



Full wwPDB X-ray Structure Validation Report ⓘ

Jan 5, 2024 – 01:18 am GMT

PDB ID : 5LQ3
Title : Structures and transport dynamics of the Campylobacter jejuni multidrug efflux pump CmeB
Authors : Su, C.C.
Deposited on : 2016-08-15
Resolution : 3.55 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

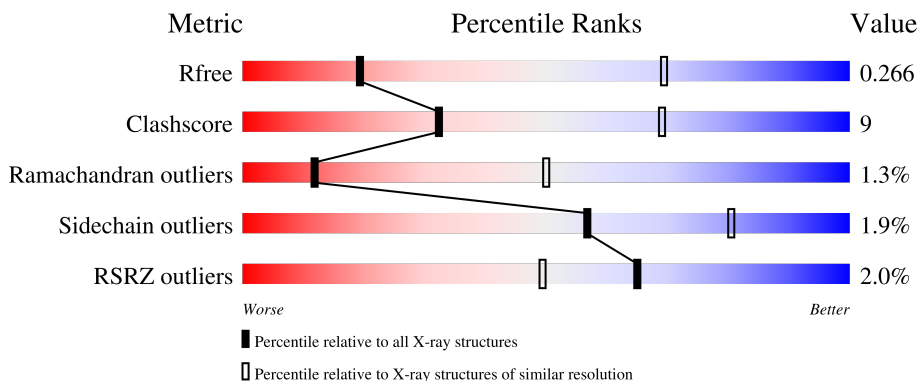
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.55 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.



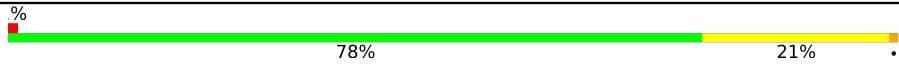
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1020 (3.62-3.50)
Clashscore	141614	1100 (3.62-3.50)
Ramachandran outliers	138981	1065 (3.62-3.50)
Sidechain outliers	138945	1066 (3.62-3.50)
RSRZ outliers	127900	1009 (3.64-3.48)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	1035	<div style="display: flex; align-items: center;"> <div style="width: 5%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 78%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 20%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 5%; height: 10px; background-color: orange; margin-right: 5px;"></div> <div style="width: 5%; height: 10px; background-color: grey;"></div> </div> <p style="margin-left: 20px;">78% 20%</p>
1	B	1035	<div style="display: flex; align-items: center;"> <div style="width: 4%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 75%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 24%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 5%; height: 10px; background-color: orange; margin-right: 5px;"></div> <div style="width: 5%; height: 10px; background-color: grey;"></div> </div> <p style="margin-left: 20px;">75% 24%</p>
1	C	1035	<div style="display: flex; align-items: center;"> <div style="width: 2%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 78%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 21%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 5%; height: 10px; background-color: orange; margin-right: 5px;"></div> <div style="width: 5%; height: 10px; background-color: grey;"></div> </div> <p style="margin-left: 20px;">78% 21%</p>
1	D	1035	<div style="display: flex; align-items: center;"> <div style="width: 5%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 78%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 21%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 5%; height: 10px; background-color: orange; margin-right: 5px;"></div> <div style="width: 5%; height: 10px; background-color: grey;"></div> </div> <p style="margin-left: 20px;">78% 21%</p>
1	E	1035	<div style="display: flex; align-items: center;"> <div style="width: 3%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 72%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 26%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 5%; height: 10px; background-color: orange; margin-right: 5px;"></div> <div style="width: 5%; height: 10px; background-color: grey;"></div> </div> <p style="margin-left: 20px;">72% 26%</p>

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Mol	Chain	Length	Quality of chain
1	F	1035	 <p>A horizontal bar chart representing the quality of the chain. The bar is divided into two segments: a green segment on the left representing 78% and a yellow segment on the right representing 21%. A small red square is at the beginning of the bar, and a small black dot is at the end. A '%' symbol is positioned above the start of the bar.</p>

2 Entry composition

There is only 1 type of molecule in this entry. The entry contains 47878 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.

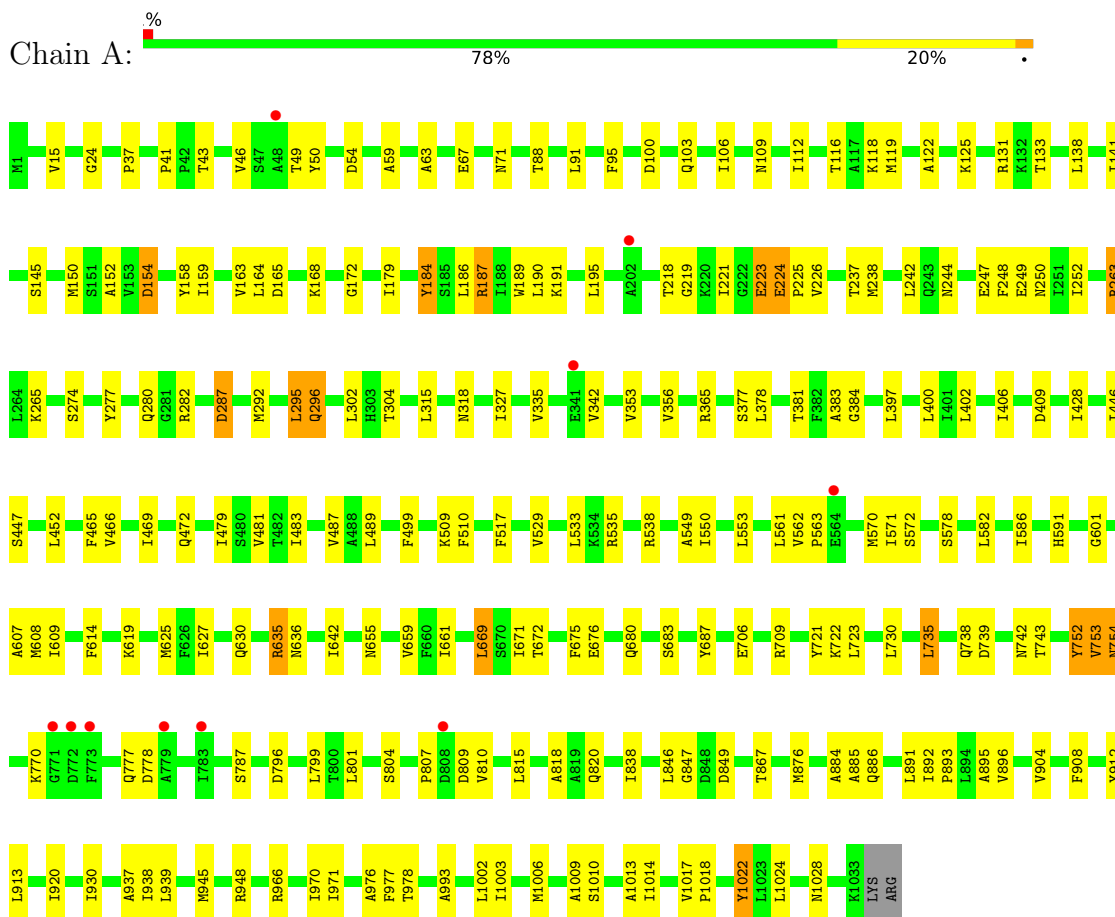
- Molecule 1 is a protein called CmeB.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	1033	7973	5155	1301	1485	32	0	0	0
1	B	1033	7973	5155	1301	1485	32	0	0	0
1	C	1035	7993	5167	1307	1487	32	0	0	0
1	D	1033	7973	5155	1301	1485	32	0	0	0
1	E	1033	7973	5155	1301	1485	32	0	0	0
1	F	1035	7993	5167	1307	1487	32	0	0	0

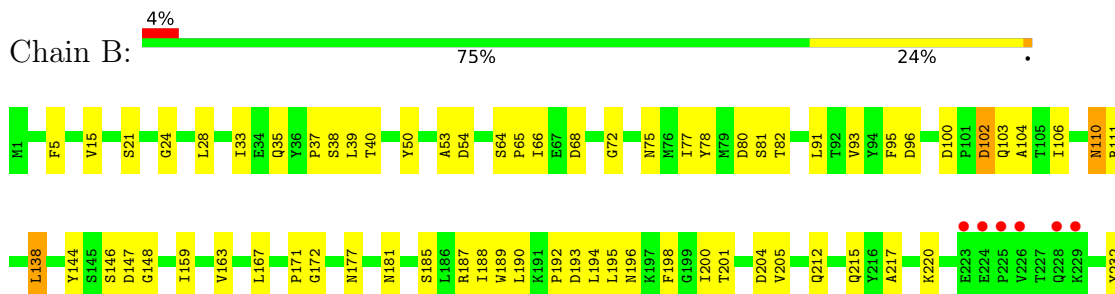
3 Residue-property plots

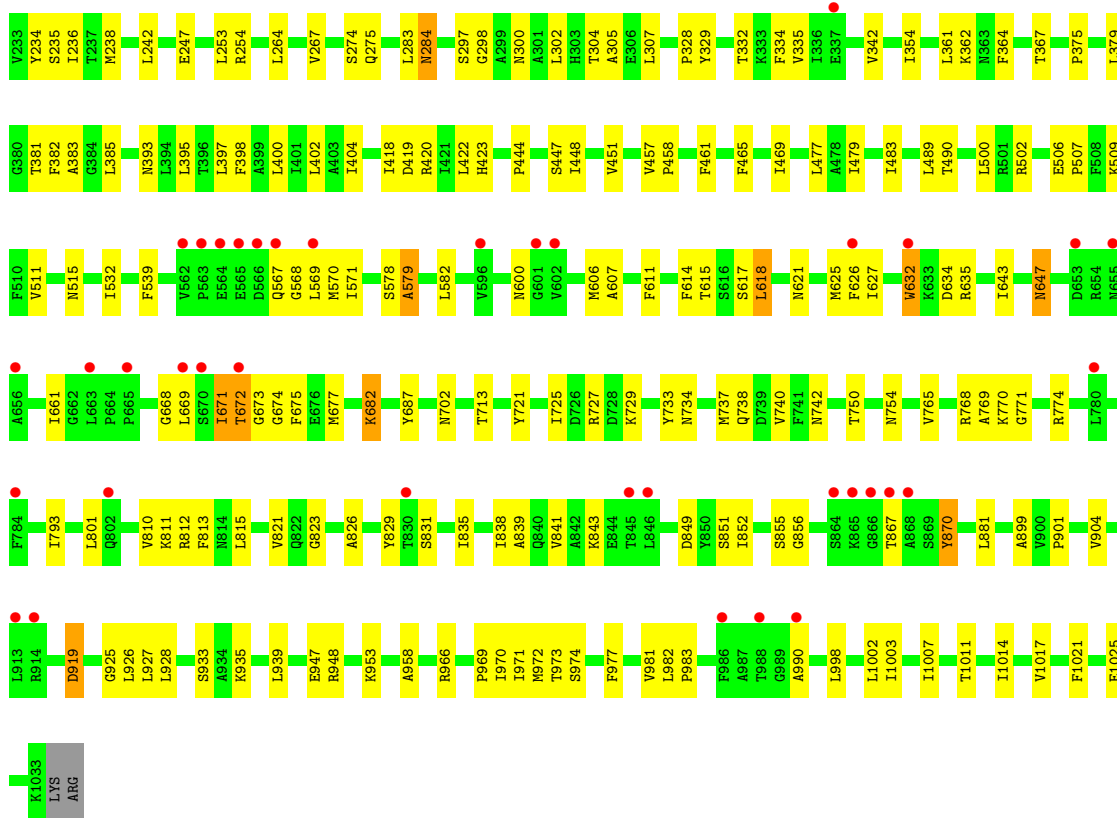
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density ($RSRZ > 2$). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

- Molecule 1: CmeB

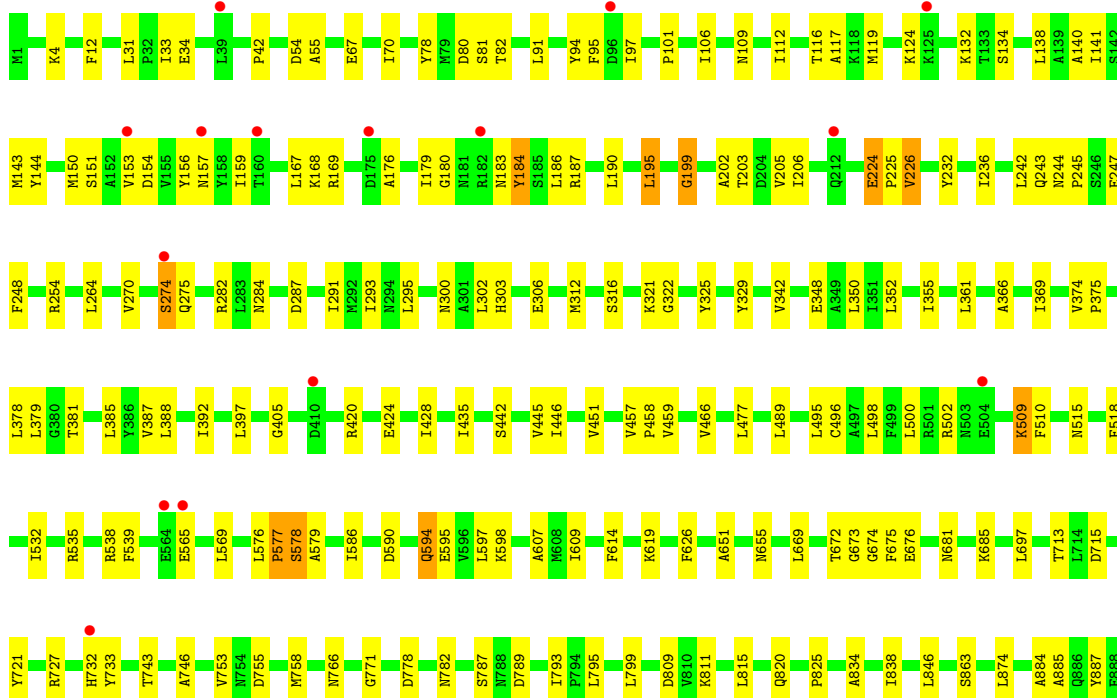
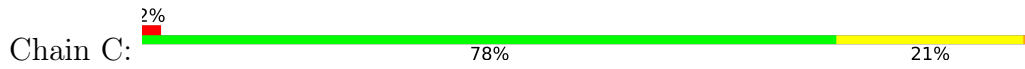


