Full wwPDB X-ray Structure Validation Report ⓘ

Nov 1, 2023 – 08:02 AM EDT

PDB ID	:	3OUR
Title	:	Crystal structure of complex between EIIA and a novel pyruvate decarboxylase
Authors	:	Jeong, C.S.; An, Y.J.; Cha, S.S.
Deposited on	:	2010-09-15
Resolution	:	2.20 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:

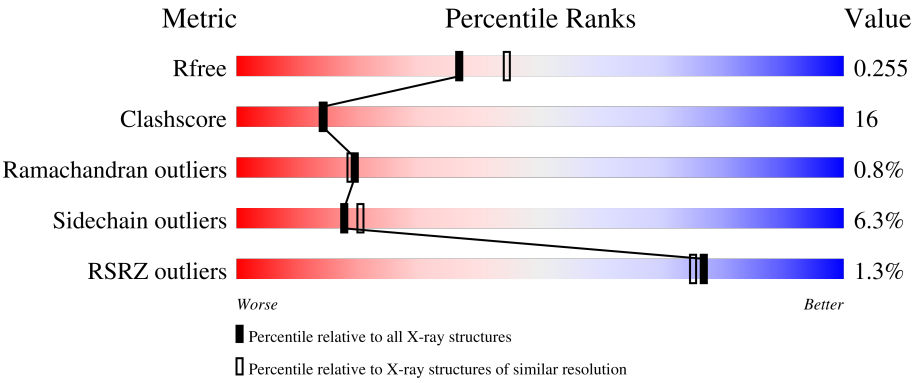
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.13
EDS	:	2.36
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 2.20 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	4898 (2.20-2.20)
Clashscore	141614	5594 (2.20-2.20)
Ramachandran outliers	138981	5503 (2.20-2.20)
Sidechain outliers	138945	5504 (2.20-2.20)
RSRZ outliers	127900	4800 (2.20-2.20)

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	435	65% 24% • 9%
1	C	435	63% 26% • 9%
1	E	435	64% 24% • 9%
1	G	435	63% 25% • 9%
2	B	183	51% 28% • 18%

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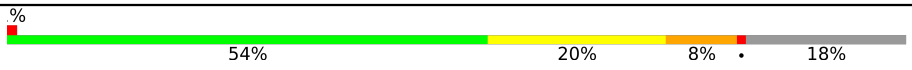
Mol	Chain	Length	Quality of chain
2	D	183	
2	F	183	
2	H	183	

2 Entry composition (i)

There are 3 unique types of molecules in this entry. The entry contains 17650 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 UPF0255 protein VV1_0328.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	394	Total	C	N	O	S	0	0	0
			3018	1931	509	563	15			
1	C	394	Total	C	N	O	S	0	0	0
			3079	1966	522	576	15			
1	E	396	Total	C	N	O	S	0	0	0
			3048	1947	517	569	15			
1	G	396	Total	C	N	O	S	0	0	0
			3098	1979	525	579	15			

There are 80 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-19	MET	-	expression tag	UNP Q8DF91
A	-18	ARG	-	expression tag	UNP Q8DF91
A	-17	GLY	-	expression tag	UNP Q8DF91
A	-16	SER	-	expression tag	UNP Q8DF91
A	-15	HIS	-	expression tag	UNP Q8DF91
A	-14	HIS	-	expression tag	UNP Q8DF91
A	-13	HIS	-	expression tag	UNP Q8DF91
A	-12	HIS	-	expression tag	UNP Q8DF91
A	-11	HIS	-	expression tag	UNP Q8DF91
A	-10	HIS	-	expression tag	UNP Q8DF91
A	-9	GLY	-	expression tag	UNP Q8DF91
A	-8	SER	-	expression tag	UNP Q8DF91
A	-7	ALA	-	expression tag	UNP Q8DF91
A	-6	CYS	-	expression tag	UNP Q8DF91
A	-5	GLU	-	expression tag	UNP Q8DF91
A	-4	LEU	-	expression tag	UNP Q8DF91
A	-3	GLY	-	expression tag	UNP Q8DF91
A	-2	THR	-	expression tag	UNP Q8DF91
A	-1	PRO	-	expression tag	UNP Q8DF91
A	0	ASN	-	expression tag	UNP Q8DF91
C	-19	MET	-	expression tag	UNP Q8DF91

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Chain	Residue	Modelled	Actual	Comment	Reference
C	-18	ARG	-	expression tag	UNP Q8DF91
C	-17	GLY	-	expression tag	UNP Q8DF91
C	-16	SER	-	expression tag	UNP Q8DF91
C	-15	HIS	-	expression tag	UNP Q8DF91
C	-14	HIS	-	expression tag	UNP Q8DF91
C	-13	HIS	-	expression tag	UNP Q8DF91
C	-12	HIS	-	expression tag	UNP Q8DF91
C	-11	HIS	-	expression tag	UNP Q8DF91
C	-10	HIS	-	expression tag	UNP Q8DF91
C	-9	GLY	-	expression tag	UNP Q8DF91
C	-8	SER	-	expression tag	UNP Q8DF91
C	-7	ALA	-	expression tag	UNP Q8DF91
C	-6	CYS	-	expression tag	UNP Q8DF91
C	-5	GLU	-	expression tag	UNP Q8DF91
C	-4	LEU	-	expression tag	UNP Q8DF91
C	-3	GLY	-	expression tag	UNP Q8DF91
C	-2	THR	-	expression tag	UNP Q8DF91
C	-1	PRO	-	expression tag	UNP Q8DF91
C	0	ASN	-	expression tag	UNP Q8DF91
E	-19	MET	-	expression tag	UNP Q8DF91
E	-18	ARG	-	expression tag	UNP Q8DF91
E	-17	GLY	-	expression tag	UNP Q8DF91
E	-16	SER	-	expression tag	UNP Q8DF91
E	-15	HIS	-	expression tag	UNP Q8DF91
E	-14	HIS	-	expression tag	UNP Q8DF91
E	-13	HIS	-	expression tag	UNP Q8DF91
E	-12	HIS	-	expression tag	UNP Q8DF91
E	-11	HIS	-	expression tag	UNP Q8DF91
E	-10	HIS	-	expression tag	UNP Q8DF91
E	-9	GLY	-	expression tag	UNP Q8DF91
E	-8	SER	-	expression tag	UNP Q8DF91
E	-7	ALA	-	expression tag	UNP Q8DF91
E	-6	CYS	-	expression tag	UNP Q8DF91
E	-5	GLU	-	expression tag	UNP Q8DF91
E	-4	LEU	-	expression tag	UNP Q8DF91
E	-3	GLY	-	expression tag	UNP Q8DF91
E	-2	THR	-	expression tag	UNP Q8DF91
E	-1	PRO	-	expression tag	UNP Q8DF91
E	0	ASN	-	expression tag	UNP Q8DF91
G	-19	MET	-	expression tag	UNP Q8DF91
G	-18	ARG	-	expression tag	UNP Q8DF91
G	-17	GLY	-	expression tag	UNP Q8DF91

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Chain	Residue	Modelled	Actual	Comment	Reference
G	-16	SER	-	expression tag	UNP Q8DF91
G	-15	HIS	-	expression tag	UNP Q8DF91
G	-14	HIS	-	expression tag	UNP Q8DF91
G	-13	HIS	-	expression tag	UNP Q8DF91
G	-12	HIS	-	expression tag	UNP Q8DF91
G	-11	HIS	-	expression tag	UNP Q8DF91
G	-10	HIS	-	expression tag	UNP Q8DF91
G	-9	GLY	-	expression tag	UNP Q8DF91
G	-8	SER	-	expression tag	UNP Q8DF91
G	-7	ALA	-	expression tag	UNP Q8DF91
G	-6	CYS	-	expression tag	UNP Q8DF91
G	-5	GLU	-	expression tag	UNP Q8DF91
G	-4	LEU	-	expression tag	UNP Q8DF91
G	-3	GLY	-	expression tag	UNP Q8DF91
G	-2	THR	-	expression tag	UNP Q8DF91
G	-1	PRO	-	expression tag	UNP Q8DF91
G	0	ASN	-	expression tag	UNP Q8DF91

- Molecule 2 is a protein called Phosphotransferase system IIA component.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	150	Total	C	N	O	S	0	0	0
			1121	714	177	228	2			
2	D	150	Total	C	N	O	S	0	0	0
			1117	713	178	224	2			
2	F	150	Total	C	N	O	S	0	0	0
			1121	715	178	226	2			
2	H	150	Total	C	N	O	S	0	0	0
			1121	714	177	228	2			

There are 56 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	-13	MET	-	expression tag	UNP Q8DFJ9
B	-12	ARG	-	expression tag	UNP Q8DFJ9
B	-11	GLY	-	expression tag	UNP Q8DFJ9
B	-10	SER	-	expression tag	UNP Q8DFJ9
B	-9	HIS	-	expression tag	UNP Q8DFJ9
B	-8	HIS	-	expression tag	UNP Q8DFJ9
B	-7	HIS	-	expression tag	UNP Q8DFJ9
B	-6	HIS	-	expression tag	UNP Q8DFJ9
B	-5	HIS	-	expression tag	UNP Q8DFJ9

