG22	2:F:121:ILE:HG23	2.01	0.42
1:I:94:MET:HG3	1:I:95:ALA:N	2.34	0.42
3:D:69:PHE:CD1	3:D:69:PHE:N	2.88	0.42
1:A:48:SER:OG	3:D:106:GLY:O	2.32	0.42
3:H:5:GLN:HG3	3:H:109:THR:HG23	2.02	0.42
1:I:43:GLN:CD	3:H:38:GLN:HE22	2.27	0.42
2:F:110(D):ARG:HD2	2:F:113:GLN:OE1	2.19	0.42
3:H:34:SER:O	3:H:97:CYS:HA	2.19	0.42
3:H:51:ARG:HD2	3:H:58:THR:HG23	2.00	0.42
1:A:40:TRP:CG	1:A:78:LEU:HD13	2.55	0.42
3:D:103:TRP:HA	3:D:103:TRP:CE3	2.54	0.42
1:A:160:GLN:OE1	1:A:163:ASN:ND2	2.53	0.42
3:D:38:GLN:HG3	3:D:43:GLY:O	2.20	0.42
3:H:22:THR:HG22	3:H:22:THR:O	2.18	0.41
3:H:50:VAL:HG13	3:H:59:THR:HG22	2.02	0.41
2:F:145:GLN:O	2:F:148:ASP:HB2	2.20	0.41
1:A:191:TYR:HA	1:A:197:TYR:OH	2.20	0.41
2:F:73:LEU:HD13	2:F:141:PHE:CD1	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:172:TYR:HE2	2:F:225:PRO:HD2	1.82	0.41
3:H:49:PHE:HE2	3:H:60:GLU:CG	2.33	0.41
1:A:88:VAL:HG23	1:A:108:LYS:HZ3	1.85	0.41
1:A:195:LYS:O	1:A:215:ASN:HA	2.20	0.41
3:H:71:ILE:HG13	3:H:82:LEU:HD23	2.02	0.41
1:A:91:TYR:N	1:A:91:TYR:CD1	2.87	0.41
2:F:55:ALA:HB1	2:F:102:ASP:OD1	2.19	0.41
3:H:34:SER:OG	3:H:49:PHE:HB3	2.20	0.41
3:D:154:VAL:HA	3:D:199:ASN:O	2.19	0.41
1:A:116:VAL:HG12	1:A:144:PHE:HA	2.03	0.41
3:D:66:LYS:HE3	3:D:66:LYS:HB2	1.87	0.41
2:F:25:GLU:O	2:F:28:PRO:HD3	2.21	0.41
2:F:101:ASN:O	2:F:103:ILE:HG22	2.19	0.41
2:F:132:PHE:CD1	2:F:132:PHE:C	2.98	0.41
1:I:67:PHE:CE1	1:I:80:ILE:HG12	2.55	0.41
3:H:35:TRP:CZ2	3:H:82:LEU:HB2	2.56	0.41
3:H:140:LEU:O	3:H:184:VAL:N	2.54	0.41
1:A:33:ASN:OD1	1:A:33:ASN:N	2.53	0.41
2:F:131:GLN:O	2:F:134:THR:OG1	2.28	0.41
1:I:19:ALA:O	1:I:80:ILE:HD12	2.21	0.41
3:D:131:LYS:HG2	3:D:133:THR:CB	2.51	0.41
3:H:23:ALA:HB3	3:H:28:PHE:CD2	2.55	0.41
2:F:72:ARG:NH1	2:F:75:SER:OG	2.54	0.40
3:D:37:ARG:HE	3:D:37:ARG:HB2	1.52	0.40
3:D:188:SER:O	3:D:190:SER:N	2.54	0.40
3:H:50:VAL:HG11	3:H:73:ARG:HB3	2.03	0.40
1:I:13:VAL:CG2	1:I:109:LEU:HD11	2.51	0.40
3:H:38:GLN:O	3:H:39:ALA:HB3	2.21	0.40
3:H:61:TYR:CE2	3:H:71:ILE:HG22	2.56	0.40
1:A:94:MET:HG2	1:A:95:ALA:N	2.36	0.40
2:F:185:ASP:HA	2:F:185(A):PRO:HD3	1.95	0.40
2:F:203:LEU:HD23	2:F:203:LEU:HA	1.84	0.40
3:D:23:ALA:HB1	3:D:26:PHE:CZ	2.57	0.40
3:D:211:LYS:HA	3:D:211:LYS:HD3	1.77	0.40
2:F:172:TYR:OH	2:F:225:PRO:O	2.37	0.40
1:I:37:PHE:HB3	1:I:96:ARG:HB3	2.03	0.40