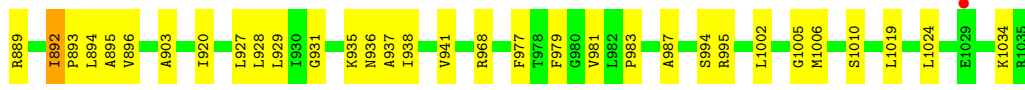
- Molecule 1: CmeB



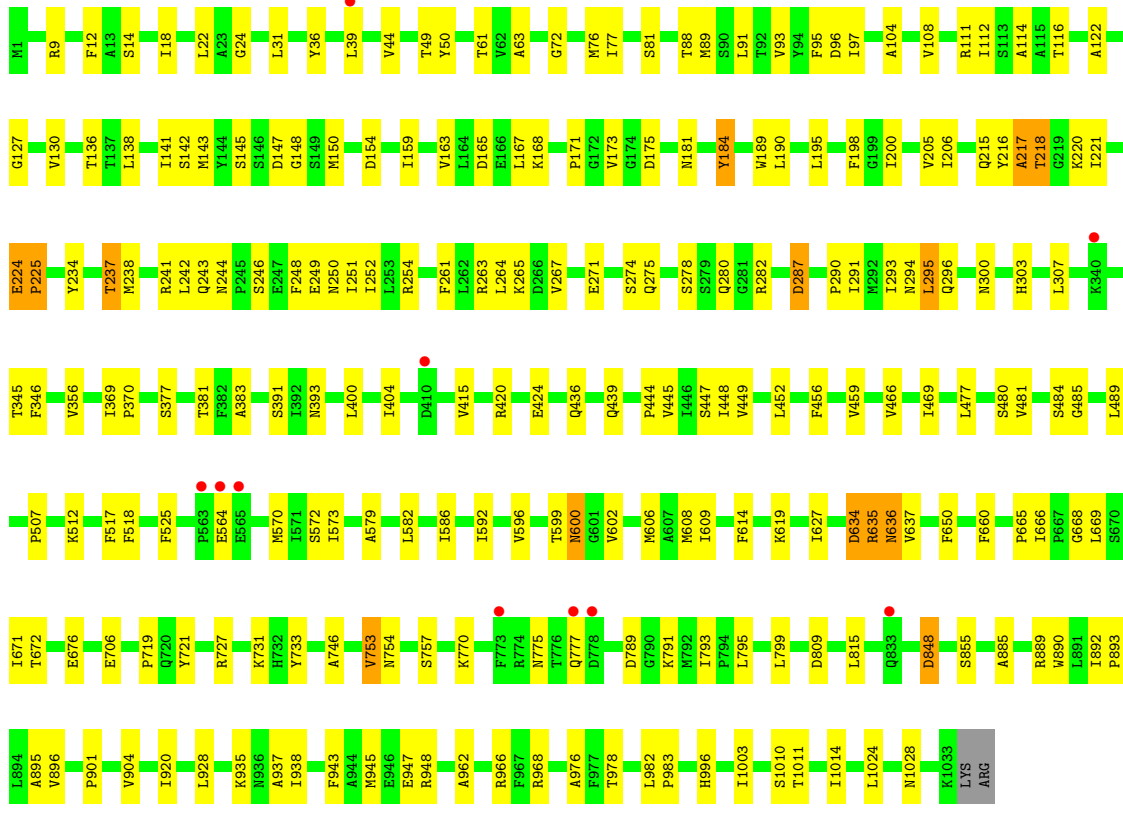
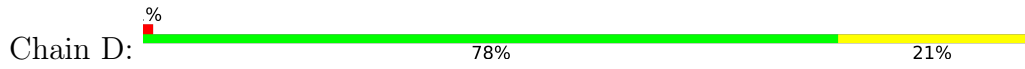


• Molecule 1: CmeB

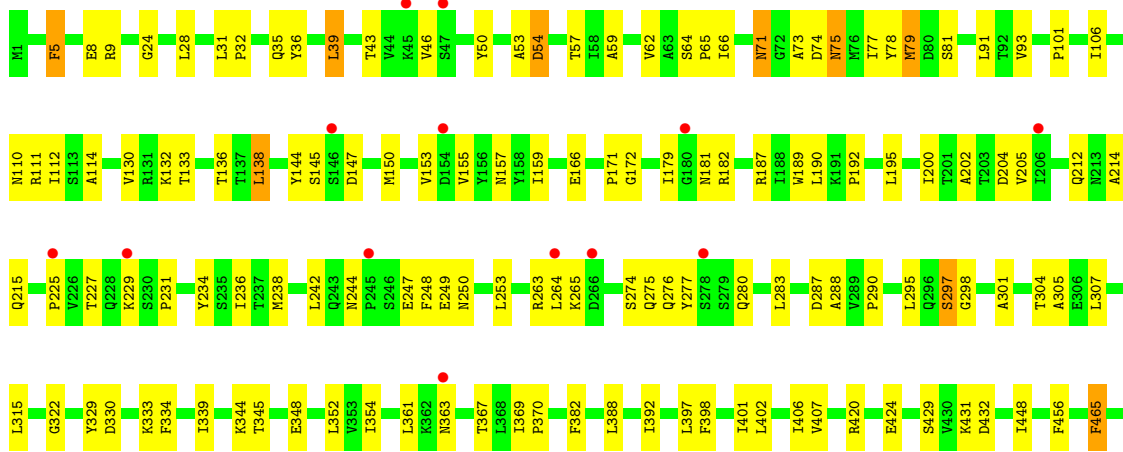


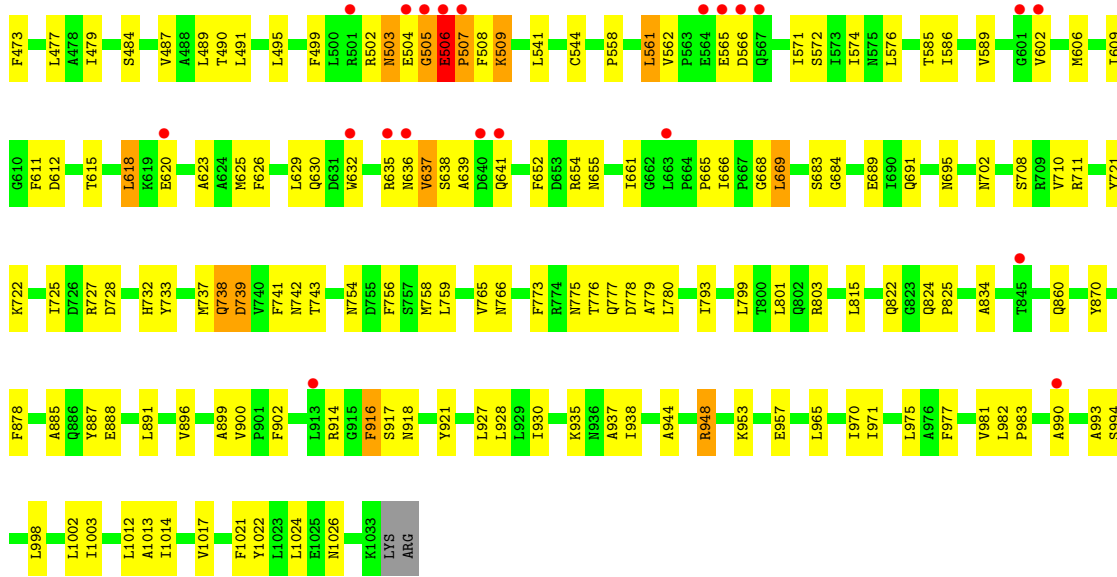


• Molecule 1: CmeB

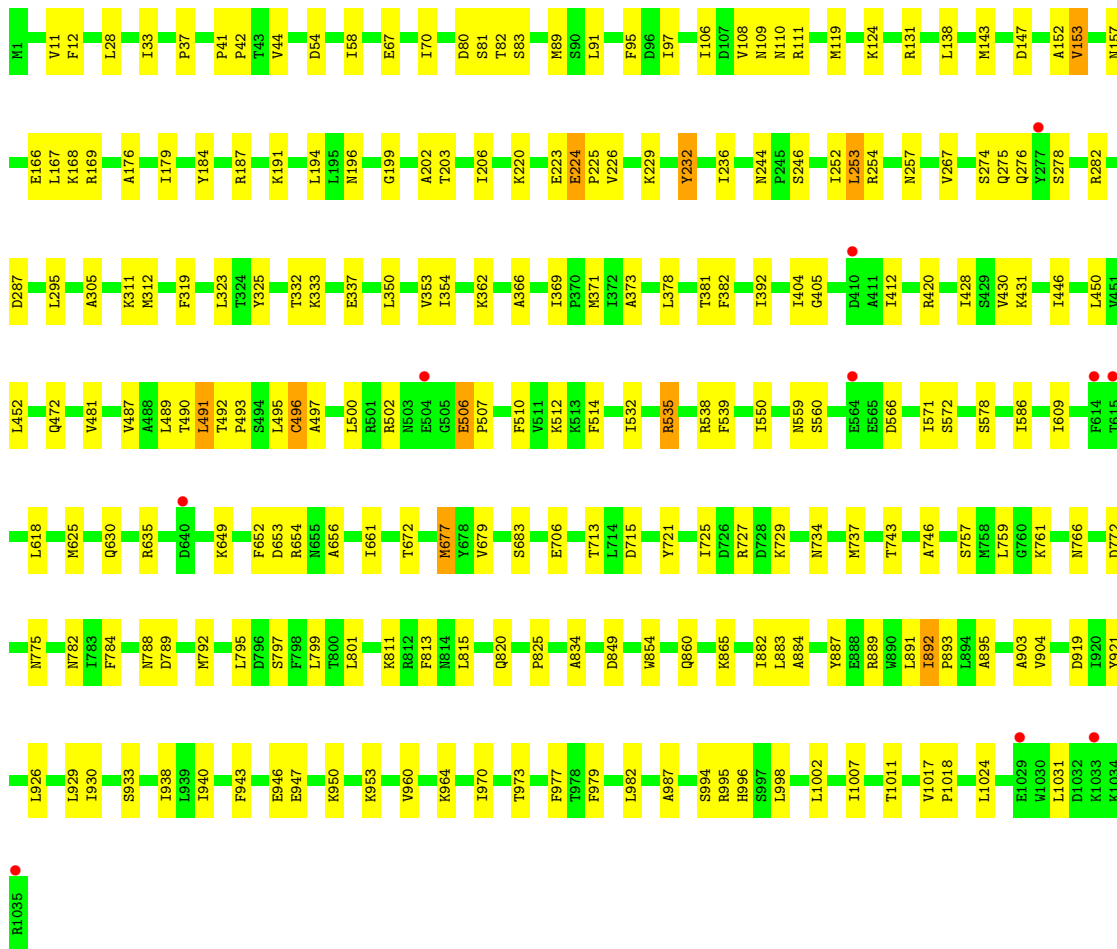
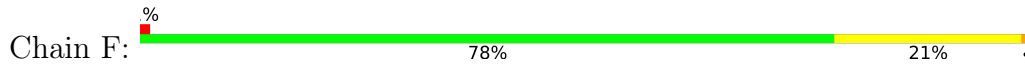


• Molecule 1: CmeB





• Molecule 1: CmeB



4 Data and refinement statistics

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, α , β , γ	120.87Å 127.99Å 169.61Å 99.79° 99.45° 84.95°	Depositor
Resolution (Å)	90.27 – 3.55 90.27 – 3.52	Depositor EDS
% Data completeness (in resolution range)	89.5 (90.27-3.55) 89.7 (90.27-3.52)	Depositor EDS
R_{merge}	0.17	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.52 (at 3.49Å)	Xtrriage
Refinement program	PHENIX	Depositor
R, R_{free}	0.226 , 0.268 0.227 , 0.266	Depositor DCC
R_{free} test set	5494 reflections (5.01%)	wwPDB-VP
Wilson B-factor (Å ²)	94.3	Xtrriage
Anisotropy	0.700	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.27 , 39.4	EDS
L-test for twinning ²	$\langle L \rangle = 0.46$, $\langle L^2 \rangle = 0.28$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.87	EDS
Total number of atoms	47878	wwPDB-VP
Average B, all atoms (Å ²)	100.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.98% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality [i](#)

5.1 Standard geometry [i](#)

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	0.25	0/8129	0.42	1/11032 (0.0%)
1	B	0.25	0/8129	0.42	0/11032
1	C	0.25	0/8149	0.41	0/11057
1	D	0.26	1/8129 (0.0%)	0.41	0/11032
1	E	0.25	0/8129	0.44	3/11032 (0.0%)
1	F	0.25	0/8149	0.41	0/11057
All	All	0.25	1/48814 (0.0%)	0.42	4/66242 (0.0%)

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	D	36	TYR	C-N	5.25	1.44	1.34

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	E	505	GLY	N-CA-C	7.54	131.94	113.10
1	A	295	LEU	CA-CB-CG	5.60	128.18	115.30
1	E	39	LEU	C-N-CA	5.29	134.93	121.70
1	E	506	GLU	C-N-CD	5.09	139.10	128.40

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	7973	0	8119	143	0
1	B	7973	0	8119	160	0
1	C	7993	0	8145	142	0
1	D	7973	0	8119	146	0
1	E	7973	0	8119	183	0
1	F	7993	0	8145	134	0
All	All	47878	0	48766	851	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 9.

