



Full wwPDB X-ray Structure Validation Report ⓘ

Jun 24, 2024 – 09:36 PM EDT

PDB ID : 6ZN9
Title : MaeB PTA domain apoprotein
Authors : Lovering, A.L.; Harding, C.J.
Deposited on : 2020-07-06
Resolution : 2.72 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) : 1.20.1
EDS : 2.37.1
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) : 2.37.1

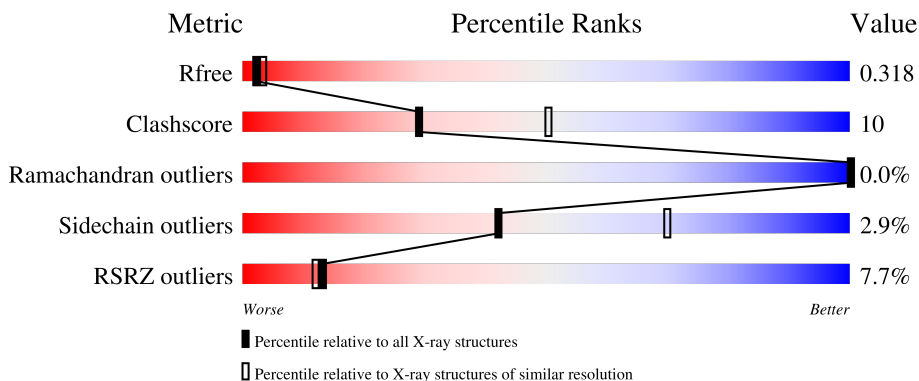
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.72 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	3359 (2.74-2.70)
Clashscore	141614	3686 (2.74-2.70)
Ramachandran outliers	138981	3622 (2.74-2.70)
Sidechain outliers	138945	3623 (2.74-2.70)
RSRZ outliers	127900	3276 (2.74-2.70)

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	362	<div style="display: flex; align-items: center;"> <div style="width: 7%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 77%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 16%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 6%; height: 10px; background-color: orange; margin-right: 5px;"></div> <div style="width: 6%; height: 10px; background-color: grey;"></div> </div> <p style="text-align: center;">7% 77% 16% • 6%</p>
1	B	362	<div style="display: flex; align-items: center;"> <div style="width: 4%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 70%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 22%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 6%; height: 10px; background-color: orange; margin-right: 5px;"></div> <div style="width: 6%; height: 10px; background-color: grey;"></div> </div> <p style="text-align: center;">4% 70% 22% • 6%</p>
1	C	362	<div style="display: flex; align-items: center;"> <div style="width: 3%; 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: 17%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 7%; height: 10px; background-color: orange; margin-right: 5px;"></div> <div style="width: 6%; height: 10px; background-color: grey;"></div> </div> <p style="text-align: center;">3% 75% 17% • 7%</p>
1	D	362	<div style="display: flex; align-items: center;"> <div style="width: 3%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 71%; 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: 6%; height: 10px; background-color: orange; margin-right: 5px;"></div> <div style="width: 6%; height: 10px; background-color: grey;"></div> </div> <p style="text-align: center;">3% 71% 21% • 6%</p>
1	E	362	<div style="display: flex; align-items: center;"> <div style="width: 8%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 76%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 17%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 6%; height: 10px; background-color: orange; margin-right: 5px;"></div> <div style="width: 6%; height: 10px; background-color: grey;"></div> </div> <p style="text-align: center;">8% 76% 17% • 6%</p>

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Mol	Chain	Length	Quality of chain
1	F	362	<p>15% 71% 22% • 6%</p>
1	G	362	<p>% 74% 19% • 6%</p>
1	H	362	<p>8% 71% 22% • 6%</p>
1	I	362	<p>10% 77% 17% • 6%</p>
1	J	362	<p>7% 69% 24% • 7%</p>
1	K	362	<p>7% 79% 14% • 6%</p>
1	L	362	<p>13% 69% 22% • 7%</p>

2 Entry composition [i](#)

There is only 1 type of molecule in this entry. The entry contains 31258 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 Malate dehydrogenase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	C	338	2598	1658	444	485	11	0	0	0
1	D	341	2611	1665	447	488	11	0	0	0
1	A	340	2606	1663	446	486	11	0	0	0
1	B	341	2610	1665	447	487	11	0	0	0
1	F	339	2602	1661	445	485	11	0	0	0
1	G	340	2607	1663	446	487	11	0	0	0
1	J	338	2598	1658	444	485	11	0	0	0
1	L	338	2598	1658	444	485	11	0	0	0
1	H	340	2607	1663	446	487	11	0	0	0
1	I	340	2607	1663	446	487	11	0	0	0
1	K	340	2607	1663	446	487	11	0	0	0
1	E	340	2607	1663	446	487	11	0	0	0

There are 240 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C	419	MET	-	initiating methionine	UNP Q6MM15
C	420	GLY	-	expression tag	UNP Q6MM15
C	421	SER	-	expression tag	UNP Q6MM15
C	422	SER	-	expression tag	UNP Q6MM15
C	423	HIS	-	expression tag	UNP Q6MM15