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

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:244:GLU:OE2	3:H:31:TYR:OH[1_545]	2.03	0.17
2:F:37(B):GLY:N	1:I:32:ARG:O[1_545]	2.07	0.13

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	212/216 (98%)	188 (89%)	21 (10%)	3 (1%)	9 31
1	I	210/216 (97%)	158 (75%)	32 (15%)	20 (10%)	0 1
2	F	245/284 (86%)	212 (86%)	27 (11%)	6 (2%)	5 19
3	D	211/213 (99%)	182 (86%)	20 (10%)	9 (4%)	2 8
3	H	211/213 (99%)	138 (65%)	39 (18%)	34 (16%)	0 0
All	All	1089/1142 (95%)	878 (81%)	139 (13%)	72 (7%)	1 3

All (72) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	99	ALA
2	F	37(A)	ARG
2	F	238	ILE
1	I	73	GLY
1	I	99	ALA
1	I	122	ILE
1	I	124	PRO
1	I	127	ASP
1	I	141	LEU
1	I	146	PRO
1	I	147	ARG
1	I	160	GLN
1	I	176	SER
1	I	183	THR
1	I	200	GLU

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Mol	Chain	Res	Type
3	D	53	GLU
3	D	175	SER
3	H	63	ALA
3	H	76	SER
3	H	89	THR
3	H	90	GLU
3	H	91	ASP
3	H	102	ASN
3	H	119	LYS
3	H	124	PHE
3	H	125	PRO
3	H	127	ALA
3	H	128	PRO
3	H	130	SER
3	H	142	CYS
3	H	149	PRO
3	H	150	GLU
3	H	151	PRO
3	H	166	HIS
3	H	213	VAL
3	H	214	GLU
1	A	29	LEU
2	F	173	GLY
1	I	31	ASN
1	I	217	GLY
3	D	102	ASN
3	D	133	THR
3	D	206	ASN
3	H	78	SER
3	H	160	ALA
3	H	162	THR
3	H	164	GLY
3	H	209	VAL
3	H	210	ASP
2	F	37(B)	GLY
2	F	169	GLN
1	I	209	PRO
3	D	189	SER
3	H	39	ALA
3	H	212	LYS
1	A	48	SER
2	F	239	ARG

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Mol	Chain	Res	Type
1	I	48	SER
1	I	174	LYS
3	D	17	LEU
3	D	39	ALA
3	D	99	ARG
3	H	103	TRP
3	H	143	LEU
3	H	85	ASN
3	H	99	ARG
3	H	133	THR
1	I	140	LEU
3	H	165	VAL
1	I	118	PRO
3	H	40	PRO
1	I	15	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	180/190 (95%)	139 (77%)	41 (23%)	0 2
1	I	89/190 (47%)	64 (72%)	25 (28%)	0 1
2	F	214/248 (86%)	191 (89%)	23 (11%)	5 17
3	D	164/174 (94%)	128 (78%)	36 (22%)	1 2
3	H	81/174 (47%)	52 (64%)	29 (36%)	0 0
All	All	728/976 (75%)	574 (79%)	154 (21%)	1 2

All (154) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	3	VAL
1	A	4	LEU
1	A	6	GLN
1	A	9	LEU

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Mol	Chain	Res	Type
1	A	11	LEU
1	A	13	VAL
1	A	20	SER
1	A	23	CYS
1	A	26	SER
1	A	27	GLN
1	A	29	LEU
1	A	30	MET
1	A	33	ASN
1	A	38	LEU
1	A	42	LEU
1	A	48	SER
1	A	55	LEU
1	A	66	ARG
1	A	74	THR
1	A	86	GLU
1	A	90	VAL
1	A	93	CYS
1	A	105	GLN
1	A	111	ILE
1	A	116	VAL
1	A	128	GLU
1	A	138	VAL
1	A	140	LEU
1	A	141	LEU
1	A	147	ARG
1	A	151	VAL
1	A	155	VAL
1	A	161	SER
1	A	181	SER
1	A	183	THR
1	A	184	LEU
1	A	186	LEU
1	A	188	LYS
1	A	192	GLU
1	A	196	VAL
1	A	211	THR
2	F	23	THR
2	F	39	THR
2	F	53	ILE
2	F	56	THR
2	F	59	PHE