All (851) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:81:SER:HB3	1:B:91:LEU:HD23	1.31	1.12
1:A:671:ILE:HD12	1:A:672:THR:H	1.31	0.95
1:D:224:GLU:HB3	1:D:225:PRO:HD3	1.53	0.91
1:A:586:ILE:HG12	1:A:609:ILE:HD12	1.60	0.82
1:C:929:LEU:HD21	1:C:1005:GLY:HA3	1.62	0.80
1:C:224:GLU:HB3	1:C:225:PRO:HD3	1.65	0.79
1:A:189:TRP:HB3	1:A:770:LYS:HB2	1.66	0.77
1:E:507:PRO:HD2	1:E:508:PHE:H	1.49	0.76
1:C:903:ALA:HB1	1:C:929:LEU:HG	1.68	0.75
1:F:630:GLN:O	1:F:635:ARG:NH1	2.22	0.72
1:B:236:ILE:HG22	1:C:721:TYR:HB2	1.71	0.72
1:D:198:PHE:O	1:D:254:ARG:NH2	2.21	0.72
1:A:671:ILE:HD12	1:A:672:THR:N	2.04	0.72
1:C:42:PRO:HG2	1:C:95:PHE:HB2	1.72	0.71
1:F:199:GLY:H	1:F:254:ARG:HH22	1.38	0.71
1:F:507:PRO:HB2	1:F:512:LYS:HB2	1.72	0.71
1:E:363:ASN:HB3	1:E:503:ASN:HB3	1.72	0.70
1:B:570:MET:HB2	1:B:627:ILE:HB	1.72	0.70
1:D:61:THR:HG21	1:F:757:SER:HB3	1.73	0.70
1:A:184:TYR:HA	1:A:274:SER:HA	1.74	0.70
1:F:152:ALA:O	1:F:276:GLN:NE2	2.24	0.70
1:A:165:ASP:HB2	1:B:815:LEU:HD13	1.74	0.69
1:A:250:ASN:HA	1:A:263:ARG:HD3	1.75	0.69
1:D:189:TRP:HB3	1:D:770:LYS:HB2	1.74	0.69
1:A:721:TYR:HB2	1:C:236:ILE:HG22	1.75	0.69
1:F:1017:VAL:HG23	1:F:1018:PRO:HD3	1.74	0.69
1:F:282:ARG:NH1	1:F:287:ASP:OD1	2.27	0.68
1:A:71:ASN:ND2	1:C:169:ARG:O	2.26	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:507:PRO:O	1:E:508:PHE:HB2	1.94	0.67
1:A:138:LEU:HD22	1:A:295:LEU:HD23	1.74	0.67
1:A:659:VAL:HG22	1:A:709:ARG:HH21	1.60	0.67
1:B:21:SER:HA	1:B:379:LEU:HD22	1.75	0.67
1:D:159:ILE:HA	1:D:163:VAL:HB	1.77	0.67
1:A:619:LYS:NZ	1:A:809:ASP:OD2	2.20	0.66
1:D:224:GLU:HB3	1:D:225:PRO:CD	2.25	0.66
1:A:277:TYR:HB3	1:C:224:GLU:HG2	1.76	0.66
1:F:490:THR:O	1:F:492:THR:N	2.28	0.66
1:A:735:LEU:HD23	1:A:787:SER:HA	1.78	0.66
1:E:565:GLU:HB2	1:E:993:ALA:HB2	1.78	0.66
1:B:669:LEU:HD13	1:B:672:THR:HA	1.76	0.66
1:D:263:ARG:NH2	1:E:728:ASP:OD2	2.28	0.66
1:F:729:LYS:NZ	1:F:797:SER:O	2.29	0.66
1:C:889:ARG:HD2	1:C:892:ILE:HD13	1.77	0.65
1:A:571:ILE:HD11	1:A:672:THR:HG22	1.76	0.65
1:D:753:VAL:HG13	1:D:754:ASN:H	1.61	0.65
1:E:244:ASN:HB2	1:E:247:GLU:HG3	1.77	0.65
1:E:190:LEU:HB3	1:E:195:LEU:HD11	1.78	0.65
1:E:171:PRO:HD2	1:E:307:LEU:HD13	1.78	0.65
1:E:509:LYS:HD3	1:E:509:LYS:H	1.61	0.65
1:F:571:ILE:HD11	1:F:672:THR:HG22	1.76	0.65
1:F:202:ALA:HB3	1:F:743:THR:HG22	1.79	0.65
1:F:560:SER:O	1:F:865:LYS:NZ	2.29	0.65
1:E:280:GLN:NE2	1:E:287:ASP:OD2	2.30	0.65
1:E:344:LYS:NZ	1:E:348:GLU:OE2	2.28	0.65
1:A:106:ILE:HB	1:C:106:ILE:HG21	1.79	0.65
1:A:43:THR:OG1	1:A:133:THR:O	2.14	0.64
1:B:81:SER:HB3	1:B:91:LEU:CD2	2.19	0.64
1:B:448:ILE:HG21	1:B:935:LYS:HE2	1.79	0.64
1:C:676:GLU:OE2	1:C:820:GLN:NE2	2.30	0.64
1:E:138:LEU:HD21	1:E:305:ALA:HB2	1.79	0.64
1:A:249:GLU:HB3	1:A:265:LYS:HB3	1.79	0.64
1:C:138:LEU:HB2	1:C:295:LEU:HB2	1.79	0.64
1:E:46:VAL:HG22	1:E:130:VAL:HG12	1.80	0.64
1:F:947:GLU:HB3	1:F:953:LYS:HD2	1.80	0.64
1:B:24:GLY:HA2	1:B:383:ALA:HB2	1.80	0.64
1:B:750:THR:OG1	1:B:768:ARG:NH1	2.31	0.64
1:A:24:GLY:HA2	1:A:383:ALA:HB2	1.80	0.64
1:A:466:VAL:HG11	1:A:867:THR:HG21	1.79	0.64
1:E:733:TYR:HB3	1:E:793:ILE:HD13	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:885:ALA:HB1	1:F:12:PHE:HD1	1.64	0.63
1:C:184:TYR:HE1	1:C:274:SER:H	1.47	0.63
1:E:566:ASP:HB2	1:E:639:ALA:HB2	1.80	0.63
1:F:431:LYS:HA	1:F:497:ALA:HB1	1.80	0.63
1:B:192:PRO:O	1:B:196:ASN:ND2	2.24	0.62
1:C:778:ASP:O	1:C:782:ASN:ND2	2.31	0.62
1:E:181:ASN:OD1	1:E:275:GLN:NE2	2.32	0.62
1:E:611:PHE:HA	1:E:618:LEU:HA	1.81	0.62
1:D:676:GLU:HG2	1:D:855:SER:HB3	1.81	0.62
1:D:249:GLU:HB3	1:D:265:LYS:HB3	1.80	0.62
1:E:507:PRO:CD	1:E:508:PHE:H	2.12	0.62
1:F:428:ILE:O	1:F:502:ARG:NH2	2.33	0.62
1:D:445:VAL:HG21	1:D:489:LEU:HD21	1.82	0.62
1:A:190:LEU:O	1:A:770:LYS:N	2.33	0.62
1:E:914:ARG:HD2	1:E:916:PHE:HE2	1.65	0.62
1:B:826:ALA:HB3	1:B:829:TYR:HD2	1.65	0.61
1:D:586:ILE:HG12	1:D:609:ILE:HG21	1.82	0.61
1:A:1017:VAL:HG23	1:A:1018:PRO:HD3	1.81	0.61
1:E:236:ILE:HG22	1:F:721:TYR:HB2	1.80	0.61
1:F:929:LEU:HD21	1:F:1002:LEU:HA	1.81	0.61
1:E:721:TYR:HB3	1:E:801:LEU:HG	1.83	0.61
1:A:152:ALA:HB2	1:A:287:ASP:HB3	1.83	0.61
1:D:50:TYR:HE1	1:D:122:ALA:HB3	1.64	0.61
1:E:420:ARG:HD2	1:E:965:LEU:HD22	1.82	0.61
1:F:535:ARG:HB3	1:F:538:ARG:HD2	1.83	0.61
1:D:184:TYR:HA	1:D:274:SER:HA	1.82	0.60
1:D:234:TYR:HE2	1:E:803:ARG:HH21	1.48	0.60
1:E:571:ILE:HG13	1:E:661:ILE:HG13	1.83	0.60
1:C:282:ARG:HB2	1:C:607:ALA:HB3	1.83	0.60
1:E:330:ASP:HB3	1:E:333:LYS:HB2	1.82	0.60
1:A:224:GLU:O	1:A:226:VAL:N	2.33	0.60
1:D:775:ASN:ND2	1:D:777:GLN:OE1	2.27	0.60
1:B:611:PHE:HA	1:B:618:LEU:HA	1.83	0.60
1:D:244:ASN:OD1	1:D:246:SER:OG	2.18	0.60
1:F:187:ARG:HG2	1:F:766:ASN:HB2	1.82	0.60
1:A:342:VAL:HG11	1:A:397:LEU:HB3	1.83	0.60
1:C:242:LEU:HD22	1:C:247:GLU:HB3	1.84	0.60
1:F:203:THR:HG23	1:F:743:THR:HG23	1.84	0.60
1:C:159:ILE:HG23	1:C:291:ILE:HD11	1.82	0.60
1:B:82:THR:HG22	1:B:811:LYS:HG2	1.84	0.60
1:D:241:ARG:NH1	1:D:757:SER:OG	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1006:MET:O	1:C:1010:SER:OG	2.17	0.59
1:D:815:LEU:O	1:F:169:ARG:NH2	2.35	0.59
1:A:223:GLU:OE2	1:B:768:ARG:NH1	2.35	0.59
1:A:402:LEU:HD11	1:A:1002:LEU:HD21	1.84	0.59
1:E:606:MET:O	1:E:626:PHE:N	2.36	0.59
1:A:447:SER:HB3	1:A:938:ILE:HD13	1.85	0.59
1:F:446:ILE:HD11	1:F:489:LEU:HD11	1.83	0.59
1:C:224:GLU:HB3	1:C:225:PRO:CD	2.30	0.59
1:E:35:GLN:HG3	1:E:36:TYR:HD1	1.68	0.59
1:C:143:MET:HB2	1:C:159:ILE:HD11	1.85	0.59
1:A:280:GLN:HB3	1:A:609:ILE:HD11	1.83	0.58
1:E:388:LEU:HD12	1:E:479:ILE:HD11	1.84	0.58
1:E:666:ILE:HG22	1:E:668:GLY:H	1.68	0.58
1:C:168:LYS:HG2	1:C:176:ALA:H	1.68	0.58
1:C:202:ALA:HB3	1:C:743:THR:HG22	1.84	0.58
1:F:42:PRO:HG2	1:F:95:PHE:HB2	1.84	0.58
1:A:118:LYS:HG3	1:C:183:ASN:HD21	1.68	0.58
1:F:119:MET:HB2	1:F:124:LYS:HE2	1.84	0.58
1:F:987:ALA:HB1	1:F:995:ARG:HH21	1.68	0.58
1:A:884:ALA:HA	1:A:893:PRO:HG3	1.86	0.58
1:C:894:LEU:HD12	1:C:1024:LEU:HD11	1.86	0.58
1:C:369:ILE:HD12	1:C:495:LEU:HB3	1.86	0.58
1:B:100:ASP:HB3	1:B:103:GLN:HB3	1.86	0.57
1:F:487:VAL:HG13	1:F:491:LEU:HD23	1.85	0.57
1:C:282:ARG:NH1	1:C:287:ASP:OD1	2.37	0.57
1:A:190:LEU:HB3	1:A:195:LEU:HD11	1.87	0.57
1:B:146:SER:O	1:B:148:GLY:N	2.37	0.57
1:A:377:SER:O	1:A:381:THR:OG1	2.21	0.57
1:D:721:TYR:HB2	1:F:236:ILE:HG22	1.85	0.57
1:D:377:SER:O	1:D:381:THR:OG1	2.21	0.57
1:C:199:GLY:O	1:C:254:ARG:NH2	2.37	0.57
1:E:253:LEU:HD11	1:E:264:LEU:HD12	1.87	0.57
1:F:405:GLY:HA3	1:F:977:PHE:HA	1.87	0.57
1:C:576:LEU:O	1:C:578:SER:N	2.37	0.57
1:C:203:THR:HG23	1:C:743:THR:HG23	1.86	0.56
1:B:138:LEU:HD21	1:B:305:ALA:HB2	1.87	0.56
1:C:4:LYS:HG3	1:C:435:ILE:HD12	1.87	0.56
1:B:342:VAL:HG21	1:B:397:LEU:HB2	1.86	0.56
1:D:206:ILE:HD11	1:D:746:ALA:HB2	1.86	0.56
1:C:892:ILE:H	1:C:893:PRO:HD2	1.70	0.56
1:E:465:PHE:HB3	1:E:860:GLN:HB3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:553:LEU:HD22	1:A:908:PHE:HB3	1.87	0.56
1:E:5:PHE:HE1	1:E:9:ARG:HD2	1.69	0.56
1:E:402:LEU:HD21	1:E:998:LEU:HD21	1.86	0.56
1:C:153:VAL:O	1:C:157:ASN:ND2	2.38	0.56
1:D:599:THR:HG22	1:D:600:ASN:H	1.69	0.56
1:E:914:ARG:HD2	1:E:916:PHE:CE2	2.42	0.55
1:F:82:THR:HB	1:F:811:LYS:HE3	1.87	0.55
1:A:141:ILE:HG23	1:A:327:ILE:HG12	1.88	0.55
1:F:979:PHE:HA	1:F:982:LEU:HB2	1.88	0.55
1:A:683:SER:HB3	1:A:849:ASP:HB2	1.88	0.55
1:B:489:LEU:HD12	1:B:490:THR:HG23	1.88	0.55
1:C:300:ASN:HB3	1:C:303:HIS:HB3	1.88	0.55
1:F:887:TYR:HE2	1:F:938:ILE:HD11	1.71	0.55
1:A:145:SER:HB2	1:A:150:MET:HB2	1.87	0.55
1:B:106:ILE:HG21	1:C:106:ILE:HD13	1.88	0.55
1:C:577:PRO:O	1:C:579:ALA:N	2.39	0.55
1:B:395:LEU:HD13	1:B:469:ILE:HG23	1.88	0.55
1:C:496:CYS:HA	1:C:500:LEU:HD23	1.86	0.55
1:B:39:LEU:HD13	1:B:465:PHE:HE1	1.72	0.55
1:D:136:THR:HG21	1:D:668:GLY:HA2	1.88	0.55
1:E:283:LEU:HG	1:E:288:ALA:HB2	1.89	0.55
1:F:168:LYS:HG2	1:F:176:ALA:H	1.71	0.55
1:C:977:PHE:CD2	1:C:1006:MET:HG2	2.42	0.55
1:A:630:GLN:HB2	1:A:635:ARG:HD3	1.88	0.55
1:C:935:LYS:NZ	1:C:936:ASN:OD1	2.38	0.55
1:C:981:VAL:HG11	1:C:1002:LEU:HD23	1.89	0.55
1:D:24:GLY:HA2	1:D:383:ALA:HB2	1.88	0.55
1:D:224:GLU:HG3	1:E:277:TYR:CD1	2.42	0.55
1:E:638:SER:OG	1:E:641:GLN:HB2	2.06	0.55
1:D:195:LEU:HD23	1:D:267:VAL:HB	1.90	0.54
1:D:215:GLN:NE2	1:E:57:THR:OG1	2.40	0.54
1:A:179:ILE:HD12	1:A:608:MET:HG2	1.88	0.54
1:A:687:TYR:CZ	1:A:810:VAL:HG13	2.43	0.54
1:B:733:TYR:HB3	1:B:793:ILE:HD13	1.88	0.54
1:E:145:SER:HB3	1:E:150:MET:HB2	1.88	0.54
1:E:1002:LEU:HD12	1:E:1003:ILE:HD12	1.89	0.54
1:B:402:LEU:HB3	1:B:928:LEU:HD22	1.88	0.54
1:D:391:SER:O	1:D:393:ASN:ND2	2.40	0.54
1:F:795:LEU:HB3	1:F:799:LEU:HD12	1.88	0.54
1:D:635:ARG:HG3	1:D:637:VAL:H	1.72	0.54
1:A:365:ARG:NH1	1:A:499:PHE:O	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:151:SER:OG	1:C:154:ASP:OD2	2.26	0.54
1:D:44:VAL:HG12	1:D:93:VAL:HB	1.89	0.54
1:D:81:SER:HB3	1:D:91:LEU:HD13	1.88	0.54
1:C:787:SER:OG	1:C:789:ASP:OD1	2.25	0.54
1:D:127:GLY:HA3	1:E:114:ALA:HA	1.89	0.54
1:D:167:LEU:HD13	1:D:293:ILE:HD11	1.89	0.54
1:F:903:ALA:HB1	1:F:929:LEU:HD12	1.90	0.54
1:E:172:GLY:HA3	1:E:304:THR:HG21	1.89	0.54
1:E:187:ARG:HG2	1:E:766:ASN:HB2	1.89	0.54
1:F:366:ALA:HB2	1:F:500:LEU:HD11	1.90	0.54
1:A:970:ILE:HG22	1:A:971:ILE:HD12	1.90	0.54
1:C:138:LEU:HD22	1:C:295:LEU:HD13	1.89	0.54
1:C:82:THR:HB	1:C:811:LYS:HE3	1.89	0.54
1:D:143:MET:HB2	1:D:159:ILE:HD11	1.90	0.54
1:A:469:ILE:HD12	1:A:920:ILE:HD13	1.89	0.53
1:C:428:ILE:O	1:C:502:ARG:NH2	2.41	0.53
1:D:889:ARG:NH2	1:D:892:ILE:HD13	2.23	0.53
1:E:891:LEU:HB3	1:E:1024:LEU:HD22	1.91	0.53
1:C:459:VAL:HG11	1:C:927:LEU:HD13	1.89	0.53
1:D:130:VAL:O	1:E:110:ASN:ND2	2.39	0.53
1:E:35:GLN:HG3	1:E:36:TYR:CD1	2.43	0.53