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Chain	Residue	Modelled	Actual	Comment	Reference
C	424	HIS	-	expression tag	UNP Q6MM15
C	425	HIS	-	expression tag	UNP Q6MM15
C	426	HIS	-	expression tag	UNP Q6MM15
C	427	HIS	-	expression tag	UNP Q6MM15
C	428	HIS	-	expression tag	UNP Q6MM15
C	429	SER	-	expression tag	UNP Q6MM15
C	430	SER	-	expression tag	UNP Q6MM15
C	431	GLY	-	expression tag	UNP Q6MM15
C	432	LEU	-	expression tag	UNP Q6MM15
C	433	VAL	-	expression tag	UNP Q6MM15
C	434	PRO	-	expression tag	UNP Q6MM15
C	435	ALA	-	expression tag	UNP Q6MM15
C	436	GLY	-	expression tag	UNP Q6MM15
C	437	SER	-	expression tag	UNP Q6MM15
C	438	HIS	-	expression tag	UNP Q6MM15
D	419	MET	-	initiating methionine	UNP Q6MM15
D	420	GLY	-	expression tag	UNP Q6MM15
D	421	SER	-	expression tag	UNP Q6MM15
D	422	SER	-	expression tag	UNP Q6MM15
D	423	HIS	-	expression tag	UNP Q6MM15
D	424	HIS	-	expression tag	UNP Q6MM15
D	425	HIS	-	expression tag	UNP Q6MM15
D	426	HIS	-	expression tag	UNP Q6MM15
D	427	HIS	-	expression tag	UNP Q6MM15
D	428	HIS	-	expression tag	UNP Q6MM15
D	429	SER	-	expression tag	UNP Q6MM15
D	430	SER	-	expression tag	UNP Q6MM15
D	431	GLY	-	expression tag	UNP Q6MM15
D	432	LEU	-	expression tag	UNP Q6MM15
D	433	VAL	-	expression tag	UNP Q6MM15
D	434	PRO	-	expression tag	UNP Q6MM15
D	435	ALA	-	expression tag	UNP Q6MM15
D	436	GLY	-	expression tag	UNP Q6MM15
D	437	SER	-	expression tag	UNP Q6MM15
D	438	HIS	-	expression tag	UNP Q6MM15
A	419	MET	-	initiating methionine	UNP Q6MM15
A	420	GLY	-	expression tag	UNP Q6MM15
A	421	SER	-	expression tag	UNP Q6MM15
A	422	SER	-	expression tag	UNP Q6MM15
A	423	HIS	-	expression tag	UNP Q6MM15
A	424	HIS	-	expression tag	UNP Q6MM15
A	425	HIS	-	expression tag	UNP Q6MM15

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Chain	Residue	Modelled	Actual	Comment	Reference
A	426	HIS	-	expression tag	UNP Q6MM15
A	427	HIS	-	expression tag	UNP Q6MM15
A	428	HIS	-	expression tag	UNP Q6MM15
A	429	SER	-	expression tag	UNP Q6MM15
A	430	SER	-	expression tag	UNP Q6MM15
A	431	GLY	-	expression tag	UNP Q6MM15
A	432	LEU	-	expression tag	UNP Q6MM15
A	433	VAL	-	expression tag	UNP Q6MM15
A	434	PRO	-	expression tag	UNP Q6MM15
A	435	ALA	-	expression tag	UNP Q6MM15
A	436	GLY	-	expression tag	UNP Q6MM15
A	437	SER	-	expression tag	UNP Q6MM15
A	438	HIS	-	expression tag	UNP Q6MM15
B	419	MET	-	initiating methionine	UNP Q6MM15
B	420	GLY	-	expression tag	UNP Q6MM15
B	421	SER	-	expression tag	UNP Q6MM15
B	422	SER	-	expression tag	UNP Q6MM15
B	423	HIS	-	expression tag	UNP Q6MM15
B	424	HIS	-	expression tag	UNP Q6MM15
B	425	HIS	-	expression tag	UNP Q6MM15
B	426	HIS	-	expression tag	UNP Q6MM15
B	427	HIS	-	expression tag	UNP Q6MM15
B	428	HIS	-	expression tag	UNP Q6MM15
B	429	SER	-	expression tag	UNP Q6MM15
B	430	SER	-	expression tag	UNP Q6MM15
B	431	GLY	-	expression tag	UNP Q6MM15
B	432	LEU	-	expression tag	UNP Q6MM15
B	433	VAL	-	expression tag	UNP Q6MM15
B	434	PRO	-	expression tag	UNP Q6MM15
B	435	ALA	-	expression tag	UNP Q6MM15
B	436	GLY	-	expression tag	UNP Q6MM15
B	437	SER	-	expression tag	UNP Q6MM15
B	438	HIS	-	expression tag	UNP Q6MM15
F	419	MET	-	initiating methionine	UNP Q6MM15
F	420	GLY	-	expression tag	UNP Q6MM15
F	421	SER	-	expression tag	UNP Q6MM15
F	422	SER	-	expression tag	UNP Q6MM15
F	423	HIS	-	expression tag	UNP Q6MM15
F	424	HIS	-	expression tag	UNP Q6MM15
F	425	HIS	-	expression tag	UNP Q6MM15
F	426	HIS	-	expression tag	UNP Q6MM15
F	427	HIS	-	expression tag	UNP Q6MM15