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Chain	Residue	Modelled	Actual	Comment	Reference
B	-4	HIS	-	expression tag	UNP Q8DFJ9
B	-3	GLY	-	expression tag	UNP Q8DFJ9
B	-2	SER	-	expression tag	UNP Q8DFJ9
B	-1	ASP	-	expression tag	UNP Q8DFJ9
B	0	THR	-	expression tag	UNP Q8DFJ9
D	-13	MET	-	expression tag	UNP Q8DFJ9
D	-12	ARG	-	expression tag	UNP Q8DFJ9
D	-11	GLY	-	expression tag	UNP Q8DFJ9
D	-10	SER	-	expression tag	UNP Q8DFJ9
D	-9	HIS	-	expression tag	UNP Q8DFJ9
D	-8	HIS	-	expression tag	UNP Q8DFJ9
D	-7	HIS	-	expression tag	UNP Q8DFJ9
D	-6	HIS	-	expression tag	UNP Q8DFJ9
D	-5	HIS	-	expression tag	UNP Q8DFJ9
D	-4	HIS	-	expression tag	UNP Q8DFJ9
D	-3	GLY	-	expression tag	UNP Q8DFJ9
D	-2	SER	-	expression tag	UNP Q8DFJ9
D	-1	ASP	-	expression tag	UNP Q8DFJ9
D	0	THR	-	expression tag	UNP Q8DFJ9
F	-13	MET	-	expression tag	UNP Q8DFJ9
F	-12	ARG	-	expression tag	UNP Q8DFJ9
F	-11	GLY	-	expression tag	UNP Q8DFJ9
F	-10	SER	-	expression tag	UNP Q8DFJ9
F	-9	HIS	-	expression tag	UNP Q8DFJ9
F	-8	HIS	-	expression tag	UNP Q8DFJ9
F	-7	HIS	-	expression tag	UNP Q8DFJ9
F	-6	HIS	-	expression tag	UNP Q8DFJ9
F	-5	HIS	-	expression tag	UNP Q8DFJ9
F	-4	HIS	-	expression tag	UNP Q8DFJ9
F	-3	GLY	-	expression tag	UNP Q8DFJ9
F	-2	SER	-	expression tag	UNP Q8DFJ9
F	-1	ASP	-	expression tag	UNP Q8DFJ9
F	0	THR	-	expression tag	UNP Q8DFJ9
H	-13	MET	-	expression tag	UNP Q8DFJ9
H	-12	ARG	-	expression tag	UNP Q8DFJ9
H	-11	GLY	-	expression tag	UNP Q8DFJ9
H	-10	SER	-	expression tag	UNP Q8DFJ9
H	-9	HIS	-	expression tag	UNP Q8DFJ9
H	-8	HIS	-	expression tag	UNP Q8DFJ9
H	-7	HIS	-	expression tag	UNP Q8DFJ9
H	-6	HIS	-	expression tag	UNP Q8DFJ9
H	-5	HIS	-	expression tag	UNP Q8DFJ9

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Chain	Residue	Modelled	Actual	Comment	Reference
H	-4	HIS	-	expression tag	UNP Q8DFJ9
H	-3	GLY	-	expression tag	UNP Q8DFJ9
H	-2	SER	-	expression tag	UNP Q8DFJ9
H	-1	ASP	-	expression tag	UNP Q8DFJ9
H	0	THR	-	expression tag	UNP Q8DFJ9

- Molecule 3 is water.

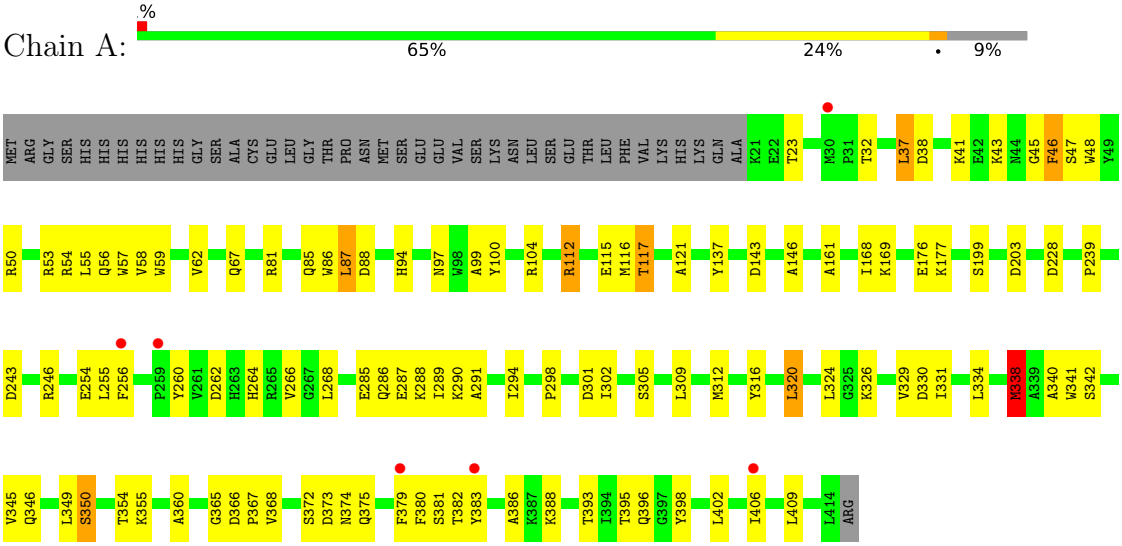
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	120	Total O 120 120	0	0
3	B	74	Total O 74 74	0	0
3	C	212	Total O 212 212	0	0
3	D	75	Total O 75 75	0	0
3	E	159	Total O 159 159	0	0
3	F	52	Total O 52 52	0	0
3	G	157	Total O 157 157	0	0
3	H	78	Total O 78 78	0	0

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.

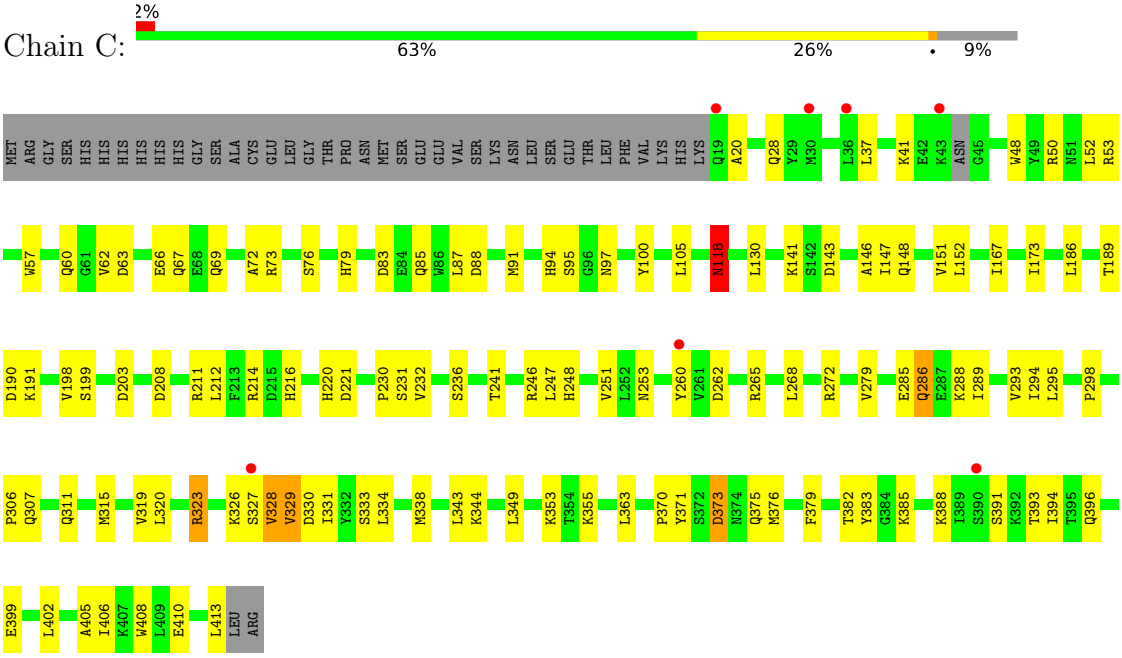
• Molecule 1: UPF0255 protein VV1_0328

Chain A:



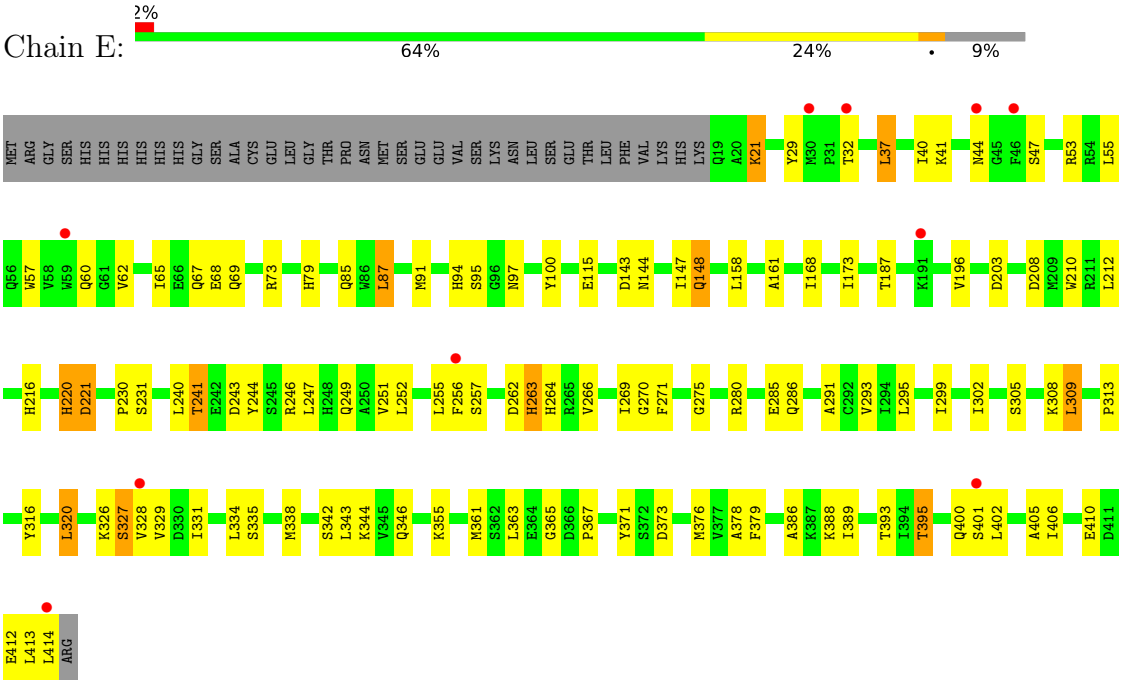
• Molecule 1: UPF0255 protein VV1_0328

Chain C:



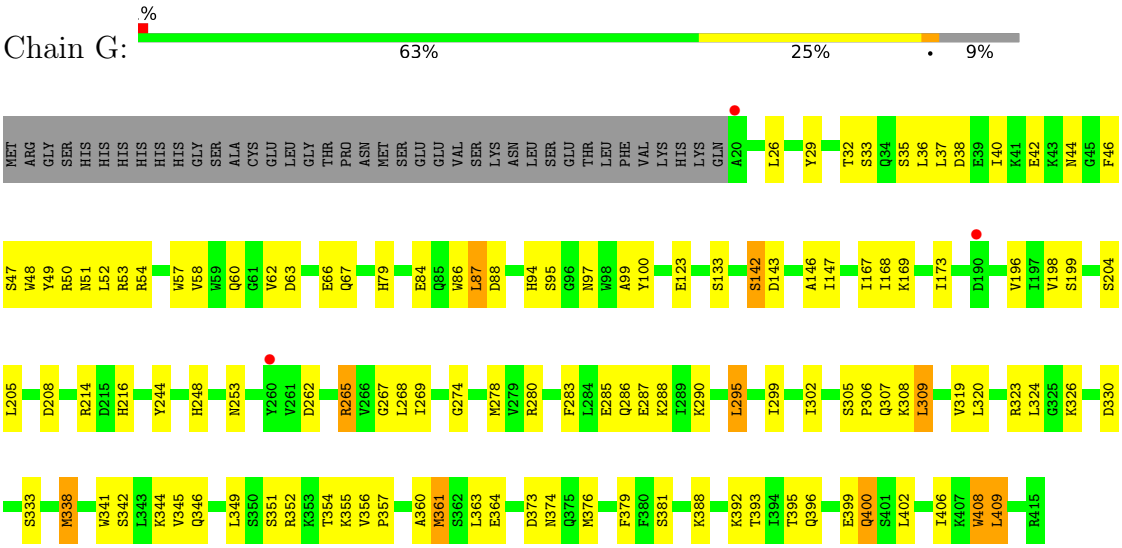
• Molecule 1: UPF0255 protein VV1_0328

Chain E:



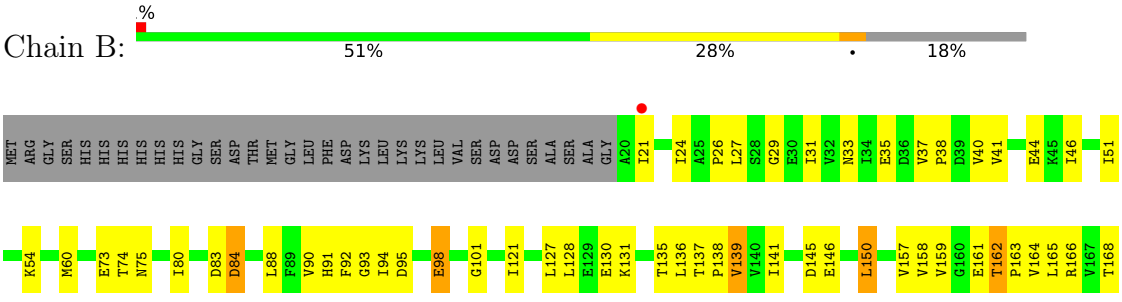
• Molecule 1: UPF0255 protein VV1_0328

Chain G:



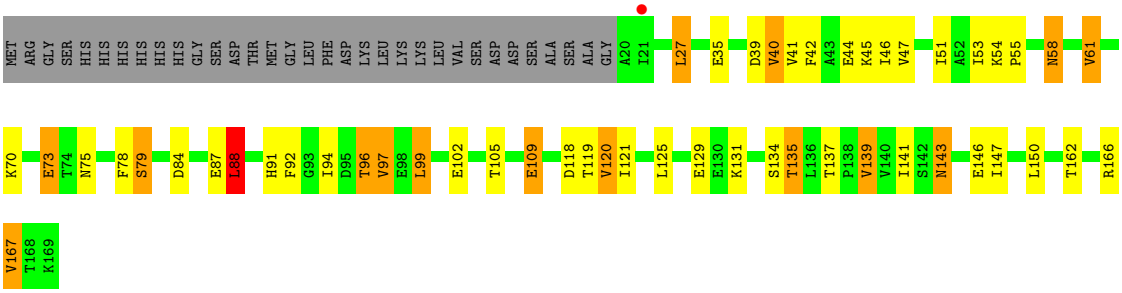
• Molecule 2: Phosphotransferase system IIA component

Chain B:



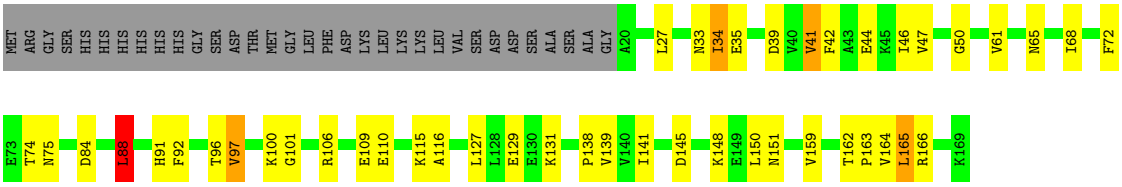
• Molecule 2: Phosphotransferase system IIA component

Chain D:



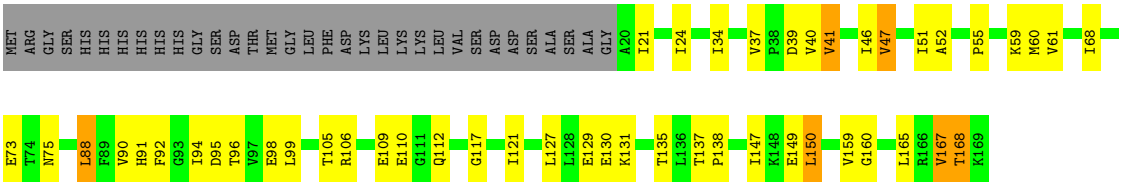
• Molecule 2: Phosphotransferase system IIA component

Chain F:



• Molecule 2: Phosphotransferase system IIA component

Chain H:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α, β, γ	322.87Å 62.07Å 126.36Å 90.00° 110.80° 90.00°	Depositor
Resolution (Å)	49.37 – 2.20 49.37 – 2.19	Depositor EDS
% Data completeness (in resolution range)	90.5 (49.37-2.20) 98.4 (49.37-2.19)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.60 (at 2.18Å)	Xtriage
Refinement program	CNS 1.1	Depositor
R, R_{free}	0.201 , 0.248 0.208 , 0.255	Depositor DCC
R_{free} test set	5953 reflections (4.99%)	wwPDB-VP
Wilson B-factor (Å^2)	29.2	Xtriage
Anisotropy	0.264	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.32 , 52.7	EDS
L-test for twinning[2]	$< \|L\| > = 0.47$, $< L^2 > = 0.30$	Xtriage
Estimated twinning fraction	0.020 for -h-2*l,-k,l	Xtriage
F_o,F_c correlation	0.94	EDS
Total number of atoms	17650	wwPDB-VP
Average B, all atoms (Å^2)	36.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 14.29% 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

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	0.43	0/3092	0.67	1/4211 (0.0%)
1	C	0.43	0/3152	0.67	0/4279
1	E	0.41	0/3119	0.64	0/4241
1	G	0.44	0/3172	0.65	0/4306
2	B	0.49	0/1135	0.77	0/1539
2	D	0.46	0/1131	0.76	2/1533 (0.1%)
2	F	0.48	0/1135	0.80	2/1538 (0.1%)
2	H	0.50	0/1135	0.80	1/1539 (0.1%)
All	All	0.44	0/17071	0.69	6/23186 (0.0%)

There are no bond length outliers.

All (6) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	H	88	LEU	CA-CB-CG	6.68	130.67	115.30
2	D	27	LEU	CA-CB-CG	6.08	129.29	115.30
2	F	88	LEU	CA-CB-CG	5.79	128.62	115.30
2	D	88	LEU	CA-CB-CG	5.54	128.04	115.30
1	A	330	ASP	N-CA-C	-5.14	97.12	111.00
2	F	165	LEU	CA-CB-CG	5.02	126.85	115.30

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	3018	0	2882	91	0
1	C	3079	0	2994	89	0
1	E	3048	0	2941	95	0
1	G	3098	0	3024	90	0
2	B	1121	0	1137	42	0
2	D	1117	0	1140	54	0
2	F	1121	0	1144	32	0
2	H	1121	0	1137	47	0
3	A	120	0	0	4	0
3	B	74	0	0	1	0
3	C	212	0	0	3	0
3	D	75	0	0	5	0
3	E	159	0	0	2	0
3	F	52	0	0	3	0
3	G	157	0	0	3	0
3	H	78	0	0	3	0
All	All	17650	0	16399	516	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 16.