1:D:282:ARG:NH1	1:D:287:ASP:OD1	2.41	0.53
1:E:79:MET:HB3	1:E:93:VAL:HA	1.90	0.53
1:A:15:VAL:HG13	1:B:881:LEU:HB3	1.88	0.53
1:A:553:LEU:HD21	1:A:912:TYR:HB2	1.91	0.53
1:E:101:PRO:HB2	1:E:132:LYS:HD3	1.90	0.53
1:C:140:ALA:HB3	1:C:329:TYR:HB3	1.89	0.53
1:E:31:LEU:HD23	1:E:32:PRO:HD2	1.90	0.53
1:D:481:VAL:HA	1:D:484:SER:HB3	1.90	0.53
1:F:450:LEU:HB3	1:F:882:ILE:HG21	1.91	0.53
1:A:601:GLY:HA3	1:A:642:ILE:HD11	1.91	0.53
1:C:352:LEU:HD22	1:C:979:PHE:HD2	1.74	0.53
1:E:407:VAL:HG22	1:E:484:SER:HB2	1.90	0.53
1:E:602:VAL:HA	1:E:629:LEU:HA	1.90	0.53
1:C:405:GLY:HA3	1:C:977:PHE:HA	1.90	0.53
1:C:466:VAL:HG22	1:C:920:ILE:HD11	1.91	0.53
1:A:561:LEU:HD12	1:A:562:VAL:HG12	1.91	0.53
1:A:179:ILE:HD11	1:A:292:MET:HG3	1.90	0.52
1:C:167:LEU:HD13	1:C:293:ILE:HD11	1.90	0.52
1:E:35:GLN:HE22	1:E:334:PHE:HE2	1.57	0.52
1:F:83:SER:HB3	1:F:89:MET:HG2	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:196:ASN:ND2	1:F:782:ASN:O	2.39	0.52
1:F:353:VAL:HG21	1:F:404:ILE:HG22	1.90	0.52
1:D:943:PHE:HD2	1:D:962:ALA:HA	1.75	0.52
1:D:896:VAL:HG13	1:D:937:ALA:HB3	1.92	0.52
1:A:131:ARG:HB3	1:B:111:ARG:HH12	1.75	0.52
1:E:429:SER:OG	1:E:432:ASP:OD2	2.28	0.52
1:D:9:ARG:HG2	1:E:888:GLU:OE2	2.09	0.52
1:F:987:ALA:O	1:F:996:HIS:NE2	2.37	0.52
1:B:511:VAL:O	1:B:515:ASN:ND2	2.31	0.52
1:F:44:VAL:HG21	1:F:108:VAL:HG21	1.91	0.52
1:A:116:THR:HA	1:A:119:MET:HG3	1.92	0.52
1:C:977:PHE:HD2	1:C:1006:MET:HG2	1.75	0.52
1:E:212:GLN:O	1:F:727:ARG:NH1	2.39	0.52
1:B:328:PRO:HB2	1:B:626:PHE:HE2	1.74	0.52
1:C:697:LEU:HD12	1:C:846:LEU:HD11	1.91	0.52
1:D:296:GLN:HE22	1:E:74:ASP:HA	1.73	0.52
1:B:615:THR:HG23	1:B:617:SER:H	1.75	0.52
1:B:982:LEU:N	1:B:983:PRO:HD2	2.25	0.52
1:F:892:ILE:H	1:F:893:PRO:HD2	1.74	0.52
1:B:397:LEU:HA	1:B:400:LEU:HD22	1.92	0.51
1:C:33:ILE:HD13	1:C:392:ILE:HB	1.92	0.51
1:D:147:ASP:OD1	1:D:148:GLY:N	2.38	0.51
1:D:168:LYS:NZ	1:D:175:ASP:OD1	2.43	0.51
1:E:758:MET:HG2	1:E:759:LEU:HG	1.91	0.51
1:A:37:PRO:HG3	1:A:472:GLN:HG3	1.91	0.51
1:C:190:LEU:HD13	1:C:195:LEU:HD11	1.92	0.51
1:A:237:THR:HA	1:B:54:ASP:HB3	1.91	0.51
1:D:596:VAL:O	1:D:602:VAL:HG21	2.11	0.51
1:A:159:ILE:HG22	1:A:164:LEU:HB2	1.92	0.51
1:A:218:THR:HG23	1:A:219:GLY:H	1.75	0.51
1:A:447:SER:OG	1:A:886:GLN:OE1	2.25	0.51
1:C:515:ASN:OD1	1:C:968:ARG:NH2	2.43	0.51
1:D:159:ILE:HD13	1:D:291:ILE:HD11	1.92	0.51
1:E:402:LEU:HD22	1:E:928:LEU:HD22	1.92	0.51
1:F:727:ARG:NH1	1:F:737:MET:SD	2.84	0.51
1:B:904:VAL:HG12	1:B:926:LEU:HD11	1.93	0.51
1:F:801:LEU:H	1:F:801:LEU:HD23	1.76	0.51
1:B:398:PHE:CZ	1:B:998:LEU:HD22	2.46	0.51
1:E:283:LEU:HA	1:E:606:MET:HA	1.92	0.51
1:A:723:LEU:HD22	1:A:799:LEU:HB3	1.92	0.51
1:B:737:MET:HA	1:B:740:VAL:HG12	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:518:PHE:HZ	1:D:968:ARG:HA	1.76	0.51
1:E:406:ILE:HD12	1:E:477:LEU:HD22	1.91	0.51
1:E:448:ILE:HG12	1:E:935:LYS:HG3	1.92	0.51
1:E:507:PRO:CD	1:E:508:PHE:N	2.73	0.51
1:E:242:LEU:HB2	1:E:248:PHE:CE1	2.45	0.51
1:E:339:ILE:HG12	1:E:397:LEU:HD21	1.92	0.51
1:E:572:SER:HB2	1:E:625:MET:HB3	1.92	0.51
1:D:12:PHE:CD2	1:E:885:ALA:HB1	2.46	0.51
1:D:76:MET:HA	1:D:95:PHE:HA	1.93	0.51
1:D:377:SER:OG	1:D:480:SER:O	2.28	0.51
1:E:392:ILE:HG23	1:E:397:LEU:HD11	1.93	0.51
1:A:706:GLU:N	1:A:706:GLU:OE1	2.43	0.50
1:B:375:PRO:O	1:B:379:LEU:HB2	2.11	0.50
1:B:675:PHE:HE2	1:B:821:VAL:HG12	1.75	0.50
1:C:302:LEU:HD12	1:C:302:LEU:H	1.75	0.50
1:D:619:LYS:NZ	1:D:809:ASP:OD2	2.30	0.50
1:E:502:ARG:O	1:E:504:GLU:N	2.44	0.50
1:A:282:ARG:HB2	1:A:607:ALA:HB3	1.93	0.50
1:D:706:GLU:N	1:D:706:GLU:OE1	2.45	0.50
1:D:795:LEU:HB3	1:D:799:LEU:HD12	1.93	0.50
1:F:354:ILE:HG12	1:F:371:MET:SD	2.51	0.50
1:F:586:ILE:HG12	1:F:609:ILE:HG21	1.92	0.50
1:A:446:ILE:HD11	1:A:489:LEU:HD11	1.93	0.50
1:A:753:VAL:HG22	1:A:754:ASN:H	1.76	0.50
1:B:66:ILE:HG22	1:B:815:LEU:HD23	1.92	0.50
1:B:721:TYR:HB3	1:B:801:LEU:HD11	1.94	0.50
1:A:891:LEU:HD23	1:A:1028:ASN:HD21	1.75	0.50
1:B:200:ILE:HG21	1:B:253:LEU:HD13	1.94	0.50
1:B:532:ILE:HG23	1:B:539:PHE:CG	2.47	0.50
1:C:451:VAL:HG12	1:C:931:GLY:HA2	1.92	0.50
1:E:665:PRO:HD2	1:E:669:LEU:HD11	1.93	0.50
1:B:382:PHE:HE1	1:B:400:LEU:HD21	1.76	0.50
1:B:422:LEU:O	1:B:502:ARG:NH2	2.45	0.50
1:D:733:TYR:HB3	1:D:793:ILE:HG12	1.93	0.50
1:E:106:ILE:HG21	1:F:106:ILE:HD12	1.92	0.50
1:A:582:LEU:O	1:A:586:ILE:HG13	2.12	0.50
1:C:378:LEU:O	1:C:381:THR:HG22	2.12	0.50
1:D:224:GLU:HG3	1:E:277:TYR:HD1	1.77	0.50
1:D:300:ASN:OD1	1:D:303:HIS:N	2.40	0.50
1:C:795:LEU:HB3	1:C:799:LEU:HD12	1.94	0.50
1:B:188:ILE:HD13	1:B:264:LEU:HD21	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:217:ALA:HB3	1:B:238:MET:HB3	1.93	0.49
1:B:947:GLU:HG3	1:B:953:LYS:HD2	1.93	0.49
1:E:948:ARG:NH1	1:E:953:LYS:O	2.45	0.49
1:B:901:PRO:HA	1:B:904:VAL:HG22	1.93	0.49
1:C:681:ASN:OD1	1:C:685:LYS:N	2.38	0.49
1:C:477:LEU:HD13	1:C:928:LEU:HD13	1.94	0.49
1:C:884:ALA:HB2	1:C:893:PRO:HG3	1.93	0.49
1:E:54:ASP:OD2	1:E:57:THR:OG1	2.29	0.49
1:E:777:GLN:O	1:E:777:GLN:NE2	2.44	0.49
1:B:682:LYS:HE2	1:B:851:SER:HB2	1.94	0.49
1:C:81:SER:HB3	1:C:91:LEU:HD13	1.94	0.49
1:E:618:LEU:H	1:E:618:LEU:HD23	1.77	0.49
1:E:1022:TYR:O	1:E:1026:ASN:ND2	2.46	0.49
1:F:166:GLU:HG3	1:F:311:LYS:HE2	1.95	0.49
1:A:252:ILE:HG22	1:A:263:ARG:HG2	1.94	0.49
1:C:590:ASP:O	1:C:594:GLN:HB2	2.13	0.49
1:D:448:ILE:HG12	1:D:935:LYS:HG3	1.93	0.49
1:E:576:LEU:HD13	1:E:585:THR:HG23	1.95	0.49
1:B:826:ALA:HB3	1:B:829:TYR:CD2	2.46	0.49
1:F:960:VAL:HG12	1:F:964:LYS:HE2	1.95	0.49
1:E:64:SER:HB3	1:E:65:PRO:HD3	1.95	0.49
1:E:977:PHE:O	1:E:981:VAL:HG22	2.12	0.49
1:F:566:ASP:OD1	1:F:635:ARG:NH2	2.46	0.49
1:F:903:ALA:HB2	1:F:933:SER:HB3	1.93	0.49
1:C:54:ASP:OD1	1:C:55:ALA:N	2.46	0.49
1:D:150:MET:O	1:D:154:ASP:HB2	2.12	0.49
1:D:237:THR:HG23	1:E:722:LYS:HA	1.94	0.49
1:F:138:LEU:HD22	1:F:295:LEU:HD13	1.95	0.49
1:A:977:PHE:HD2	1:A:1006:MET:HG2	1.78	0.49
1:C:535:ARG:HB2	1:C:538:ARG:HG2	1.94	0.49
1:C:614:PHE:HE1	1:C:672:THR:HG21	1.78	0.49
1:C:887:TYR:HE2	1:C:938:ILE:HD11	1.77	0.49
1:D:72:GLY:O	1:D:111:ARG:NH2	2.46	0.49
1:D:190:LEU:HD21	1:D:205:VAL:HG11	1.95	0.48
1:E:227:THR:OG1	1:F:772:ASP:OD2	2.23	0.48
1:B:187:ARG:HD3	1:B:189:TRP:CZ2	2.48	0.48
1:E:295:LEU:HD22	1:E:301:ALA:HB2	1.94	0.48
1:E:369:ILE:HB	1:E:370:PRO:HD3	1.95	0.48
1:E:541:LEU:HA	1:E:544:CYS:SG	2.53	0.48
1:B:838:ILE:HA	1:B:841:VAL:HG22	1.96	0.48
1:D:171:PRO:HD2	1:D:307:LEU:HD13	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:319:PHE:HB3	1:F:323:LEU:HB3	1.96	0.48
1:A:302:LEU:HD21	1:A:335:VAL:HB	1.95	0.48
1:A:912:TYR:HD1	1:A:913:LEU:HD12	1.78	0.48
1:B:190:LEU:HD21	1:B:205:VAL:HG11	1.96	0.48
1:C:224:GLU:CB	1:C:225:PRO:HD3	2.41	0.48
1:C:274:SER:OG	1:C:275:GLN:N	2.46	0.48
1:B:402:LEU:HD21	1:B:998:LEU:HD21	1.95	0.48
1:C:565:GLU:OE2	1:C:994:SER:N	2.44	0.48
1:D:142:SER:HB2	1:D:606:MET:SD	2.53	0.48
1:E:725:ILE:HD11	1:E:727:ARG:CZ	2.43	0.48
1:B:738:GLN:O	1:B:742:ASN:HB2	2.13	0.48
1:F:143:MET:HG2	1:F:325:TYR:HB3	1.96	0.48
1:A:122:ALA:HA	1:A:125:LYS:HD2	1.96	0.48
1:A:187:ARG:NE	1:A:274:SER:O	2.39	0.48
1:C:70:ILE:HD11	1:C:112:ILE:HD11	1.94	0.48
1:B:64:SER:HB3	1:B:65:PRO:HD3	1.95	0.48
1:D:436:GLN:HA	1:D:439:GLN:HG3	1.95	0.48
1:E:66:ILE:HG23	1:E:815:LEU:HD22	1.95	0.48
1:F:706:GLU:OE1	1:F:706:GLU:N	2.46	0.48
1:A:570:MET:HG3	1:A:627:ILE:HB	1.96	0.48
1:B:571:ILE:HG13	1:B:661:ILE:HG13	1.96	0.48
1:C:895:ALA:HB2	1:C:1024:LEU:HD12	1.95	0.48
1:D:356:VAL:HG11	1:D:976:ALA:HA	1.95	0.48
1:E:900:VAL:HG13	1:E:930:ILE:HG12	1.95	0.48
1:B:632:TRP:HA	1:B:635:ARG:HG2	1.95	0.47
1:D:261:PHE:HZ	1:E:732:HIS:HB2	1.79	0.47
1:D:346:PHE:CD2	1:D:404:ILE:HD11	2.48	0.47
1:D:477:LEU:HD13	1:D:928:LEU:HD13	1.95	0.47
1:D:525:PHE:HE1	1:D:1014:ILE:HG13	1.78	0.47
1:E:297:SER:OG	1:E:298:GLY:N	2.46	0.47
1:F:572:SER:HB3	1:F:625:MET:HB2	1.96	0.47
1:B:970:ILE:HG21	1:B:1014:ILE:HG21	1.95	0.47
1:D:63:ALA:HB2	1:D:89:MET:HG3	1.95	0.47
1:E:74:ASP:O	1:E:75:ASN:HB3	2.15	0.47
1:F:153:VAL:O	1:F:157:ASN:ND2	2.34	0.47
1:F:220:LYS:HE2	1:F:223:GLU:HB2	1.96	0.47
1:D:242:LEU:HB2	1:D:248:PHE:CE1	2.49	0.47
1:F:865:LYS:HA	1:F:865:LYS:HD2	1.65	0.47
1:A:163:VAL:HA	1:A:315:LEU:HD13	1.96	0.47
1:B:364:PHE:O	1:B:367:THR:HG22	2.14	0.47
1:C:101:PRO:HB2	1:C:132:LYS:HG3	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:446:ILE:HD11	1:C:489:LEU:HD11	1.95	0.47
1:D:731:LYS:HB2	1:F:252:ILE:HD12	1.96	0.47
1:E:43:THR:OG1	1:E:133:THR:OG1	2.15	0.47
1:E:982:LEU:N	1:E:983:PRO:HD2	2.30	0.47
1:F:253:LEU:HD12	1:F:267:VAL:HG11	1.97	0.47
1:C:206:ILE:HD11	1:C:746:ALA:HB2	1.96	0.47
1:E:691:GLN:NE2	1:E:695:ASN:OD1	2.48	0.47
1:F:305:ALA:HB2	1:F:332:THR:HG21	1.95	0.47
1:F:977:PHE:HZ	1:F:1002:LEU:HD23	1.80	0.47
1:C:619:LYS:HD3	1:C:809:ASP:OD1	2.15	0.47
1:C:987:ALA:HB1	1:C:995:ARG:HH21	1.79	0.47
1:A:242:LEU:HD22	1:A:247:GLU:HB3	1.96	0.47
1:B:72:GLY:HA3	1:B:75:ASN:HB2	1.96	0.47
1:B:393:ASN:O	1:B:397:LEU:HG	2.14	0.47
1:B:839:ALA:O	1:B:843:LYS:HG2	2.14	0.47
1:D:39:LEU:HD21	1:D:469:ILE:HG13	1.97	0.47
1:D:449:VAL:HG21	1:D:485:GLY:HA3	1.96	0.47
1:D:895:ALA:HB2	1:D:1024:LEU:HD12	1.97	0.47
1:E:81:SER:HB3	1:E:91:LEU:HD13	1.95	0.47
1:E:586:ILE:HA	1:E:609:ILE:HD13	1.97	0.47
1:F:224:GLU:HB3	1:F:225:PRO:HD2	1.96	0.47
1:F:490:THR:O	1:F:493:PRO:HD2	2.15	0.47
1:F:784:PHE:HB3	1:F:792:MET:HB3	1.97	0.47
1:A:46:VAL:HB	1:A:91:LEU:HB3	1.97	0.47
1:A:465:PHE:HE2	1:A:561:LEU:HD11	1.80	0.47
1:E:179:ILE:HD11	1:E:290:PRO:HB2	1.96	0.47
1:E:234:TYR:OH	1:F:775:ASN:O	2.33	0.47
1:E:249:GLU:HB3	1:E:265:LYS:HB3	1.96	0.47
1:F:373:ALA:HA	1:F:487:VAL:HG11	1.96	0.47
1:B:198:PHE:O	1:B:254:ARG:NH1	2.48	0.47
1:C:825:PRO:HB3	1:C:834:ALA:HB2	1.95	0.47