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Chain	Residue	Modelled	Actual	Comment	Reference
F	428	HIS	-	expression tag	UNP Q6MM15
F	429	SER	-	expression tag	UNP Q6MM15
F	430	SER	-	expression tag	UNP Q6MM15
F	431	GLY	-	expression tag	UNP Q6MM15
F	432	LEU	-	expression tag	UNP Q6MM15
F	433	VAL	-	expression tag	UNP Q6MM15
F	434	PRO	-	expression tag	UNP Q6MM15
F	435	ALA	-	expression tag	UNP Q6MM15
F	436	GLY	-	expression tag	UNP Q6MM15
F	437	SER	-	expression tag	UNP Q6MM15
F	438	HIS	-	expression tag	UNP Q6MM15
G	419	MET	-	initiating methionine	UNP Q6MM15
G	420	GLY	-	expression tag	UNP Q6MM15
G	421	SER	-	expression tag	UNP Q6MM15
G	422	SER	-	expression tag	UNP Q6MM15
G	423	HIS	-	expression tag	UNP Q6MM15
G	424	HIS	-	expression tag	UNP Q6MM15
G	425	HIS	-	expression tag	UNP Q6MM15
G	426	HIS	-	expression tag	UNP Q6MM15
G	427	HIS	-	expression tag	UNP Q6MM15
G	428	HIS	-	expression tag	UNP Q6MM15
G	429	SER	-	expression tag	UNP Q6MM15
G	430	SER	-	expression tag	UNP Q6MM15
G	431	GLY	-	expression tag	UNP Q6MM15
G	432	LEU	-	expression tag	UNP Q6MM15
G	433	VAL	-	expression tag	UNP Q6MM15
G	434	PRO	-	expression tag	UNP Q6MM15
G	435	ALA	-	expression tag	UNP Q6MM15
G	436	GLY	-	expression tag	UNP Q6MM15
G	437	SER	-	expression tag	UNP Q6MM15
G	438	HIS	-	expression tag	UNP Q6MM15
J	419	MET	-	initiating methionine	UNP Q6MM15
J	420	GLY	-	expression tag	UNP Q6MM15
J	421	SER	-	expression tag	UNP Q6MM15
J	422	SER	-	expression tag	UNP Q6MM15
J	423	HIS	-	expression tag	UNP Q6MM15
J	424	HIS	-	expression tag	UNP Q6MM15
J	425	HIS	-	expression tag	UNP Q6MM15
J	426	HIS	-	expression tag	UNP Q6MM15
J	427	HIS	-	expression tag	UNP Q6MM15
J	428	HIS	-	expression tag	UNP Q6MM15
J	429	SER	-	expression tag	UNP Q6MM15

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Chain	Residue	Modelled	Actual	Comment	Reference
J	430	SER	-	expression tag	UNP Q6MM15
J	431	GLY	-	expression tag	UNP Q6MM15
J	432	LEU	-	expression tag	UNP Q6MM15
J	433	VAL	-	expression tag	UNP Q6MM15
J	434	PRO	-	expression tag	UNP Q6MM15
J	435	ALA	-	expression tag	UNP Q6MM15
J	436	GLY	-	expression tag	UNP Q6MM15
J	437	SER	-	expression tag	UNP Q6MM15
J	438	HIS	-	expression tag	UNP Q6MM15
L	419	MET	-	initiating methionine	UNP Q6MM15
L	420	GLY	-	expression tag	UNP Q6MM15
L	421	SER	-	expression tag	UNP Q6MM15
L	422	SER	-	expression tag	UNP Q6MM15
L	423	HIS	-	expression tag	UNP Q6MM15
L	424	HIS	-	expression tag	UNP Q6MM15
L	425	HIS	-	expression tag	UNP Q6MM15
L	426	HIS	-	expression tag	UNP Q6MM15
L	427	HIS	-	expression tag	UNP Q6MM15
L	428	HIS	-	expression tag	UNP Q6MM15
L	429	SER	-	expression tag	UNP Q6MM15
L	430	SER	-	expression tag	UNP Q6MM15
L	431	GLY	-	expression tag	UNP Q6MM15
L	432	LEU	-	expression tag	UNP Q6MM15
L	433	VAL	-	expression tag	UNP Q6MM15
L	434	PRO	-	expression tag	UNP Q6MM15
L	435	ALA	-	expression tag	UNP Q6MM15
L	436	GLY	-	expression tag	UNP Q6MM15
L	437	SER	-	expression tag	UNP Q6MM15
L	438	HIS	-	expression tag	UNP Q6MM15
H	419	MET	-	initiating methionine	UNP Q6MM15
H	420	GLY	-	expression tag	UNP Q6MM15
H	421	SER	-	expression tag	UNP Q6MM15
H	422	SER	-	expression tag	UNP Q6MM15
H	423	HIS	-	expression tag	UNP Q6MM15
H	424	HIS	-	expression tag	UNP Q6MM15
H	425	HIS	-	expression tag	UNP Q6MM15
H	426	HIS	-	expression tag	UNP Q6MM15
H	427	HIS	-	expression tag	UNP Q6MM15
H	428	HIS	-	expression tag	UNP Q6MM15
H	429	SER	-	expression tag	UNP Q6MM15
H	430	SER	-	expression tag	UNP Q6MM15
H	431	GLY	-	expression tag	UNP Q6MM15