All (516) 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:H:127:LEU:HD11	2:H:131:LYS:HE2	1.30	1.11
1:E:410:GLU:OE1	1:E:414:LEU:HD12	1.58	1.04
2:B:37:VAL:HB	2:B:94:ILE:HD11	1.50	0.94
1:C:118:ASN:HD22	1:C:118:ASN:H	1.15	0.94
1:E:97:ASN:HD22	1:E:100:TYR:H	1.21	0.88
2:D:135:THR:HG21	3:D:172:HOH:O	1.73	0.87
1:C:97:ASN:HD22	1:C:100:TYR:H	1.21	0.85
2:D:94:ILE:HD11	1:E:379:PHE:CZ	2.15	0.82
2:D:141:ILE:HG21	2:D:147:ILE:HD12	1.62	0.82
1:G:324:LEU:HD21	1:G:341:TRP:CZ2	2.16	0.81
1:G:57:TRP:O	1:G:62:VAL:HG12	1.81	0.81
2:B:158:VAL:HG23	2:B:161:GLU:HB2	1.60	0.80
1:A:316:TYR:O	1:A:320:LEU:HD22	1.80	0.80
1:G:97:ASN:HD22	1:G:100:TYR:H	1.28	0.80
1:E:395:THR:HB	2:F:44:GLU:OE1	1.82	0.79
1:A:97:ASN:HD22	1:A:100:TYR:H	1.29	0.79
2:F:164:VAL:HG23	2:F:165:LEU:HD22	1.64	0.79
1:E:402:LEU:O	1:E:406:ILE:HG12	1.84	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:389:ILE:HG12	1:E:401:SER:HB3	1.65	0.78
1:A:268:LEU:HD11	1:A:289:ILE:HD13	1.67	0.77
1:G:396:GLN:HG2	1:G:400:GLN:HE22	1.48	0.77
2:D:94:ILE:HD11	1:E:379:PHE:HZ	1.47	0.76
2:H:75:ASN:HD21	2:H:106:ARG:HE	1.33	0.75
1:G:324:LEU:HD21	1:G:341:TRP:HZ2	1.50	0.75
1:A:81:ARG:NE	1:A:87:LEU:HA	2.00	0.75
2:H:75:ASN:ND2	2:H:106:ARG:HE	1.84	0.75
2:H:127:LEU:CD1	2:H:131:LYS:HE2	2.12	0.74
2:F:39:ASP:OD1	2:F:41:VAL:HG13	1.87	0.74
1:E:41:LYS:HG2	1:E:85:GLN:HE22	1.53	0.74
2:H:73:GLU:HG2	3:H:677:HOH:O	1.88	0.73
1:C:231:SER:OG	1:C:323:ARG:HG3	1.88	0.73
2:F:65:ASN:OD1	2:F:115:LYS:HD2	1.89	0.72
1:G:305:SER:HB3	1:G:308:LYS:HG3	1.69	0.72
1:C:344:LYS:HB2	1:C:376:MET:CE	2.19	0.72
1:A:360:ALA:HB1	1:A:374:ASN:OD1	1.90	0.72
1:G:396:GLN:HG2	1:G:400:GLN:NE2	2.04	0.71
1:G:324:LEU:HD11	1:G:338:MET:HE1	1.72	0.71
1:A:298:PRO:HB3	1:A:368:VAL:HG12	1.72	0.71
1:C:402:LEU:O	1:C:406:ILE:HG12	1.91	0.71
1:A:326:LYS:HE3	1:A:334:LEU:HG	1.71	0.70
1:E:371:TYR:HB2	1:E:388:LYS:HG3	1.73	0.70
1:G:199:SER:HB2	1:G:248:HIS:NE2	2.07	0.70
1:C:286:GLN:NE2	1:C:355:LYS:H	1.89	0.70
1:G:307:GLN:NE2	1:G:307:GLN:H	1.90	0.69
1:G:169:LYS:HD2	3:G:508:HOH:O	1.92	0.69
1:G:402:LEU:O	1:G:406:ILE:HG12	1.92	0.69
2:B:37:VAL:HB	2:B:94:ILE:CD1	2.20	0.68
2:F:88:LEU:HD13	2:F:141:ILE:HG13	1.76	0.68
2:D:55:PRO:HD2	2:D:135:THR:HG23	1.74	0.68
1:C:405:ALA:O	1:C:408:TRP:HB3	1.93	0.67
1:G:54:ARG:NH2	2:H:41:VAL:HG11	2.10	0.67
1:G:285:GLU:OE1	1:G:288:LYS:HD2	1.95	0.67
1:A:342:SER:O	1:A:346:GLN:HG3	1.94	0.67
1:E:69:GLN:HE21	1:E:73:ARG:NH2	1.92	0.67
1:C:118:ASN:H	1:C:118:ASN:ND2	1.88	0.67
1:C:69:GLN:OE1	2:D:70:LYS:HE3	1.94	0.66
2:B:95:ASP:O	2:B:98:GLU:HG3	1.96	0.66
1:A:81:ARG:HE	1:A:87:LEU:HA	1.57	0.66
1:E:305:SER:CB	1:E:308:LYS:HD2	2.25	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:244:TYR:CZ	1:E:280:ARG:HD2	2.31	0.66
2:D:44:GLU:HB2	2:D:46:ILE:HD13	1.78	0.66
1:C:344:LYS:HB2	1:C:376:MET:HE1	1.75	0.66
1:A:37:LEU:HD13	1:A:331:ILE:HD11	1.77	0.66
1:C:37:LEU:HD13	1:C:331:ILE:HD11	1.76	0.66
1:A:382:THR:HG22	1:A:383:TYR:CD2	2.30	0.66
2:H:61:VAL:HG11	2:H:117:GLY:HA2	1.78	0.66
1:C:385:LYS:HD2	1:C:408:TRP:CZ3	2.31	0.65
2:B:158:VAL:CG2	2:B:161:GLU:HB2	2.26	0.65
1:E:342:SER:O	1:E:346:GLN:HG3	1.96	0.65
1:A:302:ILE:O	1:A:309:LEU:HD11	1.97	0.65
2:D:120:VAL:HG23	2:D:121:ILE:HG13	1.77	0.65
1:E:361:MET:HB3	1:E:389:ILE:CD1	2.28	0.64
1:G:143:ASP:HB3	1:G:146:ALA:HB3	1.80	0.64
1:E:65:ILE:HD11	2:F:47:VAL:HG23	1.78	0.64
2:H:95:ASP:O	2:H:98:GLU:HG2	1.96	0.64
1:C:385:LYS:HD2	1:C:408:TRP:HZ3	1.63	0.63
2:D:94:ILE:CD1	1:E:379:PHE:HZ	2.11	0.63
2:F:97:VAL:CG2	3:F:933:HOH:O	2.45	0.63
2:H:127:LEU:HD11	2:H:131:LYS:CE	2.20	0.63
1:C:330:ASP:HB3	1:C:333:SER:HB3	1.81	0.63
2:D:42:PHE:CD1	2:D:47:VAL:HG11	2.34	0.63
1:E:79:HIS:HD2	1:E:95:SER:O	1.81	0.62
1:G:395:THR:HB	3:H:303:HOH:O	1.98	0.62
1:E:293:VAL:HG11	1:E:405:ALA:HB1	1.80	0.62
1:E:57:TRP:O	1:E:62:VAL:HG12	2.00	0.62
2:H:59:LYS:HE3	2:H:159:VAL:HG11	1.80	0.62
1:G:262:ASP:CG	1:G:265:ARG:HG3	2.21	0.62
2:H:109:GLU:HG3	2:H:112:GLN:HB2	1.81	0.62
1:A:176:GLU:OE2	1:A:246:ARG:NH1	2.32	0.61
1:G:79:HIS:HD2	1:G:95:SER:O	1.82	0.61
1:E:196:VAL:HG11	1:E:269:ILE:HD12	1.82	0.61
1:G:196:VAL:HG11	1:G:269:ILE:HG13	1.83	0.61
2:B:21:ILE:HD13	2:B:84:ASP:OD2	2.01	0.61
1:G:26:LEU:HD22	1:G:142:SER:HB2	1.83	0.61
1:G:51:ASN:HD22	1:G:53:ARG:HE	1.48	0.61
1:G:306:PRO:HG2	1:G:307:GLN:HE22	1.65	0.61
1:C:79:HIS:HD2	1:C:95:SER:O	1.83	0.61
2:D:61:VAL:HG22	2:D:118:ASP:O	2.01	0.61
1:E:313:PRO:HD2	1:E:316:TYR:HD2	1.63	0.61
1:E:144:ASN:O	1:E:148:GLN:HG2	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:353:LYS:HE2	1:C:379:PHE:O	2.00	0.60
1:G:267:GLY:O	1:G:268:LEU:HD23	2.01	0.60
1:C:293:VAL:HG11	1:C:405:ALA:HB1	1.82	0.60
2:F:75:ASN:ND2	2:F:106:ARG:HE	1.99	0.60
1:G:50:ARG:NH1	1:G:88:ASP:OD1	2.34	0.60
1:E:230:PRO:HG3	1:E:247:LEU:HG	1.83	0.60
1:C:343:LEU:HB2	1:C:349:LEU:HD12	1.83	0.60
1:C:363:LEU:HD11	1:C:394:ILE:HG23	1.84	0.60
2:D:51:ILE:HD12	2:D:51:ILE:C	2.22	0.59
2:D:40:VAL:O	2:D:44:GLU:HG3	2.00	0.59
1:G:306:PRO:HG2	1:G:307:GLN:NE2	2.17	0.59
1:A:37:LEU:HD13	1:A:331:ILE:CD1	2.32	0.59
2:D:97:VAL:HG22	3:D:839:HOH:O	2.03	0.59
1:C:231:SER:O	1:C:323:ARG:HD2	2.03	0.59
1:G:364:GLU:OE2	1:G:388:LYS:HE2	2.02	0.59
2:B:60:MET:CE	2:B:90:VAL:HG12	2.33	0.59
1:C:349:LEU:HD13	1:C:376:MET:HE2	1.85	0.59
2:H:149:GLU:HB3	2:H:168:THR:HG22	1.83	0.59
1:A:47:SER:O	1:A:87:LEU:HD22	2.03	0.59
1:A:104:ARG:HG2	1:A:104:ARG:HH11	1.68	0.59
1:G:244:TYR:CZ	1:G:280:ARG:HD2	2.38	0.59
2:F:41:VAL:HA	2:F:46:ILE:HD12	1.84	0.58
2:H:51:ILE:C	2:H:51:ILE:HD12	2.22	0.58
1:E:143:ASP:O	1:E:147:ILE:HG12	2.03	0.58
2:H:39:ASP:OD1	2:H:41:VAL:HG13	2.03	0.58
1:C:141:LYS:HE2	1:C:236:SER:HB2	1.85	0.58
1:C:285:GLU:OE1	1:C:288:LYS:HD2	2.04	0.58
1:A:54:ARG:O	1:A:58:VAL:HG23	2.04	0.58
1:C:220:HIS:HB3	1:C:410:GLU:OE2	2.04	0.58