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Mol	Chain	Res	Type
2	F	63	ASP
2	F	70	ARG
2	F	74	ASN
2	F	80	GLU
2	F	81	MET
2	F	87	ASN
2	F	92	LYS
2	F	95	SER
2	F	103	ILE
2	F	109	ARG
2	F	116	ARG
2	F	117	THR
2	F	148	ASP
2	F	166	ARG
2	F	167	GLU
2	F	169	GLN
2	F	224	LYS
2	F	242	THR
1	I	1	GLU
1	I	3	VAL
1	I	4	LEU
1	I	6	GLN
1	I	7	SER
1	I	11	LEU
1	I	13	VAL
1	I	14	THR
1	I	25	SER
1	I	27	GLN
1	I	29	LEU
1	I	31	ASN
1	I	32	ARG
1	I	36	ASN
1	I	38	LEU
1	I	42	LEU
1	I	57	SER
1	I	66	ARG
1	I	68	SER
1	I	74	THR
1	I	78	LEU
1	I	80	ILE
1	I	82	ARG
1	I	88	VAL

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Mol	Chain	Res	Type
1	I	94	MET
3	D	5	GLN
3	D	16	SER
3	D	17	LEU
3	D	34	SER
3	D	42	LYS
3	D	45	GLU
3	D	47	VAL
3	D	50	VAL
3	D	54	SER
3	D	64	SER
3	D	65	VAL
3	D	66	LYS
3	D	70	THR
3	D	71	ILE
3	D	72	SER
3	D	78	SER
3	D	79	ILE
3	D	84	MET
3	D	89	THR
3	D	94	VAL
3	D	109	THR
3	D	110	LEU
3	D	112	THR
3	D	122	SER
3	D	129	SER
3	D	153	THR
3	D	157	ASN
3	D	161	LEU
3	D	171	VAL
3	D	180	LEU
3	D	181	SER
3	D	183	VAL
3	D	184	VAL
3	D	189	SER
3	D	209	VAL
3	D	211	LYS
3	H	2	GLN
3	H	5	GLN
3	H	10	LEU
3	H	20	SER
3	H	21	CYS

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Mol	Chain	Res	Type
3	H	37	ARG
3	H	44	LEU
3	H	49	PHE
3	H	50	VAL
3	H	58	THR
3	H	65	VAL
3	H	68	ARG
3	H	69	PHE
3	H	72	SER
3	H	73	ARG
3	H	78	SER
3	H	79	ILE
3	H	82	LEU
3	H	83	GLN
3	H	84	MET
3	H	89	THR
3	H	91	ASP
3	H	92	THR
3	H	94	VAL
3	H	96	TYR
3	H	97	CYS
3	H	98	ILE
3	H	111	VAL
3	H	112	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (12) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	27	GLN
1	A	47	GLN
1	A	50	GLN
1	A	58	ASN
1	A	215	ASN
2	F	27	GLN
2	F	74	ASN
2	F	100	HIS
2	F	170(B)	HIS
1	I	36	ASN
1	I	50	GLN
3	H	5	GLN

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no oligosaccharides in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	I	2
1	A	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	I	111:ILE	C	113:ARG	N	5.25
1	A	111:ILE	C	113:ARG	N	3.68
1	I	27:GLN	C	29:LEU	N	3.62

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	216/216 (100%)	-0.46	0 100 100	33, 58, 84, 101	0
1	I	216/216 (100%)	0.57	7 (3%) 50 44	79, 139, 249, 381	0
2	F	247/284 (86%)	-0.39	0 100 100	37, 64, 110, 213	0
3	D	213/213 (100%)	-0.40	1 (0%) 87 84	30, 64, 96, 166	0
3	H	213/213 (100%)	0.62	8 (3%) 44 38	91, 148, 252, 425	0
All	All	1105/1142 (96%)	-0.02	16 (1%) 73 68	30, 80, 207, 425	0

All (16) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	I	157	ASN	2.9
3	H	125	PRO	2.8
1	I	111	ILE	2.7
3	D	133	THR	2.6
1	I	139	CYS	2.5
3	H	114	SER	2.4
3	H	159	GLY	2.3
3	H	54	SER	2.3
1	I	29	LEU	2.3
1	I	190	ASP	2.2
3	H	55	ALA	2.2
1	I	133	GLY	2.1
1	I	95	ALA	2.1
3	H	179	SER	2.1
3	H	86	ALA	2.1
3	H	155	SER	2.0

6.2 Non-standard residues in protein, DNA, RNA chains (i)

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

6.3 Carbohydrates (i)

There are no oligosaccharides in this entry.

6.4 Ligands (i)

There are no ligands in this entry.

6.5 Other polymers (i)

There are no such residues in this entry.