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Chain	Residue	Modelled	Actual	Comment	Reference
H	432	LEU	-	expression tag	UNP Q6MM15
H	433	VAL	-	expression tag	UNP Q6MM15
H	434	PRO	-	expression tag	UNP Q6MM15
H	435	ALA	-	expression tag	UNP Q6MM15
H	436	GLY	-	expression tag	UNP Q6MM15
H	437	SER	-	expression tag	UNP Q6MM15
H	438	HIS	-	expression tag	UNP Q6MM15
I	419	MET	-	initiating methionine	UNP Q6MM15
I	420	GLY	-	expression tag	UNP Q6MM15
I	421	SER	-	expression tag	UNP Q6MM15
I	422	SER	-	expression tag	UNP Q6MM15
I	423	HIS	-	expression tag	UNP Q6MM15
I	424	HIS	-	expression tag	UNP Q6MM15
I	425	HIS	-	expression tag	UNP Q6MM15
I	426	HIS	-	expression tag	UNP Q6MM15
I	427	HIS	-	expression tag	UNP Q6MM15
I	428	HIS	-	expression tag	UNP Q6MM15
I	429	SER	-	expression tag	UNP Q6MM15
I	430	SER	-	expression tag	UNP Q6MM15
I	431	GLY	-	expression tag	UNP Q6MM15
I	432	LEU	-	expression tag	UNP Q6MM15
I	433	VAL	-	expression tag	UNP Q6MM15
I	434	PRO	-	expression tag	UNP Q6MM15
I	435	ALA	-	expression tag	UNP Q6MM15
I	436	GLY	-	expression tag	UNP Q6MM15
I	437	SER	-	expression tag	UNP Q6MM15
I	438	HIS	-	expression tag	UNP Q6MM15
K	419	MET	-	initiating methionine	UNP Q6MM15
K	420	GLY	-	expression tag	UNP Q6MM15
K	421	SER	-	expression tag	UNP Q6MM15
K	422	SER	-	expression tag	UNP Q6MM15
K	423	HIS	-	expression tag	UNP Q6MM15
K	424	HIS	-	expression tag	UNP Q6MM15
K	425	HIS	-	expression tag	UNP Q6MM15
K	426	HIS	-	expression tag	UNP Q6MM15
K	427	HIS	-	expression tag	UNP Q6MM15
K	428	HIS	-	expression tag	UNP Q6MM15
K	429	SER	-	expression tag	UNP Q6MM15
K	430	SER	-	expression tag	UNP Q6MM15
K	431	GLY	-	expression tag	UNP Q6MM15
K	432	LEU	-	expression tag	UNP Q6MM15
K	433	VAL	-	expression tag	UNP Q6MM15

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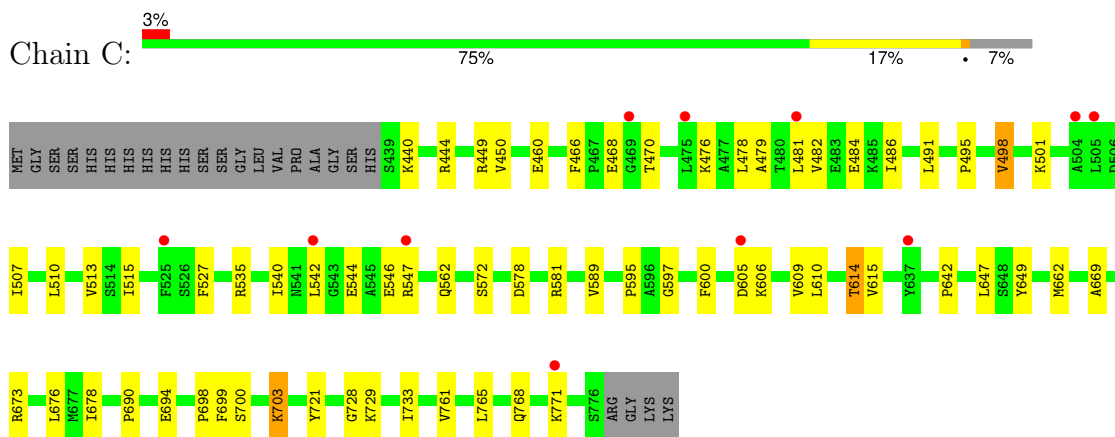
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Chain	Residue	Modelled	Actual	Comment	Reference
K	434	PRO	-	expression tag	UNP Q6MM15
K	435	ALA	-	expression tag	UNP Q6MM15
K	436	GLY	-	expression tag	UNP Q6MM15
K	437	SER	-	expression tag	UNP Q6MM15
K	438	HIS	-	expression tag	UNP Q6MM15
E	419	MET	-	initiating methionine	UNP Q6MM15
E	420	GLY	-	expression tag	UNP Q6MM15
E	421	SER	-	expression tag	UNP Q6MM15
E	422	SER	-	expression tag	UNP Q6MM15
E	423	HIS	-	expression tag	UNP Q6MM15
E	424	HIS	-	expression tag	UNP Q6MM15
E	425	HIS	-	expression tag	UNP Q6MM15
E	426	HIS	-	expression tag	UNP Q6MM15
E	427	HIS	-	expression tag	UNP Q6MM15
E	428	HIS	-	expression tag	UNP Q6MM15
E	429	SER	-	expression tag	UNP Q6MM15
E	430	SER	-	expression tag	UNP Q6MM15
E	431	GLY	-	expression tag	UNP Q6MM15
E	432	LEU	-	expression tag	UNP Q6MM15
E	433	VAL	-	expression tag	UNP Q6MM15
E	434	PRO	-	expression tag	UNP Q6MM15
E	435	ALA	-	expression tag	UNP Q6MM15
E	436	GLY	-	expression tag	UNP Q6MM15
E	437	SER	-	expression tag	UNP Q6MM15
E	438	HIS	-	expression tag	UNP Q6MM15

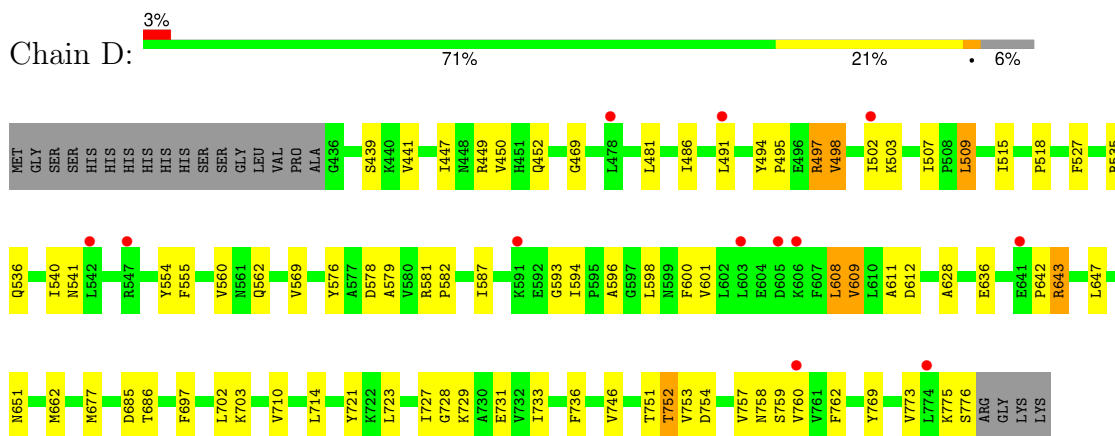
3 Residue-property plots

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.