1:E:220:HIS:HD2	1:E:410:GLU:OE2	1.86	0.58
2:D:87:GLU:HB2	2:D:143:ASN:HB2	1.86	0.58
2:D:94:ILE:HG12	2:D:134:SER:HB3	1.86	0.58
2:F:68:ILE:O	2:F:110:GLU:O	2.21	0.58
1:A:55:LEU:HD21	2:B:46:ILE:CD1	2.34	0.57
2:D:143:ASN:HD21	2:D:146:GLU:CD	2.07	0.57
1:G:198:VAL:HG22	1:G:269:ILE:HB	1.86	0.57
1:A:57:TRP:HE3	1:A:67:GLN:NE2	2.01	0.57
1:A:243:ASP:O	1:A:246:ARG:HG2	2.05	0.57
1:A:53:ARG:HH12	1:A:203:ASP:CG	2.08	0.57
1:A:342:SER:HB3	1:A:345:VAL:HB	1.86	0.57
1:C:28:GLN:O	1:C:328:VAL:O	2.23	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:41:LYS:HG2	1:E:85:GLN:NE2	2.18	0.57
1:G:360:ALA:HB1	1:G:374:ASN:ND2	2.19	0.57
1:C:91:MET:O	1:C:94:HIS:HE1	1.88	0.57
2:H:75:ASN:ND2	2:H:106:ARG:HB2	2.19	0.57
1:C:371:TYR:O	1:C:375:GLN:HG3	2.04	0.56
1:E:187:THR:HG21	1:E:221:ASP:HA	1.86	0.56
1:G:360:ALA:HB1	1:G:374:ASN:HD22	1.70	0.56
1:E:326:LYS:NZ	1:E:334:LEU:HD12	2.21	0.56
2:B:127:LEU:HD11	2:B:131:LYS:CE	2.36	0.56
1:G:44:ASN:HB3	1:G:46:PHE:CE2	2.41	0.56
1:G:349:LEU:HD13	1:G:376:MET:HG2	1.88	0.56
1:A:395:THR:HG23	1:A:396:GLN:N	2.21	0.56
1:A:285:GLU:OE1	1:A:288:LYS:HE2	2.05	0.56
1:C:199:SER:HB2	1:C:248:HIS:NE2	2.20	0.56
2:D:94:ILE:CG1	2:D:134:SER:HB3	2.36	0.56
1:G:351:SER:OG	1:G:352:ARG:N	2.38	0.56
1:C:231:SER:HA	1:C:236:SER:HA	1.87	0.56
1:E:73:ARG:HH11	1:E:73:ARG:HG2	1.71	0.56
2:B:75:ASN:O	2:B:121:ILE:HD13	2.07	0.55
1:A:309:LEU:HD21	1:A:338:MET:HG2	1.88	0.55
1:C:344:LYS:HB2	1:C:376:MET:HE3	1.88	0.55
1:G:286:GLN:NE2	1:G:355:LYS:H	2.04	0.55
1:E:65:ILE:HD12	1:E:65:ILE:N	2.20	0.55
1:C:76:SER:OG	2:D:73:GLU:HG2	2.06	0.55
2:D:61:VAL:HG22	2:D:118:ASP:C	2.27	0.55
1:E:286:GLN:NE2	1:E:355:LYS:H	2.04	0.55
1:E:220:HIS:CD2	1:E:410:GLU:OE2	2.59	0.55
2:D:55:PRO:CD	2:D:135:THR:HG23	2.36	0.55
1:A:81:ARG:HE	1:A:87:LEU:CA	2.19	0.55
1:E:97:ASN:ND2	1:E:100:TYR:H	1.97	0.55
1:E:302:ILE:HG13	1:E:309:LEU:CD1	2.36	0.55
1:G:396:GLN:CG	1:G:400:GLN:HE22	2.16	0.55
2:H:75:ASN:O	2:H:121:ILE:HD13	2.07	0.55
1:G:253:ASN:OD1	1:G:288:LYS:HE3	2.07	0.54
1:A:169:LYS:HE3	1:A:260:TYR:CE2	2.42	0.54
2:B:33:ASN:HB3	2:B:35:GLU:OE2	2.07	0.54
1:C:328:VAL:O	1:C:329:VAL:HG23	2.07	0.54
2:D:88:LEU:HD13	2:D:141:ILE:HG13	1.90	0.54
1:A:45:GLY:O	1:A:85:GLN:NE2	2.41	0.54
1:A:393:THR:HA	2:B:44:GLU:OE2	2.08	0.54
1:A:87:LEU:HD22	1:A:87:LEU:N	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:239:PRO:O	1:A:246:ARG:NH2	2.41	0.54
2:H:168:THR:CG2	2:H:168:THR:O	2.56	0.54
1:A:86:TRP:C	1:A:88:ASP:H	2.11	0.54
1:C:268:LEU:HD11	1:C:289:ILE:HD13	1.90	0.54
2:F:75:ASN:HD21	2:F:106:ARG:HE	1.55	0.54
1:A:48:TRP:CZ3	1:A:87:LEU:HD23	2.42	0.53
1:A:55:LEU:HD22	1:A:59:TRP:CE2	2.42	0.53
2:B:60:MET:HE1	2:B:90:VAL:HG12	1.91	0.53
1:C:66:GLU:HG2	1:C:105:LEU:HD11	1.90	0.53
1:C:72:ALA:O	1:C:76:SER:HB3	2.08	0.53
1:A:45:GLY:O	1:A:46:PHE:O	2.27	0.53
1:A:50:ARG:HG3	1:A:50:ARG:HH11	1.74	0.53
1:E:363:LEU:HD23	1:E:389:ILE:HB	1.89	0.53
1:A:57:TRP:O	1:A:62:VAL:HG12	2.09	0.53
1:C:334:LEU:O	1:C:338:MET:HG2	2.08	0.53
1:G:167:ILE:C	1:G:168:ILE:HD12	2.29	0.53
1:G:345:VAL:HG12	1:G:345:VAL:O	2.08	0.53
1:E:91:MET:O	1:E:94:HIS:HE1	1.91	0.53
1:G:305:SER:CB	1:G:308:LYS:HG3	2.36	0.53
1:C:306:PRO:HG3	3:C:636:HOH:O	2.07	0.53
1:C:230:PRO:HG3	1:C:247:LEU:HG	1.90	0.52
1:E:173:ILE:N	1:E:173:ILE:HD12	2.24	0.52
1:E:331:ILE:O	1:E:335:SER:HB3	2.09	0.52
1:C:253:ASN:OD1	1:C:288:LYS:HE2	2.09	0.52
1:E:393:THR:HB	2:F:44:GLU:CD	2.30	0.52
1:G:84:GLU:HG3	3:G:434:HOH:O	2.10	0.52
1:G:338:MET:HA	1:G:338:MET:CE	2.40	0.52
1:C:20:ALA:HB2	3:C:898:HOH:O	2.09	0.52
1:E:47:SER:HB3	1:E:87:LEU:HD22	1.91	0.52
1:E:212:LEU:O	1:E:216:HIS:HB2	2.10	0.52
2:H:149:GLU:HG2	2:H:150:LEU:N	2.24	0.52
2:F:97:VAL:HG22	3:F:933:HOH:O	2.07	0.52
1:G:216:HIS:HE1	1:G:399:GLU:OE2	1.92	0.51
2:D:91:HIS:O	2:D:137:THR:HG23	2.09	0.51
1:E:249:GLN:NE2	1:E:285:GLU:OE2	2.33	0.51
1:A:161:ALA:HB1	1:A:168:ILE:HB	1.92	0.51
1:G:47:SER:HB3	1:G:87:LEU:CD2	2.39	0.51
1:G:344:LYS:HE3	3:G:694:HOH:O	2.09	0.51
2:H:55:PRO:HD2	2:H:135:THR:HG23	1.92	0.51
2:D:141:ILE:HG22	2:D:143:ASN:H	1.75	0.51
1:A:286:GLN:NE2	1:A:355:LYS:H	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:290:LYS:HG2	3:A:461:HOH:O	2.11	0.51
1:C:118:ASN:HD22	1:C:118:ASN:N	1.96	0.51
1:A:374:ASN:O	1:A:386:ALA:HB2	2.11	0.51
2:D:125:LEU:O	2:D:129:GLU:HB2	2.11	0.51
2:F:151:ASN:HB2	2:F:166:ARG:HB3	1.92	0.51
2:B:91:HIS:O	2:B:138:PRO:HD2	2.11	0.51
1:E:57:TRP:C	1:E:62:VAL:HG12	2.32	0.51
1:E:326:LYS:HD2	1:E:334:LEU:HD12	1.92	0.51
1:A:57:TRP:C	1:A:62:VAL:HG12	2.32	0.51
2:B:51:ILE:HD12	2:B:51:ILE:C	2.32	0.51
1:E:299:ILE:HG23	1:E:343:LEU:HD12	1.92	0.51
2:F:35:GLU:CD	2:F:35:GLU:H	2.14	0.51
1:A:268:LEU:CD1	1:A:289:ILE:HD13	2.39	0.50
1:C:363:LEU:CD1	1:C:394:ILE:HG23	2.41	0.50
1:G:143:ASP:O	1:G:147:ILE:HG12	2.10	0.50
2:B:41:VAL:HA	2:B:46:ILE:HD12	1.92	0.50
1:E:68:GLU:HB3	2:F:72:PHE:CE2	2.46	0.50
1:G:283:PHE:CD1	1:G:354:THR:HB	2.47	0.50
2:B:74:THR:O	2:B:101:GLY:HA2	2.12	0.50
2:B:135:THR:HG21	3:B:225:HOH:O	2.11	0.50
1:E:256:PHE:CE2	1:E:257:SER:HB3	2.47	0.50
2:F:97:VAL:HG23	3:F:933:HOH:O	2.09	0.50
2:B:139:VAL:CG2	2:B:139:VAL:O	2.60	0.50
1:C:328:VAL:O	1:C:329:VAL:CB	2.59	0.50
2:D:141:ILE:HG21	2:D:147:ILE:CD1	2.39	0.50
1:A:402:LEU:O	1:A:406:ILE:HG12	2.12	0.50
1:E:220:HIS:ND1	1:E:220:HIS:N	2.60	0.50
2:F:164:VAL:HG23	2:F:165:LEU:CD2	2.37	0.50
1:G:408:TRP:CD1	1:G:409:LEU:N	2.80	0.50
1:C:212:LEU:O	1:C:216:HIS:HB2	2.11	0.49
1:E:37:LEU:HD13	1:E:331:ILE:HD11	1.94	0.49
2:H:168:THR:HG22	2:H:168:THR:O	2.12	0.49
1:A:87:LEU:HD22	1:A:87:LEU:H	1.76	0.49
1:C:53:ARG:NH2	1:C:203:ASP:OD2	2.44	0.49
2:D:109:GLU:HG2	3:D:429:HOH:O	2.12	0.49
1:A:302:ILE:O	1:A:309:LEU:CD1	2.60	0.49
1:G:173:ILE:N	1:G:173:ILE:HD12	2.27	0.49
2:H:24:ILE:N	2:H:24:ILE:HD12	2.27	0.49
2:H:47:VAL:HG13	3:H:305:HOH:O	2.12	0.49