1:E:756:PHE:CE2	1:E:758:MET:HB2	2.50	0.47
1:B:35:GLN:HE22	1:B:334:PHE:HE2	1.63	0.47
1:B:671:ILE:HG23	1:B:674:GLY:H	1.80	0.47
1:B:925:GLY:HA3	1:B:1002:LEU:HD23	1.97	0.47
1:C:284:ASN:HA	1:C:597:LEU:HD11	1.97	0.47
1:E:71:ASN:HB3	1:E:111:ARG:CZ	2.44	0.47
1:E:635:ARG:NE	1:E:637:VAL:HA	2.29	0.47
1:A:801:LEU:H	1:A:801:LEU:HD23	1.80	0.46
1:E:711:ARG:NH2	1:E:822:GLN:OE1	2.48	0.46
1:E:970:ILE:HG21	1:E:1014:ILE:HG21	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:59:ALA:HA	1:A:63:ALA:HB3	1.97	0.46
1:A:614:PHE:CE1	1:A:671:ILE:HD13	2.51	0.46
1:B:812:ARG:NH2	1:B:815:LEU:O	2.48	0.46
1:C:225:PRO:HD2	1:C:226:VAL:H	1.80	0.46
1:C:329:TYR:CD2	1:C:626:PHE:HB3	2.51	0.46
1:F:206:ILE:HD11	1:F:746:ALA:HB2	1.96	0.46
1:F:578:SER:HB3	1:F:715:ASP:OD2	2.16	0.46
1:F:895:ALA:HB2	1:F:1024:LEU:HD12	1.97	0.46
1:D:570:MET:HG3	1:D:627:ILE:HB	1.96	0.46
1:D:943:PHE:O	1:D:947:GLU:HG2	2.15	0.46
1:E:187:ARG:HD3	1:E:189:TRP:CH2	2.51	0.46
1:E:345:THR:HG21	1:E:401:ILE:HG23	1.98	0.46
1:A:49:THR:HG22	1:A:88:THR:HG22	1.97	0.46
1:A:738:GLN:O	1:A:742:ASN:ND2	2.38	0.46
1:B:677:MET:HG3	1:B:821:VAL:HB	1.97	0.46
1:B:831:SER:O	1:B:835:ILE:HG12	2.15	0.46
1:E:144:TYR:CG	1:E:283:LEU:HD21	2.50	0.46
1:C:342:VAL:HG11	1:C:397:LEU:HB3	1.98	0.46
1:E:953:LYS:HD3	1:E:957:GLU:HB3	1.97	0.46
1:A:242:LEU:HB2	1:A:248:PHE:CE2	2.51	0.46
1:B:65:PRO:HA	1:B:68:ASP:HB3	1.97	0.46
1:F:350:LEU:O	1:F:354:ILE:HG13	2.15	0.46
1:F:532:ILE:HG12	1:F:539:PHE:CZ	2.51	0.46
1:A:353:VAL:HA	1:A:356:VAL:HG12	1.98	0.46
1:A:1010:SER:O	1:A:1014:ILE:HG12	2.16	0.46
1:B:39:LEU:HD13	1:B:465:PHE:CE1	2.51	0.46
1:B:144:TYR:CD1	1:B:283:LEU:HD21	2.51	0.46
1:B:1007:ILE:O	1:B:1011:THR:OG1	2.22	0.46
1:C:1034:LYS:HE2	1:C:1034:LYS:HB3	1.82	0.46
1:D:138:LEU:HD22	1:D:295:LEU:HG	1.98	0.46
1:D:217:ALA:O	1:D:218:THR:HB	2.16	0.46
1:E:574:ILE:HB	1:E:623:ALA:HB3	1.97	0.46
1:F:759:LEU:HD23	1:F:759:LEU:HA	1.81	0.46
1:D:165:ASP:HB3	1:E:815:LEU:HD12	1.98	0.46
1:D:190:LEU:O	1:D:770:LYS:N	2.39	0.46
1:D:892:ILE:HG21	1:D:945:MET:SD	2.56	0.46
1:A:158:TYR:OH	1:A:318:ASN:O	2.32	0.45
1:C:67:GLU:HB3	1:C:815:LEU:HD23	1.98	0.45
1:D:114:ALA:HB1	1:F:131:ARG:HD3	1.97	0.45
1:E:182:ARG:NE	1:E:276:GLN:O	2.49	0.45
1:E:495:LEU:HD22	1:E:499:PHE:HE2	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:738:GLN:O	1:E:742:ASN:ND2	2.28	0.45
1:B:354:ILE:HA	1:B:367:THR:OG1	2.16	0.45
1:C:392:ILE:HG23	1:C:397:LEU:HD21	1.98	0.45
1:D:252:ILE:HG22	1:D:263:ARG:HG2	1.97	0.45
1:D:456:PHE:HA	1:D:459:VAL:HG22	1.97	0.45
1:F:70:ILE:O	1:F:111:ARG:NH1	2.50	0.45
1:F:653:ASP:HB3	1:F:656:ALA:O	2.16	0.45
1:F:677:MET:HE1	1:F:679:VAL:HB	1.97	0.45
1:D:466:VAL:HG23	1:D:920:ILE:HD11	1.98	0.45
1:D:665:PRO:HG2	1:D:666:ILE:HD12	1.99	0.45
1:A:661:ILE:HD12	1:A:672:THR:HG21	1.98	0.45
1:A:815:LEU:O	1:C:169:ARG:NH2	2.49	0.45
1:A:895:ALA:HB2	1:A:1024:LEU:HD12	1.98	0.45
1:B:361:LEU:O	1:B:362:LYS:HB2	2.15	0.45
1:B:1002:LEU:HD12	1:B:1003:ILE:HD12	1.97	0.45
1:E:361:LEU:O	1:E:363:ASN:N	2.48	0.45
1:D:44:VAL:HG11	1:D:108:VAL:HG21	1.98	0.45
1:E:238:MET:HE2	1:F:725:ILE:HD11	1.98	0.45
1:F:825:PRO:HB3	1:F:834:ALA:HB2	1.98	0.45
1:C:31:LEU:HD11	1:C:385:LEU:HB2	1.98	0.45
1:E:192:PRO:HD2	1:E:773:PHE:CG	2.51	0.45
1:E:8:GLU:HG2	1:E:431:LYS:HE2	1.97	0.45
1:E:632:TRP:CE2	1:E:990:ALA:HB2	2.52	0.45
1:E:635:ARG:HG3	1:E:637:VAL:HG12	1.98	0.45
1:A:295:LEU:HD13	1:A:296:GLN:N	2.32	0.45
1:E:632:TRP:HA	1:E:635:ARG:NH1	2.32	0.45
1:A:41:PRO:HB3	1:A:95:PHE:O	2.16	0.45
1:A:106:ILE:HG21	1:B:106:ILE:HD12	1.98	0.45
1:A:846:LEU:HB3	1:A:847:GLY:H	1.64	0.45
1:B:77:ILE:HG13	1:B:78:TYR:H	1.80	0.45
1:B:163:VAL:O	1:B:167:LEU:HB2	2.17	0.45
1:C:532:ILE:HG23	1:C:539:PHE:CG	2.51	0.45
1:C:675:PHE:CZ	1:C:838:ILE:HG13	2.52	0.45
1:C:892:ILE:HG23	1:C:941:VAL:HG11	1.99	0.45
1:D:369:ILE:HB	1:D:370:PRO:HD3	1.99	0.45
1:E:187:ARG:HD3	1:E:189:TRP:CZ2	2.52	0.45
1:F:191:LYS:HD2	1:F:194:LEU:HD22	1.99	0.45
1:B:33:ILE:HG21	1:B:302:LEU:HD13	1.98	0.45
1:E:402:LEU:HB2	1:E:477:LEU:HD21	1.98	0.45
1:E:612:ASP:HB3	1:E:615:THR:HG22	1.98	0.45
1:B:91:LEU:CD1	1:B:93:VAL:HG23	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:787:SER:HB3	1:C:793:ILE:HD11	1.99	0.44
1:F:54:ASP:O	1:F:58:ILE:HG13	2.17	0.44
1:F:81:SER:HB3	1:F:91:LEU:HD13	1.98	0.44
1:F:452:LEU:HD22	1:F:481:VAL:HG21	1.97	0.44
1:B:457:VAL:N	1:B:458:PRO:HD2	2.33	0.44
1:C:375:PRO:O	1:C:379:LEU:HB2	2.16	0.44
1:C:755:ASP:OD1	1:C:755:ASP:N	2.49	0.44
1:C:896:VAL:HG13	1:C:937:ALA:HB3	1.99	0.44
1:D:145:SER:HB2	1:D:150:MET:HB2	1.98	0.44
1:D:251:ILE:O	1:D:264:LEU:N	2.50	0.44
1:E:147:ASP:HB2	1:E:322:GLY:HA3	2.00	0.44
1:C:141:ILE:N	1:C:291:ILE:O	2.51	0.44
1:D:592:ILE:HG23	1:D:650:PHE:CE2	2.53	0.44
1:D:901:PRO:HA	1:D:904:VAL:HG22	1.99	0.44
1:F:37:PRO:HG3	1:F:472:GLN:HG3	1.99	0.44
1:F:661:ILE:HG21	1:F:672:THR:HB	1.99	0.44
1:F:677:MET:HB2	1:F:854:TRP:CE3	2.53	0.44
1:A:226:VAL:HG12	1:B:771:GLY:HA3	2.00	0.44
1:B:189:TRP:HZ3	1:B:768:ARG:HG2	1.82	0.44
1:B:687:TYR:OH	1:B:810:VAL:HG13	2.17	0.44
1:C:442:SER:O	1:C:446:ILE:HG12	2.18	0.44
1:E:39:LEU:HG	1:E:465:PHE:HE2	1.82	0.44
1:F:683:SER:HB3	1:F:849:ASP:HB2	1.99	0.44
1:A:356:VAL:HG11	1:A:976:ALA:HA	1.99	0.44
1:A:572:SER:OG	1:A:625:MET:HB3	2.18	0.44
1:B:444:PRO:O	1:B:447:SER:N	2.51	0.44
1:C:352:LEU:HD23	1:C:355:ILE:HD11	2.00	0.44
1:D:452:LEU:HD13	1:D:481:VAL:HG21	2.00	0.44
1:F:412:ILE:HD11	1:F:973:THR:HA	1.99	0.44
1:A:563:PRO:HB2	1:A:993:ALA:HB1	2.00	0.44
1:C:245:PRO:HD3	1:C:758:MET:SD	2.57	0.44
1:C:361:LEU:HD23	1:C:366:ALA:O	2.17	0.44
1:E:558:PRO:O	1:E:917:SER:HB2	2.18	0.44
1:E:896:VAL:HG13	1:E:937:ALA:HB3	1.99	0.44
1:B:713:THR:OG1	1:B:811:LYS:NZ	2.51	0.44
1:B:855:SER:OG	1:B:856:GLY:N	2.50	0.44
1:D:221:ILE:HG13	1:E:721:TYR:HD2	1.83	0.44
1:D:280:GLN:HG2	1:D:282:ARG:HH12	1.83	0.44
1:D:573:ILE:HG12	1:D:614:PHE:HE2	1.82	0.44
1:F:492:THR:O	1:F:496:CYS:HB2	2.16	0.44
1:F:550:ILE:HD13	1:F:904:VAL:HG13	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:402:LEU:HD11	1:A:1002:LEU:CD2	2.47	0.44
1:A:509:LYS:HG3	1:A:510:PHE:H	1.82	0.44
1:B:643:ILE:O	1:B:647:ASN:ND2	2.32	0.44
1:B:725:ILE:H	1:B:725:ILE:HG13	1.65	0.44
1:B:91:LEU:C	1:B:91:LEU:HD13	2.37	0.44
1:B:283:LEU:HB3	1:B:606:MET:HG3	2.00	0.44
1:D:666:ILE:HD13	1:D:669:LEU:HD12	2.00	0.44
1:E:487:VAL:HG13	1:E:491:LEU:HB3	2.00	0.44
1:F:943:PHE:O	1:F:947:GLU:HG2	2.18	0.44
1:A:815:LEU:HB3	1:C:169:ARG:NH2	2.33	0.43
1:B:28:LEU:HD11	1:B:382:PHE:CD2	2.53	0.43
1:B:75:ASN:O	1:B:96:ASP:HB2	2.18	0.43
1:C:509:LYS:HD2	1:C:510:PHE:N	2.33	0.43
1:C:586:ILE:HG12	1:C:609:ILE:HG21	2.00	0.43
1:D:189:TRP:NE1	1:D:271:GLU:OE2	2.47	0.43
1:E:153:VAL:O	1:E:157:ASN:ND2	2.44	0.43
1:E:505:GLY:C	1:E:506:GLU:HG3	2.39	0.43
1:B:171:PRO:HD2	1:B:307:LEU:HD13	1.99	0.43
1:B:300:ASN:O	1:B:304:THR:HG23	2.18	0.43
1:D:49:THR:HG22	1:D:88:THR:HG22	1.99	0.43
1:D:95:PHE:CZ	1:D:104:ALA:HB1	2.54	0.43
1:D:400:LEU:O	1:D:404:ILE:HG13	2.19	0.43
1:E:77:ILE:HG13	1:E:78:TYR:H	1.83	0.43
1:E:205:VAL:HG13	1:E:264:LEU:HD11	2.00	0.43
1:F:510:PHE:O	1:F:514:PHE:N	2.42	0.43
1:F:649:LYS:HB2	1:F:649:LYS:HE2	1.86	0.43
1:A:378:LEU:HD22	1:A:400:LEU:HD22	2.01	0.43
1:B:297:SER:OG	1:B:298:GLY:N	2.51	0.43
1:B:444:PRO:O	1:B:448:ILE:N	2.48	0.43
1:B:465:PHE:CE1	1:B:668:GLY:HA3	2.53	0.43
1:D:848:ASP:OD1	1:D:848:ASP:N	2.52	0.43
1:D:1010:SER:O	1:D:1014:ILE:HG12	2.18	0.43
1:E:112:ILE:C	1:E:114:ALA:H	2.21	0.43
1:E:754:ASN:H	1:E:765:VAL:HG12	1.83	0.43
1:A:896:VAL:HG13	1:A:937:ALA:HB3	2.00	0.43
1:B:578:SER:HA	1:B:621:ASN:HD22	1.84	0.43
1:C:248:PHE:O	1:C:264:LEU:HD23	2.18	0.43
1:B:939:LEU:HB3	1:B:966:ARG:HD2	2.00	0.43
1:C:518:PHE:HE2	1:C:968:ARG:HG3	1.83	0.43
1:D:141:ILE:HB	1:D:291:ILE:HB	2.00	0.43
1:D:447:SER:HB3	1:D:938:ILE:HD13	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:890:TRP:CE2	1:F:11:VAL:HG13	2.53	0.43
1:E:250:ASN:HA	1:E:263:ARG:HD3	2.00	0.43
1:F:33:ILE:HD13	1:F:392:ILE:HB	2.01	0.43
1:A:730:LEU:HD12	1:A:730:LEU:HA	1.86	0.43
1:A:739:ASP:O	1:A:743:THR:OG1	2.21	0.43
1:A:885:ALA:HB1	1:C:12:PHE:CD2	2.54	0.43
1:A:939:LEU:O	1:A:966:ARG:HG3	2.18	0.43
1:B:332:THR:HA	1:B:335:VAL:HG12	2.01	0.43
1:B:632:TRP:CZ2	1:B:990:ALA:HB2	2.54	0.43
1:B:927:LEU:HD23	1:B:927:LEU:HA	1.92	0.43
1:C:733:TYR:HB3	1:C:793:ILE:HD13	2.01	0.43
1:D:181:ASN:O	1:D:275:GLN:HB3	2.19	0.43
1:D:579:ALA:HB2	1:D:719:PRO:HG3	2.01	0.43
1:E:155:VAL:O	1:E:159:ILE:HG12	2.19	0.43
1:E:354:ILE:HG12	1:E:367:THR:HG23	2.01	0.43
1:E:489:LEU:HD12	1:E:490:THR:HG23	2.01	0.43
1:B:970:ILE:HG22	1:B:971:ILE:HD12	2.01	0.43
1:D:525:PHE:CE1	1:D:1014:ILE:HG13	2.54	0.43
1:D:671:ILE:HD12	1:D:672:THR:N	2.34	0.43
1:E:200:ILE:HG23	1:E:204:ASP:HB2	2.01	0.43
1:B:402:LEU:HB2	1:B:477:LEU:HD21	2.01	0.43
1:B:579:ALA:O	1:B:621:ASN:HB3	2.19	0.43
1:F:41:PRO:HB3	1:F:95:PHE:O	2.19	0.43
1:F:734:ASN:OD1	1:F:788:ASN:HB2	2.18	0.43
1:F:998:LEU:O	1:F:1002:LEU:HD13	2.19	0.43
1:A:465:PHE:CE2	1:A:561:LEU:HD11	2.53	0.42
1:B:998:LEU:O	1:B:1002:LEU:HG	2.19	0.42
1:D:507:PRO:HB2	1:D:512:LYS:HB2	2.00	0.42
1:E:505:GLY:C	1:E:506:GLU:CG	2.88	0.42
1:A:752:TYR:O	1:A:753:VAL:HG12	2.18	0.42
1:B:68:ASP:OD2	1:B:111:ARG:HG3	2.20	0.42
1:B:185:SER:HB3	1:B:274:SER:O	2.19	0.42
1:B:418:ILE:HG21	1:B:500:LEU:HD23	2.00	0.42
1:E:166:GLU:HB2	1:E:315:LEU:HD11	2.01	0.42
1:E:899:ALA:HB2	1:E:1017:VAL:HG22	2.01	0.42
1:F:369:ILE:HD12	1:F:495:LEU:HB3	2.01	0.42
1:A:54:ASP:OD1	1:A:54:ASP:N	2.37	0.42
1:A:221:ILE:HG13	1:B:721:TYR:HD2	1.85	0.42
1:A:384:GLY:HA3	1:A:479:ILE:HD13	2.00	0.42
1:C:134:SER:HB3	1:C:295:LEU:O	2.20	0.42
1:C:672:THR:OG1	1:C:673:GLY:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:943:PHE:HB2	1:D:966:ARG:HE	1.84	0.42