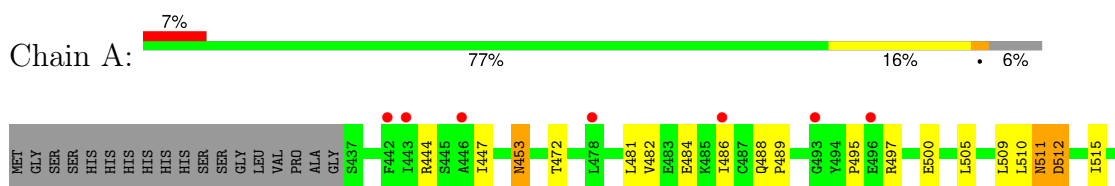
• Molecule 1: Malate dehydrogenase

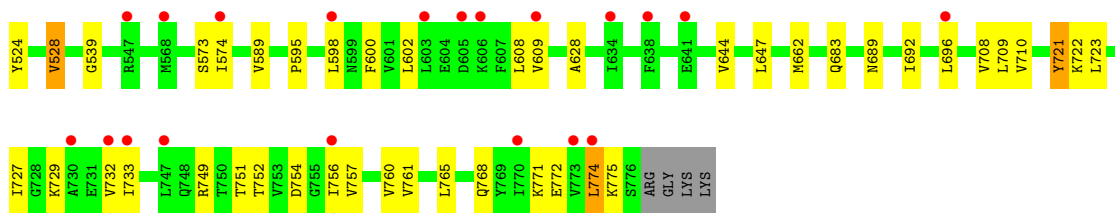


• Molecule 1: Malate dehydrogenase

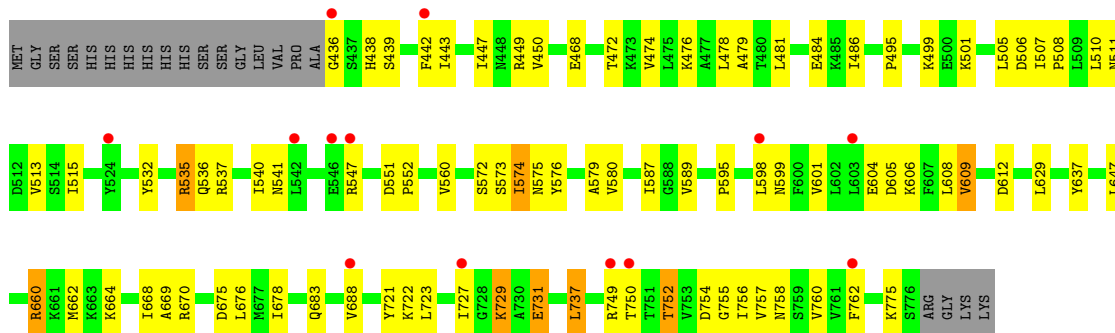


• Molecule 1: Malate dehydrogenase

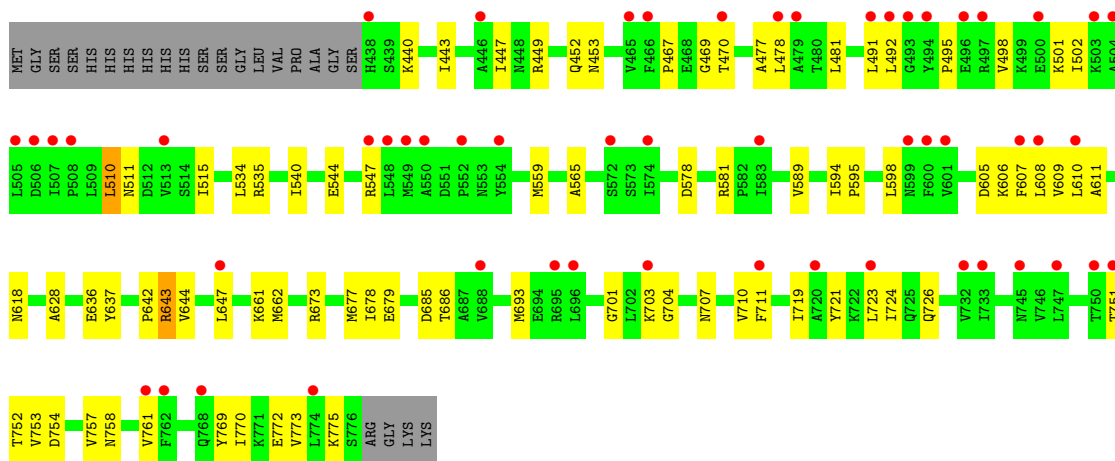




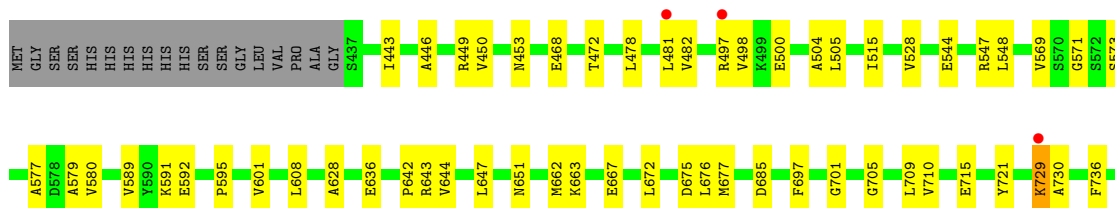
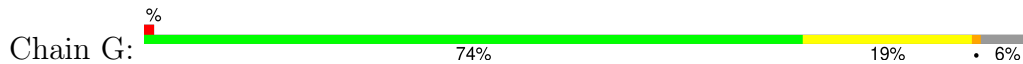
● Molecule 1: Malate dehydrogenase