1:E:271:PHE:CE1	1:E:295:LEU:HD13	2.47	0.49
1:G:278:MET:HA	1:G:278:MET:HE2	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:81:ARG:CD	1:A:87:LEU:HA	2.42	0.49
1:G:54:ARG:NH2	2:H:41:VAL:CG1	2.76	0.49
1:G:54:ARG:CZ	2:H:41:VAL:HG11	2.42	0.49
2:H:37:VAL:HG11	2:H:94:ILE:HD11	1.94	0.49
1:G:168:ILE:HD12	1:G:168:ILE:N	2.28	0.48
1:G:295:LEU:HA	1:G:361:MET:O	2.13	0.48
1:G:287:GLU:OE2	1:G:355:LYS:NZ	2.41	0.48
1:G:302:ILE:HG13	1:G:309:LEU:HD13	1.95	0.48
1:A:53:ARG:HB3	1:A:56:GLN:HB3	1.96	0.48
1:C:371:TYR:CD1	1:C:388:LYS:HB2	2.48	0.48
1:A:268:LEU:HD11	1:A:289:ILE:CD1	2.40	0.48
2:D:61:VAL:HG23	2:D:119:THR:HA	1.95	0.48
2:F:42:PHE:CD1	2:F:47:VAL:HG11	2.49	0.48
1:G:50:ARG:HH11	1:G:88:ASP:CG	2.16	0.48
1:A:254:GLU:OE2	1:A:254:GLU:HA	2.13	0.48
2:D:39:ASP:OD1	2:D:41:VAL:HG22	2.14	0.48
1:E:21:LYS:NZ	1:E:21:LYS:HB2	2.28	0.48
2:H:96:THR:O	2:H:99:LEU:HB2	2.13	0.48
1:C:349:LEU:CD1	1:C:376:MET:HE2	2.44	0.48
1:E:291:ALA:HB2	1:E:412:GLU:HG2	1.96	0.48
1:C:391:SER:HB2	1:C:393:THR:O	2.14	0.48
1:E:65:ILE:HD12	1:E:65:ILE:H	1.79	0.48
1:E:410:GLU:O	1:E:413:LEU:N	2.46	0.48
1:C:62:VAL:HG23	1:C:130:LEU:HD23	1.96	0.47
1:C:97:ASN:ND2	1:C:100:TYR:H	2.01	0.47
1:G:338:MET:HG3	1:G:341:TRP:CE3	2.49	0.47
1:A:86:TRP:C	1:A:88:ASP:N	2.67	0.47
1:E:57:TRP:HE3	1:E:67:GLN:NE2	2.12	0.47
1:E:270:GLY:HA3	1:E:275:GLY:HA2	1.97	0.47
1:G:57:TRP:C	1:G:62:VAL:HG12	2.34	0.47
1:A:255:LEU:HD23	1:A:266:VAL:HG21	1.95	0.47
2:B:94:ILE:O	2:B:95:ASP:HB2	2.14	0.47
2:D:42:PHE:CE1	2:D:47:VAL:HG11	2.49	0.47
2:F:91:HIS:O	2:F:138:PRO:HD2	2.13	0.47
2:B:145:ASP:OD2	2:B:145:ASP:N	2.47	0.47
2:H:149:GLU:HB3	2:H:168:THR:CG2	2.43	0.47
1:C:286:GLN:HE21	1:C:286:GLN:HB3	1.55	0.47
2:H:91:HIS:O	2:H:138:PRO:HD2	2.15	0.47
1:A:340:ALA:HB1	3:A:563:HOH:O	2.14	0.47
1:C:41:LYS:NZ	1:C:83:ASP:OD2	2.47	0.47
1:C:143:ASP:O	1:C:147:ILE:HG12	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:40:ILE:O	1:E:44:ASN:CB	2.63	0.47
1:E:395:THR:CB	2:F:44:GLU:OE1	2.59	0.47
1:G:274:GLY:O	1:G:278:MET:HG2	2.15	0.47
2:H:37:VAL:HG13	2:H:94:ILE:HG13	1.95	0.47
1:G:196:VAL:CG1	1:G:269:ILE:HG13	2.45	0.47
2:B:139:VAL:O	2:B:139:VAL:HG22	2.14	0.47
1:C:189:THR:HB	1:C:260:TYR:CE1	2.49	0.47
2:D:91:HIS:C	2:D:137:THR:HG23	2.36	0.47
1:E:158:LEU:O	1:E:161:ALA:HB3	2.15	0.46
1:E:280:ARG:HG2	1:E:343:LEU:HD21	1.96	0.46
1:C:60:GLN:NE2	1:C:208:ASP:HB3	2.29	0.46
1:G:280:ARG:HE	1:G:346:GLN:HE22	1.62	0.46
2:D:75:ASN:O	2:D:121:ILE:HD13	2.15	0.46
2:D:139:VAL:O	2:D:139:VAL:CG2	2.63	0.46
2:H:39:ASP:OD1	2:H:41:VAL:CG1	2.63	0.46
2:B:93:GLY:HA2	2:B:136:LEU:O	2.15	0.46
1:E:168:ILE:HD12	1:E:168:ILE:N	2.30	0.46
2:B:146:GLU:O	2:B:169:LYS:HE2	2.16	0.46
2:D:55:PRO:CG	2:D:135:THR:HG23	2.46	0.46
1:C:394:ILE:HD12	2:D:40:VAL:HG11	1.98	0.46
2:D:143:ASN:HD21	2:D:146:GLU:CG	2.29	0.46
1:E:196:VAL:HG11	1:E:269:ILE:CD1	2.46	0.46
1:G:330:ASP:OD1	1:G:333:SER:OG	2.34	0.46
1:A:349:LEU:O	1:A:350:SER:HB3	2.15	0.46
2:B:150:LEU:HD21	2:B:165:LEU:HD22	1.98	0.46
1:C:50:ARG:HH11	1:C:88:ASP:CG	2.19	0.46
1:A:365:GLY:O	1:A:366:ASP:C	2.55	0.46
2:B:27:LEU:HD23	2:B:27:LEU:N	2.31	0.45
2:D:102:GLU:OE1	2:D:131:LYS:NZ	2.48	0.45
1:A:176:GLU:O	1:A:177:LYS:C	2.54	0.45
1:A:199:SER:HA	3:A:458:HOH:O	2.16	0.45
1:G:36:LEU:O	1:G:40:ILE:HG13	2.15	0.45
1:G:63:ASP:OD2	1:G:66:GLU:HG3	2.16	0.45
2:F:92:PHE:CD1	2:F:92:PHE:C	2.89	0.45
1:A:395:THR:HG22	2:B:44:GLU:OE1	2.16	0.45
1:C:57:TRP:HE3	1:C:67:GLN:NE2	2.14	0.45
1:E:60:GLN:NE2	1:E:208:ASP:HB3	2.31	0.45
1:E:69:GLN:HE21	1:E:73:ARG:HH21	1.64	0.45
1:G:32:THR:O	1:G:35:SER:HB3	2.17	0.45
2:H:75:ASN:HD21	2:H:106:ARG:NE	2.07	0.45
1:C:328:VAL:O	1:C:329:VAL:HB	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:49:TYR:HB2	1:G:86:TRP:CE3	2.52	0.45
1:G:60:GLN:NE2	1:G:208:ASP:HB3	2.31	0.45
1:A:112:ARG:HG3	1:A:116:MET:CE	2.47	0.45
1:C:307:GLN:O	1:C:311:GLN:HG3	2.16	0.45
1:C:393:THR:OG1	1:C:396:GLN:HB2	2.16	0.45
1:G:299:ILE:HB	1:G:373:ASP:HB3	1.99	0.45
2:B:24:ILE:HA	2:B:163:PRO:HA	1.99	0.45
2:F:127:LEU:HD11	2:F:131:LYS:HD2	1.99	0.45
1:G:58:VAL:HG11	2:H:46:ILE:CG2	2.47	0.45
1:A:53:ARG:NH1	1:A:137:TYR:HE1	2.16	0.44
1:C:315:MET:O	1:C:319:VAL:HG23	2.17	0.44
2:D:35:GLU:CD	2:D:35:GLU:H	2.19	0.44
1:E:21:LYS:HB2	1:E:21:LYS:HZ2	1.81	0.44
1:E:53:ARG:HH12	1:E:203:ASP:CG	2.20	0.44
1:E:243:ASP:OD2	1:E:246:ARG:HB3	2.17	0.44
1:G:29:TYR:N	1:G:29:TYR:CD2	2.85	0.44
2:D:58:ASN:C	2:D:58:ASN:HD22	2.20	0.44
2:D:73:GLU:HG3	3:D:644:HOH:O	2.16	0.44
2:D:53:ILE:O	2:D:55:PRO:HD3	2.17	0.44
2:F:74:THR:O	2:F:101:GLY:HA2	2.18	0.44
2:H:37:VAL:CG1	2:H:94:ILE:HD11	2.48	0.44
2:H:147:ILE:O	2:H:147:ILE:HG13	2.16	0.44
2:B:26:PRO:O	2:B:60:MET:HA	2.18	0.44
2:F:162:THR:HA	2:F:163:PRO:HD3	1.85	0.44
1:A:143:ASP:HB3	1:A:146:ALA:HB3	1.99	0.44
2:B:29:GLY:HA3	2:B:54:LYS:O	2.17	0.44
2:B:80:ILE:HG22	2:B:88:LEU:HB2	1.99	0.44
1:C:330:ASP:OD2	1:C:333:SER:N	2.46	0.44
1:E:220:HIS:HD2	1:E:410:GLU:CD	2.21	0.44
2:F:145:ASP:OD2	2:F:145:ASP:N	2.50	0.44
2:H:61:VAL:CG1	2:H:117:GLY:HA2	2.47	0.44
1:E:210:TRP:HB3	3:E:447:HOH:O	2.16	0.44
1:G:196:VAL:HG11	1:G:269:ILE:CG1	2.47	0.44
2:B:31:ILE:O	1:C:148:GLN:HG2	2.17	0.44
1:C:167:ILE:HB	1:C:186:LEU:HB2	2.00	0.44
1:C:272:ARG:HA	1:C:272:ARG:HD2	1.77	0.44
1:E:262:ASP:C	1:E:264:HIS:H	2.21	0.44
1:A:345:VAL:HG12	1:A:345:VAL:O	2.18	0.43
1:C:48:TRP:CE2	1:C:52:LEU:HD11	2.53	0.43
2:B:92:PHE:HA	2:B:137:THR:HG23	2.00	0.43
1:E:252:LEU:HD13	1:E:266:VAL:HG11	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:256:PHE:CG	1:E:257:SER:N	2.85	0.43
1:G:338:MET:HA	1:G:338:MET:HE2	1.99	0.43
1:A:291:ALA:HB3	1:A:409:LEU:HD23	2.01	0.43
2:D:96:THR:HG22	2:D:99:LEU:HD22	2.00	0.43
1:E:29:TYR:CD1	1:E:329:VAL:HB	2.52	0.43
1:E:37:LEU:HD13	1:E:331:ILE:CD1	2.48	0.43
1:G:342:SER:O	1:G:346:GLN:HG3	2.18	0.43
2:H:60:MET:CE	2:H:90:VAL:HG12	2.48	0.43