1:E:775:ASN:ND2	1:E:775:ASN:O	2.52	0.42
1:E:825:PRO:HB3	1:E:834:ALA:HB2	2.01	0.42
1:E:902:PHE:CD1	1:E:1012:LEU:HB3	2.54	0.42
1:F:199:GLY:O	1:F:254:ARG:NH1	2.51	0.42
1:B:102:ASP:OD1	1:B:102:ASP:N	2.52	0.42
1:B:159:ILE:HA	1:B:163:VAL:HG22	2.00	0.42
1:B:190:LEU:HB2	1:B:769:ALA:HA	2.01	0.42
1:C:316:SER:HB3	1:C:325:TYR:HE1	1.84	0.42
1:C:321:LYS:HB3	1:C:322:GLY:H	1.63	0.42
1:E:242:LEU:HD23	1:E:247:GLU:HB3	2.00	0.42
1:F:946:GLU:HG3	1:F:950:LYS:HE2	2.02	0.42
1:A:67:GLU:HB3	1:A:815:LEU:HD23	2.02	0.42
1:A:753:VAL:HG22	1:A:754:ASN:HD22	1.84	0.42
1:C:190:LEU:HD21	1:C:205:VAL:HG11	2.01	0.42
1:E:5:PHE:CE1	1:E:9:ARG:HD2	2.53	0.42
1:E:708:SER:OG	1:E:824:GLN:HG3	2.20	0.42
1:E:981:VAL:HG23	1:E:1003:ILE:HD11	2.00	0.42
1:A:150:MET:O	1:A:154:ASP:HB2	2.20	0.42
1:A:680:GLN:HB3	1:A:818:ALA:HB2	2.02	0.42
1:B:201:THR:HG23	1:B:204:ASP:H	1.84	0.42
1:C:116:THR:O	1:C:119:MET:HB2	2.20	0.42
1:C:874:LEU:HA	1:C:874:LEU:HD23	1.84	0.42
1:D:345:THR:HG23	1:D:983:PRO:HB2	2.01	0.42
1:F:926:LEU:O	1:F:930:ILE:HG13	2.20	0.42
1:A:676:GLU:CD	1:A:820:GLN:HE21	2.23	0.42
1:D:892:ILE:N	1:D:893:PRO:HD2	2.35	0.42
1:E:971:ILE:O	1:E:975:LEU:HB2	2.19	0.42
1:F:884:ALA:HB2	1:F:893:PRO:HG3	2.02	0.42
1:A:191:LYS:HE3	1:A:191:LYS:HB2	1.91	0.42
1:B:973:THR:HG23	1:B:974:SER:N	2.35	0.42
1:C:595:GLU:HA	1:C:598:LYS:HZ3	1.84	0.42
1:D:278:SER:HA	1:D:582:LEU:HD22	2.02	0.42
1:D:789:ASP:HB2	1:D:791:LYS:HG3	2.02	0.42
1:E:39:LEU:HG	1:E:465:PHE:CE2	2.54	0.42
1:E:202:ALA:HB3	1:E:743:THR:HG23	2.01	0.42
1:B:567:GLN:O	1:B:569:LEU:N	2.53	0.42
1:B:671:ILE:O	1:B:672:THR:HG22	2.20	0.42
1:C:374:VAL:HB	1:C:375:PRO:HD3	2.02	0.42
1:C:509:LYS:H	1:C:509:LYS:HG3	1.68	0.42
1:D:77:ILE:HD11	1:D:96:ASP:HA	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:138:LEU:HD12	1:E:295:LEU:HB2	2.01	0.42
1:E:776:THR:OG1	1:E:777:GLN:N	2.53	0.42
1:F:223:GLU:HG2	1:F:224:GLU:HG3	2.02	0.42
1:B:385:LEU:HD23	1:B:479:ILE:HD12	2.01	0.42
1:B:400:LEU:O	1:B:404:ILE:HG13	2.20	0.42
1:B:768:ARG:HG3	1:B:769:ALA:O	2.20	0.42
1:B:852:ILE:H	1:B:852:ILE:HD12	1.84	0.42
1:B:899:ALA:HB2	1:B:1017:VAL:HG22	2.01	0.42
1:C:302:LEU:O	1:C:306:GLU:HG3	2.20	0.42
1:D:572:SER:HB3	1:D:660:PHE:CD2	2.55	0.42
1:F:921:TYR:HE2	1:F:994:SER:HB3	1.84	0.42
1:B:849:ASP:N	1:B:849:ASP:OD1	2.53	0.41
1:B:899:ALA:O	1:B:933:SER:OG	2.38	0.41
1:C:117:ALA:C	1:C:119:MET:H	2.23	0.41
1:C:442:SER:O	1:C:445:VAL:HG22	2.20	0.41
1:C:713:THR:OG1	1:C:820:GLN:HB3	2.20	0.41
1:D:635:ARG:O	1:D:636:ASN:HB3	2.20	0.41
1:E:329:TYR:HD2	1:E:626:PHE:HZ	1.67	0.41
1:E:398:PHE:HB3	1:E:473:PHE:HE1	1.84	0.41
1:E:636:ASN:O	1:E:637:VAL:HG22	2.19	0.41
1:E:778:ASP:C	1:E:780:LEU:H	2.22	0.41
1:F:167:LEU:HD21	1:F:312:MET:SD	2.59	0.41
1:F:430:VAL:HG12	1:F:497:ALA:HA	2.01	0.41
1:A:406:ILE:O	1:A:409:ASP:HB2	2.20	0.41
1:A:483:ILE:O	1:A:487:VAL:HG23	2.21	0.41
1:C:348:GLU:HG3	1:C:983:PRO:HB3	2.02	0.41
1:D:195:LEU:HB3	1:D:200:ILE:O	2.20	0.41
1:E:561:LEU:HB3	1:E:562:VAL:H	1.65	0.41
1:F:67:GLU:HB3	1:F:815:LEU:HD23	2.02	0.41
1:A:109:ASN:ND2	1:B:110:ASN:OD1	2.28	0.41
1:A:452:LEU:HD12	1:A:481:VAL:HG11	2.03	0.41
1:A:535:ARG:HA	1:A:538:ARG:HH11	1.85	0.41
1:B:193:ASP:OD1	1:B:194:LEU:N	2.53	0.41
1:B:242:LEU:HD22	1:B:247:GLU:HB3	2.02	0.41
1:B:381:THR:HA	1:B:483:ILE:HD12	2.03	0.41
1:B:674:GLY:HA3	1:B:823:GLY:O	2.21	0.41
1:B:947:GLU:HB3	1:B:958:ALA:HB1	2.02	0.41
1:C:179:ILE:HD13	1:C:179:ILE:HA	1.91	0.41
1:D:978:THR:HG23	1:D:1003:ILE:HG13	2.01	0.41
1:E:24:GLY:O	1:E:28:LEU:HB2	2.20	0.41
1:A:159:ILE:HA	1:A:163:VAL:HB	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:24:GLY:HA3	1:B:379:LEU:HD23	2.03	0.41
1:B:190:LEU:O	1:B:770:LYS:N	2.41	0.41
1:B:195:LEU:HD12	1:B:267:VAL:HB	2.02	0.41
1:E:629:LEU:HD12	1:E:630:GLN:O	2.20	0.41
1:F:761:LYS:HE2	1:F:761:LYS:HB3	1.89	0.41
1:A:428:ILE:HD12	1:A:428:ILE:HA	1.94	0.41
1:A:509:LYS:HG3	1:A:510:PHE:N	2.36	0.41
1:A:671:ILE:H	1:A:671:ILE:HG13	1.70	0.41
1:B:220:LYS:HG2	1:B:235:SER:HB3	2.03	0.41
1:B:418:ILE:C	1:B:420:ARG:H	2.23	0.41
1:B:702:ASN:O	1:B:702:ASN:ND2	2.54	0.41
1:D:250:ASN:HA	1:D:263:ARG:HD3	2.01	0.41
1:D:982:LEU:HB3	1:D:983:PRO:HD3	2.01	0.41
1:E:669:LEU:H	1:E:669:LEU:HD23	1.86	0.41
1:F:244:ASN:OD1	1:F:246:SER:OG	2.19	0.41
1:A:164:LEU:HD21	1:A:168:LYS:HE2	2.03	0.41
1:A:225:PRO:HG2	1:B:774:ARG:NH1	2.35	0.41
1:A:591:HIS:NE2	1:E:689:GLU:HG2	2.35	0.41
1:C:78:TYR:CZ	1:C:94:TYR:HD2	2.39	0.41
1:C:97:ILE:HD12	1:C:97:ILE:H	1.86	0.41
1:C:143:MET:HG2	1:C:325:TYR:HB3	2.03	0.41
1:C:186:LEU:HD11	1:C:270:VAL:HG12	2.01	0.41
1:C:243:GLN:HG3	1:C:244:ASN:HD22	1.85	0.41
1:D:220:LYS:NZ	1:E:620:GLU:OE1	2.54	0.41
1:F:420:ARG:HE	1:F:420:ARG:HB3	1.71	0.41
1:A:533:LEU:HD22	1:A:1022:TYR:HD2	1.86	0.41
1:A:777:GLN:CD	1:A:777:GLN:H	2.23	0.41
1:B:970:ILE:O	1:B:973:THR:HG22	2.21	0.41
1:B:977:PHE:O	1:B:981:VAL:HG22	2.21	0.41
1:C:938:ILE:HD12	1:C:938:ILE:HA	1.94	0.41
1:E:589:VAL:HG21	1:E:609:ILE:HG12	2.03	0.41
1:A:978:THR:HG23	1:A:1003:ILE:HG13	2.02	0.41
1:B:506:GLU:HA	1:B:507:PRO:HD3	1.92	0.41
1:C:578:SER:OG	1:C:579:ALA:N	2.54	0.41
1:D:97:ILE:HD12	1:D:97:ILE:H	1.85	0.41
1:D:112:ILE:O	1:D:116:THR:OG1	2.36	0.41
1:E:887:TYR:OH	1:E:938:ILE:O	2.39	0.41
1:F:80:ASP:HB3	1:F:813:PHE:CD1	2.56	0.41
1:F:224:GLU:HB3	1:F:225:PRO:CD	2.51	0.41
1:A:100:ASP:HB3	1:A:103:GLN:HB3	2.03	0.41
1:A:154:ASP:OD1	1:A:154:ASP:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:172:GLY:HA3	1:A:304:THR:HG21	2.03	0.41
1:B:80:ASP:HB3	1:B:813:PHE:HD1	1.86	0.41
1:B:607:ALA:HA	1:B:625:MET:HA	2.03	0.41
1:B:981:VAL:HG23	1:B:1003:ILE:HD11	2.03	0.41
1:C:457:VAL:HG12	1:C:458:PRO:HD3	2.02	0.41
1:D:31:LEU:HD22	1:D:391:SER:HA	2.03	0.41
1:D:216:TYR:CE2	1:E:737:MET:HG2	2.55	0.41
1:D:221:ILE:HG13	1:E:721:TYR:CD2	2.56	0.41
1:D:238:MET:HE2	1:E:741:PHE:CE1	2.56	0.41
1:D:290:PRO:HG3	1:D:608:MET:HG3	2.02	0.41
1:D:370:PRO:HG3	1:D:415:VAL:HG21	2.03	0.41
1:D:420:ARG:O	1:D:424:GLU:HB2	2.21	0.41
1:D:444:PRO:O	1:D:448:ILE:HG13	2.21	0.41
1:E:635:ARG:HE	1:E:637:VAL:HA	1.86	0.41
1:E:921:TYR:CD2	1:E:994:SER:HB3	2.56	0.41
1:F:97:ILE:HD11	1:F:860:GLN:HE22	1.86	0.41
1:F:179:ILE:O	1:F:618:LEU:HD21	2.21	0.41
1:F:883:LEU:HB2	1:F:893:PRO:HB3	2.03	0.41
1:F:977:PHE:CZ	1:F:1002:LEU:HD23	2.56	0.41
1:A:112:ILE:O	1:A:116:THR:OG1	2.35	0.41
1:A:549:ALA:O	1:A:553:LEU:HB2	2.21	0.41
1:A:722:LYS:HE2	1:A:804:SER:HB2	2.03	0.41
1:B:754:ASN:O	1:B:765:VAL:HG22	2.21	0.41
1:D:579:ALA:O	1:F:232:TYR:HA	2.21	0.41
1:F:276:GLN:C	1:F:278:SER:H	2.24	0.41
1:F:713:THR:OG1	1:F:820:GLN:HB3	2.21	0.41
1:F:889:ARG:HG2	1:F:891:LEU:HD23	2.03	0.41
1:F:940:ILE:HG13	1:F:970:ILE:HD11	2.02	0.41
1:A:669:LEU:HD23	1:A:669:LEU:HA	1.89	0.40
1:A:876:MET:HG2	1:A:930:ILE:HD11	2.03	0.40
1:B:212:GLN:O	1:C:727:ARG:NH1	2.54	0.40
1:B:448:ILE:HA	1:B:451:VAL:HG12	2.04	0.40
1:B:600:ASN:H	1:B:600:ASN:HD22	1.68	0.40
1:B:1021:PHE:O	1:B:1025:GLU:HB2	2.21	0.40
1:C:116:THR:O	1:C:124:LYS:HE2	2.21	0.40
1:C:420:ARG:O	1:C:424:GLU:HG2	2.21	0.40
1:D:190:LEU:HB3	1:D:195:LEU:HD11	2.03	0.40
1:E:59:ALA:HA	1:E:62:VAL:HG12	2.02	0.40
1:E:780:LEU:HD21	1:E:799:LEU:HB3	2.03	0.40
1:E:944:ALA:HB1	1:E:1021:PHE:CE2	2.56	0.40
1:F:80:ASP:HB3	1:F:813:PHE:HD1	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:675:PHE:CE2	1:A:838:ILE:HG13	2.56	0.40
1:A:846:LEU:HD13	1:A:846:LEU:HA	1.94	0.40
1:B:302:LEU:HD11	1:B:335:VAL:HG13	2.02	0.40
1:C:156:TYR:CE1	1:C:274:SER:HA	2.57	0.40
1:C:187:ARG:HG2	1:C:766:ASN:HB2	2.03	0.40
1:C:350:LEU:HD21	1:C:374:VAL:HG11	2.03	0.40
1:D:573:ILE:HG12	1:D:614:PHE:CE2	2.56	0.40
1:D:669:LEU:HD23	1:D:669:LEU:HA	1.97	0.40
1:F:28:LEU:HD13	1:F:382:PHE:CD2	2.56	0.40
1:F:229:LYS:HA	1:F:229:LYS:HD3	1.86	0.40
1:B:725:ILE:HD13	1:B:727:ARG:HG2	2.02	0.40
1:B:729:LYS:O	1:B:733:TYR:HD1	2.04	0.40
1:C:34:GLU:HG2	1:C:300:ASN:ND2	2.36	0.40
1:C:141:ILE:HD13	1:C:312:MET:HG3	2.03	0.40
1:D:167:LEU:O	1:D:173:VAL:HG21	2.21	0.40
1:D:564:GLU:HG2	1:D:665:PRO:HD3	2.04	0.40
1:E:352:LEU:HD13	1:E:352:LEU:HA	1.94	0.40
1:F:274:SER:OG	1:F:275:GLN:N	2.53	0.40
1:F:333:LYS:O	1:F:337:GLU:HG2	2.20	0.40
1:A:529:VAL:O	1:A:533:LEU:HG	2.22	0.40
1:A:1009:ALA:O	1:A:1013:ALA:HB3	2.22	0.40
1:B:95:PHE:CE1	1:B:104:ALA:HB1	2.57	0.40
1:B:172:GLY:HA3	1:B:304:THR:CG2	2.52	0.40
1:B:867:THR:HG23	1:B:870:TYR:HE1	1.87	0.40
1:B:969:PRO:HA	1:B:972:MET:HG2	2.02	0.40
1:C:387:VAL:HG23	1:C:388:LEU:HG	2.03	0.40
1:D:22:LEU:HD22	1:E:878:PHE:HE1	1.86	0.40
1:E:136:THR:HG23	1:E:295:LEU:HB3	2.03	0.40
1:E:420:ARG:O	1:E:424:GLU:HG2	2.20	0.40
1:E:902:PHE:HB3	1:E:1013:ALA:HB2	2.03	0.40
1:F:560:SER:HB3	1:F:919:ASP:HB3	2.03	0.40
1:F:1007:ILE:O	1:F:1011:THR:OG1	2.25	0.40
1:A:550:ILE:HD13	1:A:904:VAL:HG13	2.04	0.40
1:A:721:TYR:O	1:C:236:ILE:HA	2.22	0.40
1:A:892:ILE:HG21	1:A:945:MET:SD	2.61	0.40
1:B:15:VAL:HG21	1:C:885:ALA:HB2	2.04	0.40
1:B:939:LEU:HD13	1:B:966:ARG:NH1	2.36	0.40
1:D:14:SER:O	1:D:18:ILE:HG13	2.21	0.40
1:D:634:ASP:OD1	1:D:634:ASP:N	2.54	0.40
1:E:283:LEU:HB3	1:E:606:MET:HG3	2.04	0.40
1:E:456:PHE:HE1	1:E:927:LEU:HB3	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:739:ASP:OD1	1:E:739:ASP:N	2.53	0.40
1:E:918:ASN:ND2	1:E:918:ASN:O	2.55	0.40
1:F:378:LEU:O	1:F:381:THR:HG22	2.21	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	1031/1035 (100%)	954 (92%)	70 (7%)	7 (1%)	22	62
1	B	1031/1035 (100%)	944 (92%)	71 (7%)	16 (2%)	9	46
1	C	1033/1035 (100%)	951 (92%)	66 (6%)	16 (2%)	10	47
1	D	1031/1035 (100%)	932 (90%)	90 (9%)	9 (1%)	17	57
1	E	1031/1035 (100%)	950 (92%)	59 (6%)	22 (2%)	7	40
1	F	1033/1035 (100%)	949 (92%)	74 (7%)	10 (1%)	15	55
All	All	6190/6210 (100%)	5680 (92%)	430 (7%)	80 (1%)	12	50