● Molecule 1: Malate dehydrogenase

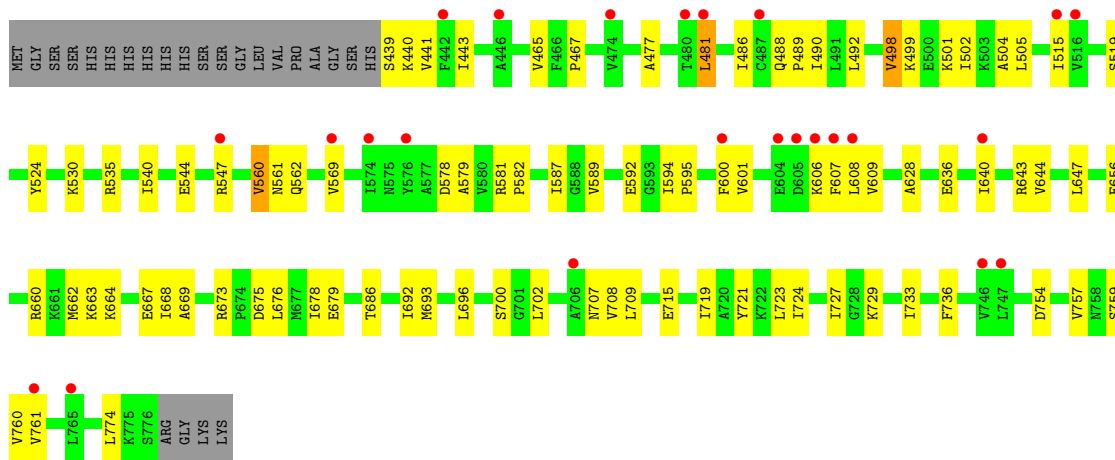


● Molecule 1: Malate dehydrogenase

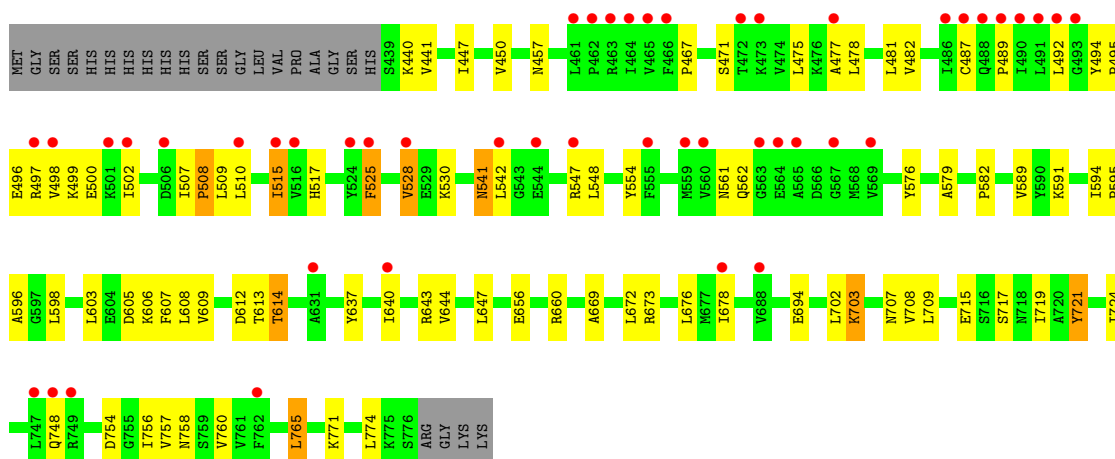




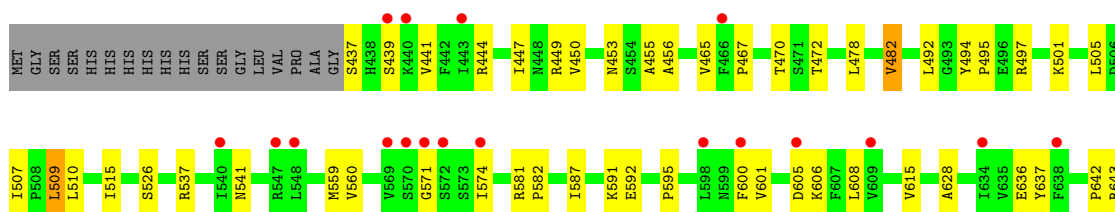
• Molecule 1: Malate dehydrogenase

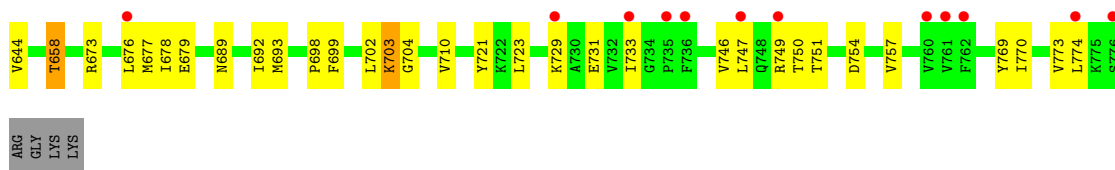


• Molecule 1: Malate dehydrogenase

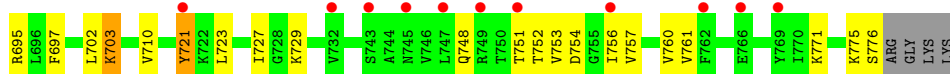
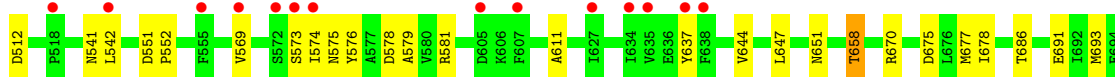
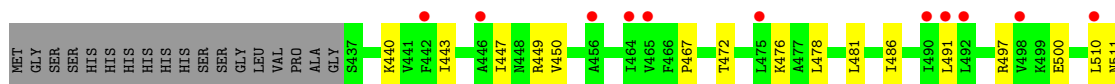
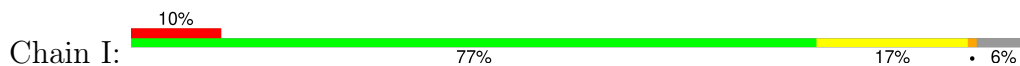


• Molecule 1: Malate dehydrogenase

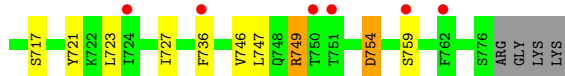
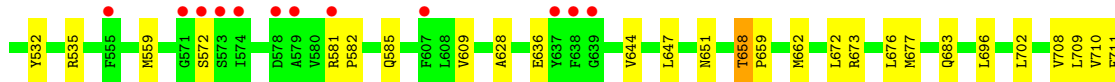
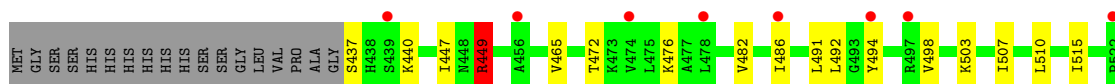
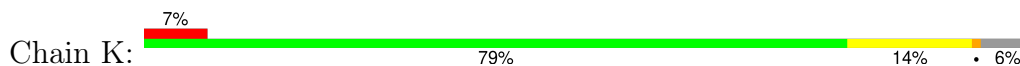




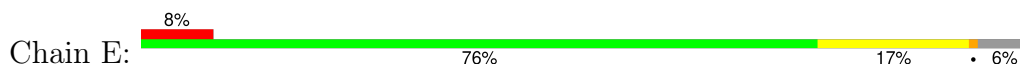
- Molecule 1: Malate dehydrogenase



- Molecule 1: Malate dehydrogenase



- Molecule 1: Malate dehydrogenase



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	139.22Å 151.28Å 285.33Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	99.64 – 2.72 125.12 – 2.72	Depositor EDS
% Data completeness (in resolution range)	100.0 (99.64-2.72) 95.9 (125.12-2.72)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.78 (at 2.73Å)	Xtrriage
Refinement program	PHENIX v1.0	Depositor
R, R_{free}	0.252 , 0.299 0.281 , 0.318	Depositor DCC
R_{free} test set	7485 reflections (4.81%)	wwPDB-VP
Wilson B-factor (Å ²)	67.1	Xtrriage
Anisotropy	0.292	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.29 , 43.2	EDS
L-test for twinning ²	$\langle L \rangle = 0.52$, $\langle L^2 \rangle = 0.36$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.89	EDS
Total number of atoms	31258	wwPDB-VP