1:A:55:LEU:HD22	1:A:59:TRP:NE1	2.33	0.43
2:B:38:PRO:HD2	2:B:94:ILE:CD1	2.48	0.43
1:G:364:GLU:CD	1:G:388:LYS:HE2	2.38	0.43
2:H:92:PHE:CD1	2:H:92:PHE:C	2.91	0.43
2:H:150:LEU:HD21	2:H:165:LEU:HD22	1.99	0.43
1:A:97:ASN:ND2	1:A:100:TYR:H	2.07	0.43
1:A:112:ARG:HG3	1:A:116:MET:HE3	2.00	0.43
1:A:329:VAL:HG13	1:A:334:LEU:CD1	2.49	0.43
1:A:298:PRO:HB3	1:A:368:VAL:CG1	2.44	0.43
2:B:157:VAL:HB	2:B:162:THR:HB	1.99	0.43
2:D:102:GLU:CD	2:D:131:LYS:NZ	2.72	0.43
1:E:262:ASP:O	1:E:264:HIS:N	2.52	0.43
1:A:41:LYS:C	1:A:43:LYS:H	2.21	0.43
1:A:228:ASP:HB2	3:A:739:HOH:O	2.18	0.43
1:C:382:THR:O	1:C:383:TYR:HB2	2.18	0.43
1:E:73:ARG:HD2	3:E:426:HOH:O	2.17	0.43
1:E:313:PRO:HD2	1:E:316:TYR:CD2	2.50	0.43
2:B:40:VAL:O	2:B:44:GLU:CG	2.67	0.43
1:C:262:ASP:OD2	1:C:265:ARG:HD2	2.19	0.43
1:E:55:LEU:HD12	1:E:55:LEU:HA	1.88	0.43
1:E:244:TYR:CE1	1:E:280:ARG:HD2	2.53	0.43
2:F:109:GLU:CD	1:G:388:LYS:HD3	2.39	0.43
1:A:176:GLU:OE1	1:A:246:ARG:NH1	2.51	0.43
1:A:305:SER:O	1:A:309:LEU:HD13	2.18	0.43
1:C:63:ASP:HB3	1:C:66:GLU:HB2	2.01	0.43
2:F:33:ASN:HB3	2:F:35:GLU:OE2	2.19	0.43
1:A:117:THR:O	1:A:121:ALA:HB2	2.19	0.42
2:B:141:ILE:N	2:B:141:ILE:HD12	2.34	0.42
1:E:365:GLY:O	1:E:367:PRO:HD3	2.19	0.42
1:G:48:TRP:CE2	1:G:52:LEU:HD11	2.54	0.42
1:G:97:ASN:HD21	1:G:99:ALA:HB3	1.82	0.42
1:G:278:MET:HA	1:G:278:MET:CE	2.49	0.42
1:A:55:LEU:HD21	2:B:46:ILE:HD13	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:157:VAL:HG11	2:B:164:VAL:HG12	2.01	0.42
1:G:123:GLU:OE1	1:G:214:ARG:NH1	2.52	0.42
2:H:61:VAL:CG1	2:H:117:GLY:CA	2.97	0.42
2:H:159:VAL:HG13	2:H:159:VAL:O	2.20	0.42
1:A:176:GLU:CD	1:A:246:ARG:NH1	2.73	0.42
1:E:344:LYS:HD2	1:E:376:MET:SD	2.59	0.42
1:C:143:ASP:HB3	1:C:146:ALA:HB3	2.02	0.42
1:C:211:ARG:CD	1:C:214:ARG:NH2	2.83	0.42
1:C:295:LEU:HD12	1:C:295:LEU:N	2.34	0.42
1:E:361:MET:HB3	1:E:389:ILE:HD11	2.00	0.42
1:A:97:ASN:HD21	1:A:99:ALA:HB3	1.84	0.42
1:E:41:LYS:CG	1:E:85:GLN:NE2	2.83	0.42
1:G:392:LYS:O	1:G:393:THR:OG1	2.35	0.42
1:A:285:GLU:OE1	1:A:288:LYS:CE	2.67	0.42
1:C:62:VAL:HG23	1:C:130:LEU:CD2	2.49	0.42
2:H:52:ALA:HA	2:H:137:THR:O	2.19	0.42
1:C:91:MET:O	1:C:94:HIS:CE1	2.71	0.42
2:H:24:ILE:HG21	2:H:160:GLY:C	2.40	0.42
1:A:294:ILE:HG13	1:A:360:ALA:HA	2.02	0.42
2:B:80:ILE:CG2	2:B:88:LEU:HB2	2.50	0.42
1:C:173:ILE:HD13	1:C:251:VAL:HG13	2.01	0.42
1:C:370:PRO:O	1:C:373:ASP:HB2	2.20	0.42
2:D:78:PHE:CD1	2:D:120:VAL:HG21	2.55	0.42
1:E:344:LYS:HB2	1:E:376:MET:CE	2.49	0.42
1:G:57:TRP:HE3	1:G:67:GLN:NE2	2.17	0.42
1:A:329:VAL:HG13	1:A:334:LEU:HD13	2.02	0.42
1:A:388:LYS:HG2	2:D:109:GLU:OE2	2.20	0.42
1:C:190:ASP:O	1:C:191:LYS:HB3	2.19	0.42
1:A:382:THR:HG22	1:A:383:TYR:CE2	2.55	0.41
1:G:319:VAL:O	1:G:323:ARG:HG2	2.19	0.41
2:H:21:ILE:HB	2:H:167:VAL:HG13	2.01	0.41
1:A:395:THR:CG2	1:A:396:GLN:N	2.82	0.41
1:E:327:SER:OG	1:E:328:VAL:N	2.52	0.41
1:G:44:ASN:HB3	1:G:46:PHE:CD2	2.56	0.41
1:A:53:ARG:NH1	1:A:137:TYR:CE1	2.88	0.41
1:C:69:GLN:HE21	1:C:73:ARG:NH2	2.19	0.41
1:C:220:HIS:H	1:C:220:HIS:CD2	2.38	0.41
1:C:232:VAL:HG13	3:C:632:HOH:O	2.20	0.41
1:C:268:LEU:CD1	1:C:289:ILE:HD13	2.50	0.41
1:G:29:TYR:HB3	1:G:33:SER:HB2	2.02	0.41
2:H:73:GLU:HG2	2:H:73:GLU:H	1.76	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:298:PRO:O	1:C:298:PRO:HG2	2.19	0.41
2:D:94:ILE:HD11	1:E:379:PHE:CE2	2.52	0.41
2:D:94:ILE:O	2:D:94:ILE:HG13	2.19	0.41
1:G:379:PHE:C	1:G:381:SER:H	2.24	0.41
1:A:388:LYS:O	1:A:388:LYS:HG3	2.20	0.41
1:C:148:GLN:O	1:C:151:VAL:HB	2.21	0.41
1:C:279:VAL:CG2	1:C:294:ILE:HD13	2.51	0.41
1:E:361:MET:SD	1:E:389:ILE:HD11	2.61	0.41
1:E:378:ALA:HB2	1:E:386:ALA:HB2	2.02	0.41
2:F:127:LEU:HD12	2:F:127:LEU:O	2.20	0.41
1:G:133:SER:HB2	1:G:205:LEU:HD12	2.01	0.41
1:C:328:VAL:O	1:C:329:VAL:CG2	2.67	0.41
2:D:70:LYS:H	2:D:79:SER:HB2	1.86	0.41
2:D:92:PHE:CD1	2:D:92:PHE:C	2.94	0.41
1:E:230:PRO:O	1:E:231:SER:OG	2.27	0.41
2:F:159:VAL:O	2:F:159:VAL:HG13	2.21	0.41
1:G:196:VAL:HG11	1:G:269:ILE:CD1	2.49	0.41
1:A:366:ASP:HA	1:A:367:PRO:HD3	1.94	0.41
2:D:167:VAL:O	2:D:167:VAL:HG22	2.21	0.41
1:E:240:LEU:O	1:E:241:THR:O	2.38	0.41
1:E:251:VAL:O	1:E:255:LEU:HD13	2.21	0.41
1:E:263:HIS:NE2	1:E:264:HIS:NE2	2.69	0.41
2:F:115:LYS:O	2:F:116:ALA:C	2.57	0.41
1:G:58:VAL:HG11	2:H:46:ILE:HG21	2.03	0.41
1:A:324:LEU:HD21	1:A:341:TRP:HZ2	1.86	0.41
2:B:92:PHE:C	2:B:92:PHE:CD1	2.95	0.41
2:D:44:GLU:O	2:D:45:LYS:HB2	2.21	0.41
1:G:356:VAL:HA	1:G:357:PRO:HD3	1.92	0.41
1:A:41:LYS:HD3	1:A:86:TRP:CZ2	2.56	0.40
1:E:161:ALA:HB1	1:E:168:ILE:HB	2.02	0.40
2:H:68:ILE:O	2:H:110:GLU:O	2.39	0.40
2:D:92:PHE:HA	2:D:137:THR:HG23	2.02	0.40
2:F:34:ILE:HB	2:F:50:GLY:O	2.20	0.40
1:A:50:ARG:HG3	1:A:50:ARG:NH1	2.36	0.40
1:A:262:ASP:C	1:A:264:HIS:H	2.25	0.40
2:B:159:VAL:HG13	2:B:159:VAL:O	2.22	0.40
1:E:302:ILE:HG13	1:E:309:LEU:HD11	2.02	0.40
1:G:57:TRP:HB2	1:G:67:GLN:HE22	1.85	0.40
1:A:373:ASP:C	1:A:375:GLN:N	2.74	0.40
1:C:198:VAL:HG12	1:C:199:SER:N	2.35	0.40
1:C:246:ARG:HH11	1:C:246:ARG:HG2	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:47:VAL:HG12	3:D:641:HOH:O	2.22	0.40
2:D:94:ILE:HG13	2:D:134:SER:HB3	2.03	0.40
1:A:379:PHE:C	1:A:381:SER:H	2.24	0.40
1:C:413:LEU:HD23	1:C:413:LEU:HA	1.99	0.40
1:E:320:LEU:HD12	1:E:320:LEU:HA	1.88	0.40
2:H:34:ILE:HG12	2:H:34:ILE: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	392/435 (90%)	341 (87%)	42 (11%)	9 (2%)	6 3
1	C	390/435 (90%)	356 (91%)	29 (7%)	5 (1%)	12 9
1	E	394/435 (91%)	366 (93%)	24 (6%)	4 (1%)	15 14
1	G	394/435 (91%)	368 (93%)	26 (7%)	0	100 100
2	B	148/183 (81%)	139 (94%)	9 (6%)	0	100 100
2	D	148/183 (81%)	138 (93%)	10 (7%)	0	100 100
2	F	148/183 (81%)	138 (93%)	10 (7%)	0	100 100
2	H	148/183 (81%)	142 (96%)	6 (4%)	0	100 100
All	All	2162/2472 (88%)	1988 (92%)	156 (7%)	18 (1%)	19 19