All (80) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	753	VAL
1	B	37	PRO
1	B	40	THR
1	C	224	GLU
1	C	226	VAL
1	C	578	SER
1	C	669	LEU
1	D	217	ALA
1	D	218	THR

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Mol	Chain	Res	Type
1	D	636	ASN
1	D	753	VAL
1	E	53	ALA
1	E	73	ALA
1	E	75	ASN
1	E	214	ALA
1	E	215	GLN
1	E	225	PRO
1	E	916	PHE
1	F	226	VAL
1	A	636	ASN
1	B	38	SER
1	B	138	LEU
1	B	284	ASN
1	B	568	GLY
1	B	671	ILE
1	B	672	THR
1	C	180	GLY
1	C	274	SER
1	C	674	GLY
1	C	863	SER
1	D	600	ASN
1	E	71	ASN
1	E	231	PRO
1	E	297	SER
1	E	503	ASN
1	E	637	VAL
1	F	491	LEU
1	A	223	GLU
1	B	147	ASP
1	B	579	ALA
1	C	232	TYR
1	C	498	LEU
1	D	225	PRO
1	E	54	ASP
1	E	229	LYS
1	E	507	PRO
1	E	684	GLY
1	E	779	ALA
1	F	654	ARG
1	A	296	GLN
1	A	578	SER