Average B, all atoms (Å ²)	85.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 18.58% 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	0.51	0/2650	0.71	0/3587
1	B	0.56	0/2654	0.74	3/3592 (0.1%)
1	C	0.58	0/2642	0.73	1/3576 (0.0%)
1	D	0.58	0/2655	0.73	1/3593 (0.0%)
1	E	0.48	0/2651	0.66	2/3588 (0.1%)
1	F	0.44	0/2646	0.69	1/3582 (0.0%)
1	G	0.56	0/2651	0.73	1/3588 (0.0%)
1	H	0.55	0/2651	0.70	0/3588
1	I	0.57	0/2651	0.72	0/3588
1	J	0.57	1/2642 (0.0%)	0.71	1/3576 (0.0%)
1	K	0.52	0/2651	0.74	3/3588 (0.1%)
1	L	0.56	0/2642	0.72	0/3576
All	All	0.54	1/31786 (0.0%)	0.72	13/43022 (0.0%)

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	J	560	VAL	CB-CG2	-5.10	1.42	1.52

All (13) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	K	749	ARG	NE-CZ-NH1	-10.37	115.11	120.30
1	B	737	LEU	CB-CG-CD1	-7.42	98.39	111.00
1	K	749	ARG	NE-CZ-NH2	7.20	123.90	120.30
1	G	481	LEU	CA-CB-CG	6.85	131.05	115.30
1	F	643	ARG	NE-CZ-NH1	-6.05	117.28	120.30
1	K	449	ARG	NE-CZ-NH1	5.62	123.11	120.30
1	B	737	LEU	CA-CB-CG	5.58	128.13	115.30
1	B	612	ASP	CB-CG-OD1	5.25	123.03	118.30
1	E	512	ASP	CB-CA-C	5.09	120.58	110.40
1	J	481	LEU	CA-CB-CG	5.07	126.96	115.30
1	D	608	LEU	CA-CB-CG	5.06	126.94	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	E	749	ARG	NE-CZ-NH2	5.02	122.81	120.30
1	C	610	LEU	CA-CB-CG	5.01	126.83	115.30

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2606	0	2675	51	0
1	B	2610	0	2678	64	0
1	C	2598	0	2675	44	0
1	D	2611	0	2681	56	0
1	E	2607	0	2678	43	0
1	F	2602	0	2674	68	0
1	G	2607	0	2678	52	0
1	H	2607	0	2678	70	0
1	I	2607	0	2678	49	0
1	J	2598	0	2675	61	0
1	K	2607	0	2678	45	0
1	L	2598	0	2675	56	0
All	All	31258	0	32123	607	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 10.