All (18) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	46	PHE
1	A	350	SER
1	C	326	LYS
1	C	329	VAL

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Mol	Chain	Res	Type
1	E	241	THR
1	A	338	MET
1	C	241	THR
1	E	263	HIS
1	E	400	GLN
1	A	117	THR
1	A	398	TYR
1	A	380	PHE
1	C	118	ASN
1	C	328	VAL
1	A	23	THR
1	A	301	ASP
1	A	312	MET
1	E	327	SER

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	310/377 (82%)	297 (96%)	13 (4%)	30	38
1	C	325/377 (86%)	314 (97%)	11 (3%)	37	47
1	E	316/377 (84%)	303 (96%)	13 (4%)	30	39
1	G	328/377 (87%)	309 (94%)	19 (6%)	20	23
2	B	125/153 (82%)	114 (91%)	11 (9%)	10	10
2	D	124/153 (81%)	102 (82%)	22 (18%)	2	1
2	F	125/153 (82%)	112 (90%)	13 (10%)	7	6
2	H	125/153 (82%)	115 (92%)	10 (8%)	12	12
All	All	1778/2120 (84%)	1666 (94%)	112 (6%)	18	20

All (112) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	32	THR

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Mol	Chain	Res	Type
1	A	37	LEU
1	A	38	ASP
1	A	87	LEU
1	A	94	HIS
1	A	112	ARG
1	A	115	GLU
1	A	256	PHE
1	A	287	GLU
1	A	320	LEU
1	A	338	MET
1	A	354	THR
1	A	372	SER
2	B	73	GLU
2	B	83	ASP
2	B	84	ASP
2	B	98	GLU
2	B	128	LEU
2	B	130	GLU
2	B	139	VAL
2	B	150	LEU
2	B	162	THR
2	B	166	ARG
2	B	168	THR
1	C	85	GLN
1	C	87	LEU
1	C	118	ASN
1	C	152	LEU
1	C	221	ASP
1	C	286	GLN
1	C	320	LEU
1	C	323	ARG
1	C	327	SER
1	C	373	ASP
1	C	399	GLU
2	D	27	LEU
2	D	40	VAL
2	D	54	LYS
2	D	58	ASN
2	D	61	VAL
2	D	73	GLU
2	D	79	SER
2	D	84	ASP

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Mol	Chain	Res	Type
2	D	88	LEU
2	D	96	THR
2	D	97	VAL
2	D	99	LEU
2	D	105	THR
2	D	109	GLU
2	D	120	VAL
2	D	135	THR
2	D	139	VAL
2	D	143	ASN
2	D	150	LEU
2	D	162	THR
2	D	166	ARG
2	D	167	VAL
1	E	21	LYS
1	E	32	THR
1	E	37	LEU
1	E	87	LEU
1	E	115	GLU
1	E	148	GLN
1	E	220	HIS
1	E	221	ASP
1	E	309	LEU
1	E	320	LEU
1	E	338	MET
1	E	373	ASP
1	E	395	THR
2	F	27	LEU
2	F	34	ILE
2	F	41	VAL
2	F	61	VAL
2	F	84	ASP
2	F	88	LEU
2	F	96	THR
2	F	97	VAL
2	F	100	LYS
2	F	129	GLU
2	F	139	VAL
2	F	148	LYS
2	F	150	LEU
1	G	37	LEU
1	G	38	ASP

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Mol	Chain	Res	Type
1	G	42	GLU
1	G	87	LEU
1	G	94	HIS
1	G	142	SER
1	G	204	SER
1	G	265	ARG
1	G	290	LYS
1	G	295	LEU
1	G	309	LEU
1	G	320	LEU
1	G	326	LYS
1	G	338	MET
1	G	361	MET
1	G	363	LEU
1	G	400	GLN
1	G	408	TRP
1	G	409	LEU
2	H	40	VAL
2	H	41	VAL
2	H	47	VAL
2	H	88	LEU
2	H	105	THR
2	H	129	GLU
2	H	130	GLU
2	H	150	LEU
2	H	167	VAL
2	H	168	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (54) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	51	ASN
1	A	67	GLN
1	A	79	HIS
1	A	97	ASN
1	A	154	ASN
1	A	170	GLN
1	A	216	HIS
1	A	286	GLN
2	B	33	ASN
1	C	60	GLN
1	C	67	GLN

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Mol	Chain	Res	Type
1	C	79	HIS
1	C	94	HIS
1	C	97	ASN
1	C	118	ASN
1	C	148	GLN
1	C	150	GLN
1	C	154	ASN
1	C	170	GLN
1	C	286	GLN
1	C	310	GLN
1	C	337	GLN
1	C	346	GLN
1	C	374	ASN
1	C	375	GLN
2	D	58	ASN
2	D	143	ASN
1	E	51	ASN
1	E	67	GLN
1	E	79	HIS
1	E	85	GLN
1	E	94	HIS
1	E	97	ASN
1	E	110	GLN
1	E	154	ASN
1	E	170	GLN
1	E	286	GLN
1	E	346	GLN
1	E	374	ASN
2	F	75	ASN
2	F	151	ASN
1	G	51	ASN
1	G	67	GLN
1	G	79	HIS
1	G	85	GLN
1	G	94	HIS
1	G	97	ASN
1	G	216	HIS
1	G	286	GLN
1	G	307	GLN
1	G	346	GLN
1	G	374	ASN
1	G	400	GLN

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Mol	Chain	Res	Type
2	H	75	ASN

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 monosaccharides 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

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	394/435 (90%)	0.08	6 (1%) 73 72	17, 42, 66, 73	0
1	C	394/435 (90%)	-0.11	7 (1%) 68 66	13, 36, 63, 80	0
1	E	396/435 (91%)	-0.13	10 (2%) 57 55	15, 38, 61, 73	0
1	G	396/435 (91%)	-0.23	3 (0%) 86 85	15, 34, 54, 61	0
2	B	150/183 (81%)	-0.39	1 (0%) 87 86	16, 29, 46, 53	0
2	D	150/183 (81%)	-0.31	1 (0%) 87 86	19, 31, 48, 58	0
2	F	150/183 (81%)	-0.42	0 100 100	18, 27, 44, 50	0
2	H	150/183 (81%)	-0.48	0 100 100	16, 26, 45, 61	0
All	All	2180/2472 (88%)	-0.18	28 (1%) 77 75	13, 34, 61, 80	0

All (28) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	C	390	SER	4.2
1	C	260	TYR	3.2
1	A	259	PRO	2.9
1	G	20	ALA	2.8
1	E	32	THR	2.7
1	C	19	GLN	2.7
1	E	256	PHE	2.6
1	A	256	PHE	2.5
1	E	414	LEU	2.5
1	A	30	MET	2.4
2	B	21	ILE	2.4
1	A	379	PHE	2.4
1	E	44	ASN	2.3
1	E	191	LYS	2.3
1	G	260	TYR	2.3
1	E	401	SER	2.3

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Mol	Chain	Res	Type	RSRZ
1	E	328	VAL	2.2
1	C	327	SER	2.2
1	E	30	MET	2.2
1	A	383	TYR	2.2
1	C	36	LEU	2.2
1	E	59	TRP	2.1
2	D	21	ILE	2.1
1	E	46	PHE	2.1
1	G	190	ASP	2.0
1	C	43	LYS	2.0
1	C	30	MET	2.0
1	A	406	ILE	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)

There are no ligands in this entry.

6.5 Other polymers (i)

There are no such residues in this entry.