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Mol	Chain	Res	Type
1	B	215	GLN
1	B	919	ASP
1	C	651	ALA
1	D	224	GLU
1	D	635	ARG
1	E	138	LEU
1	E	274	SER
1	E	561	LEU
1	A	807	PRO
1	B	53	ALA
1	B	181	ASN
1	B	275	GLN
1	D	1011	THR
1	F	153	VAL
1	F	232	TYR
1	F	362	LYS
1	F	506	GLU
1	B	673	GLY
1	C	577	PRO
1	C	753	VAL
1	C	892	ILE
1	E	683	SER
1	F	224	GLU
1	F	253	LEU
1	E	710	VAL
1	C	199	GLY
1	C	771	GLY
1	A	224	GLU
1	F	892	ILE

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	869/871 (100%)	849 (98%)	20 (2%)	50 77
1	B	869/871 (100%)	845 (97%)	24 (3%)	43 73

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	C	871/871 (100%)	858 (98%)	13 (2%)	65	84
1	D	869/871 (100%)	856 (98%)	13 (2%)	65	84
1	E	869/871 (100%)	852 (98%)	17 (2%)	55	79
1	F	871/871 (100%)	858 (98%)	13 (2%)	65	84
All	All	5218/5226 (100%)	5118 (98%)	100 (2%)	57	80

All (100) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	50	TYR
1	A	154	ASP
1	A	184	TYR
1	A	186	LEU
1	A	187	ARG
1	A	238	MET
1	A	244	ASN
1	A	263	ARG
1	A	287	ASP
1	A	517	PHE
1	A	635	ARG
1	A	655	ASN
1	A	669	LEU
1	A	735	LEU
1	A	752	TYR
1	A	754	ASN
1	A	778	ASP
1	A	796	ASP
1	A	948	ARG
1	A	1022	TYR
1	B	5	PHE
1	B	50	TYR
1	B	102	ASP
1	B	110	ASN
1	B	177	ASN
1	B	232	TYR
1	B	234	TYR
1	B	284	ASN
1	B	329	TYR
1	B	419	ASP
1	B	423	HIS
1	B	461	PHE

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Mol	Chain	Res	Type
1	B	509	LYS
1	B	582	LEU
1	B	614	PHE
1	B	618	LEU
1	B	632	TRP
1	B	634	ASP
1	B	647	ASN
1	B	682	LYS
1	B	734	ASN
1	B	870	TYR
1	B	919	ASP
1	B	948	ARG
1	C	80	ASP
1	C	109	ASN
1	C	144	TYR
1	C	150	MET
1	C	184	TYR
1	C	195	LEU
1	C	509	LYS
1	C	569	LEU
1	C	594	GLN
1	C	655	ASN
1	C	715	ASP
1	C	732	HIS
1	C	1019	LEU
1	D	184	TYR
1	D	237	THR
1	D	243	GLN
1	D	287	ASP
1	D	294	ASN
1	D	295	LEU
1	D	517	PHE
1	D	634	ASP
1	D	727	ARG
1	D	848	ASP
1	D	948	ARG
1	D	996	HIS
1	D	1028	ASN
1	E	5	PHE
1	E	50	TYR
1	E	79	MET
1	E	382	PHE

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Mol	Chain	Res	Type
1	E	465	PHE
1	E	506	GLU
1	E	509	LYS
1	E	618	LEU
1	E	652	PHE
1	E	654	ARG
1	E	655	ASN
1	E	669	LEU
1	E	702	ASN
1	E	738	GLN
1	E	739	ASP
1	E	870	TYR
1	E	948	ARG
1	F	109	ASN
1	F	110	ASN
1	F	147	ASP
1	F	184	TYR
1	F	257	ASN
1	F	496	CYS
1	F	506	GLU
1	F	535	ARG
1	F	559	ASN
1	F	652	PHE
1	F	677	MET
1	F	789	ASP
1	F	1031	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (7) such sidechains are listed below:

Mol	Chain	Res	Type
1	B	35	GLN
1	D	215	GLN
1	D	296	GLN
1	D	313	GLN
1	E	691	GLN
1	E	695	ASN
1	F	280	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](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	1033/1035 (99%)	-0.14	10 (0%) 82 70	70, 94, 119, 168	0
1	B	1033/1035 (99%)	0.00	43 (4%) 36 23	73, 110, 157, 178	0
1	C	1035/1035 (100%)	-0.11	16 (1%) 73 59	64, 95, 130, 158	0
1	D	1033/1035 (99%)	-0.11	10 (0%) 82 70	72, 96, 118, 159	0
1	E	1033/1035 (99%)	-0.00	34 (3%) 46 32	70, 103, 138, 163	0
1	F	1035/1035 (100%)	-0.18	10 (0%) 82 70	64, 88, 129, 163	0
All	All	6202/6210 (99%)	-0.09	123 (1%) 65 49	64, 98, 135, 178	0

All (123) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	566	ASP	6.8
1	E	565	GLU	6.0
1	B	565	GLU	5.5
1	B	988	THR	5.4
1	D	564	GLU	5.4
1	E	566	ASP	5.1
1	B	865	LYS	4.7
1	B	567	GLN	4.4
1	C	504	GLU	4.2
1	C	564	GLU	4.0
1	E	229	LYS	3.9
1	B	802	GLN	3.7
1	B	225	PRO	3.7
1	B	663	LEU	3.6
1	E	154	ASP	3.6
1	E	641	GLN	3.6
1	C	212	GLN	3.5
1	F	1035	ARG	3.5
1	B	864	SER	3.4

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Mol	Chain	Res	Type	RSRZ
1	E	640	ASP	3.4
1	B	784	PHE	3.4
1	A	808	ASP	3.4
1	B	845	THR	3.3
1	B	866	GLY	3.3
1	B	224	GLU	3.3
1	E	564	GLU	3.3
1	B	632	TRP	3.3
1	E	501	ARG	3.3
1	B	564	GLU	3.2
1	B	563	PRO	3.2
1	D	563	PRO	3.2
1	D	778	ASP	3.1
1	E	45	LYS	3.1
1	E	264	LEU	3.1
1	E	507	PRO	3.1
1	B	228	GLN	3.0
1	B	656	ALA	3.0
1	F	1029	GLU	3.0
1	C	1029	GLU	2.9
1	C	125	LYS	2.9
1	C	175	ASP	2.9
1	D	565	GLU	2.9
1	B	626	PHE	2.8
1	A	783	ILE	2.8
1	A	202	ALA	2.8
1	E	505	GLY	2.8
1	B	670	SER	2.8
1	E	913	LEU	2.8
1	E	632	TRP	2.7
1	A	341	GLU	2.7
1	B	602	VAL	2.7
1	F	1033	LYS	2.7
1	D	410	ASP	2.7
1	C	160	THR	2.7
1	B	868	ALA	2.7
1	E	206	ILE	2.7
1	F	277	TYR	2.6
1	C	182	ARG	2.6
1	C	410	ASP	2.6
1	E	506	GLU	2.6
1	B	665	PRO	2.6

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Mol	Chain	Res	Type	RSRZ
1	F	504	GLU	2.6
1	B	672	THR	2.6
1	B	913	LEU	2.6
1	D	340	LYS	2.5
1	E	845	THR	2.5
1	A	773	PHE	2.5
1	B	914	ARG	2.5
1	B	990	ALA	2.5
1	B	653	ASP	2.5
1	E	146	SER	2.5
1	C	153	VAL	2.4
1	E	990	ALA	2.4
1	C	565	GLU	2.4
1	E	363	ASN	2.4
1	E	636	ASN	2.4
1	A	48	ALA	2.4
1	F	615	THR	2.4
1	A	771	GLY	2.4
1	B	596	VAL	2.4
1	E	245	PRO	2.4
1	E	180	GLY	2.4
1	A	779	ALA	2.4
1	F	410	ASP	2.4
1	D	39	LEU	2.4
1	B	867	THR	2.3
1	B	669	LEU	2.3
1	E	601	GLY	2.3
1	C	157	ASN	2.3
1	E	504	GLU	2.3
1	A	772	ASP	2.3
1	C	39	LEU	2.3
1	B	226	VAL	2.3
1	E	620	GLU	2.3
1	C	96	ASP	2.3
1	B	830	THR	2.2
1	F	640	ASP	2.2
1	D	773	PHE	2.2
1	B	601	GLY	2.2
1	C	274	SER	2.2
1	E	602	VAL	2.2
1	E	278	SER	2.2
1	F	564	GLU	2.2

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Mol	Chain	Res	Type	RSRZ
1	B	223	GLU	2.1
1	E	567	GLN	2.1
1	C	732	HIS	2.1
1	D	777	GLN	2.1
1	F	614	PHE	2.1
1	B	337	GLU	2.1
1	E	663	LEU	2.1
1	E	225	PRO	2.1
1	B	229	LYS	2.1
1	E	266	ASP	2.1
1	B	986	PHE	2.1
1	B	562	VAL	2.0
1	D	833	GLN	2.0
1	B	846	LEU	2.0
1	B	780	LEU	2.0
1	A	564	GLU	2.0
1	B	655	ASN	2.0
1	B	569	LEU	2.0
1	E	47	SER	2.0
1	E	635	ARG	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.