All (607) 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:A:453:ASN:CG	1:A:768:GLN:HE22	1.07	1.49
1:A:453:ASN:CG	1:A:768:GLN:NE2	1.75	1.38
1:A:453:ASN:ND2	1:A:768:GLN:NE2	2.05	1.05
1:A:453:ASN:OD1	1:A:768:GLN:NE2	1.80	0.98
1:B:439:SER:CB	1:B:731:GLU:OE1	2.13	0.97
1:L:598:LEU:HD11	1:L:609:VAL:HB	1.52	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:544:GLU:HG2	1:G:547:ARG:HH12	1.34	0.91
1:L:530:LYS:HD3	1:L:562:GLN:HE22	1.37	0.89
1:C:450:VAL:HA	1:C:768:GLN:HE22	1.36	0.87
1:B:547:ARG:NH1	1:G:573:SER:OG	2.10	0.85
1:I:450:VAL:HG11	1:I:486:ILE:HG12	1.57	0.84
1:F:598:LEU:HD11	1:F:609:VAL:HB	1.58	0.84
1:B:436:GLY:HA2	1:B:731:GLU:OE2	1.79	0.82
1:E:437:SER:N	1:E:731:GLU:OE1	2.12	0.82
1:H:507:ILE:HG21	1:H:510:LEU:CD1	2.12	0.80
1:G:573:SER:O	1:G:749:ARG:NH2	2.14	0.80
1:K:465:VAL:HG21	1:K:559:MET:HE3	1.64	0.79
1:G:715:GLU:OE2	1:H:658:THR:HG21	1.82	0.79
1:L:507:ILE:HG12	1:L:510:LEU:HD13	1.64	0.79
1:I:721:TYR:OH	1:I:748:GLN:NE2	2.16	0.78
1:F:636:GLU:OE2	1:F:673:ARG:NH2	2.17	0.78
1:J:715:GLU:OE2	1:I:658:THR:HG21	1.86	0.76
1:L:715:GLU:OE2	1:K:658:THR:HG21	1.86	0.75
1:D:752:THR:OG1	1:D:754:ASP:OD1	2.04	0.74
1:D:541:ASN:ND2	1:K:749:ARG:HH12	1.83	0.74
1:A:512:ASP:OD1	1:A:512:ASP:N	2.20	0.74
1:D:601:VAL:HG22	1:D:608:LEU:HB2	1.70	0.74
1:L:724:ILE:HD13	1:K:727:ILE:HD11	1.68	0.73
1:I:677:MET:HE3	1:I:702:LEU:HA	1.70	0.73
1:A:481:LEU:HD21	1:A:757:VAL:HG23	1.69	0.73
1:K:449:ARG:HH11	1:K:449:ARG:HG2	1.53	0.73
1:H:541:ASN:ND2	1:E:749:ARG:HH21	1.87	0.73
1:A:774:LEU:O	1:A:774:LEU:HD22	1.87	0.72
1:H:449:ARG:O	1:H:453:ASN:ND2	2.21	0.72
1:H:439:SER:N	1:H:731:GLU:OE1	2.23	0.72
1:B:598:LEU:HD11	1:B:609:VAL:HG13	1.70	0.72
1:H:507:ILE:HG21	1:H:510:LEU:HD13	1.72	0.72
1:J:440:LYS:HA	1:J:443:ILE:HD12	1.72	0.71
1:A:511:ASN:N	1:A:511:ASN:OD1	2.23	0.71
1:B:574:ILE:HG13	1:B:579:ALA:HB2	1.71	0.71
1:A:573:SER:O	1:A:749:ARG:NH2	2.24	0.70
1:A:774:LEU:HD22	1:A:774:LEU:C	2.13	0.69
1:D:677:MET:HE3	1:D:702:LEU:HA	1.73	0.69
1:H:472:THR:HG23	1:H:505:LEU:HD21	1.75	0.69
1:H:507:ILE:CG2	1:H:510:LEU:HD13	2.21	0.69
1:E:499:LYS:HA	1:E:502:ILE:HG12	1.74	0.68
1:C:535:ARG:HB3	1:C:540:ILE:HD12	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:677:MET:HE3	1:H:702:LEU:HA	1.74	0.68
1:F:643:ARG:NH1	1:F:703:LYS:O	2.27	0.68
1:B:495:PRO:HA	1:B:515:ILE:HG21	1.73	0.68
1:D:643:ARG:HG2	1:D:677:MET:HE2	1.75	0.67
1:C:703:LYS:NZ	1:H:698:PRO:O	2.25	0.67
1:H:507:ILE:CG2	1:H:510:LEU:CD1	2.73	0.67
1:D:578:ASP:OD1	1:D:581:ARG:NH2	2.27	0.67
1:A:453:ASN:ND2	1:A:768:GLN:HE21	1.91	0.67
1:A:723:LEU:HD22	1:A:727:ILE:HD12	1.76	0.67
1:B:575:ASN:OD1	1:B:576:TYR:N	2.29	0.66
1:L:495:PRO:HD3	1:L:517:HIS:HB2	1.77	0.66
1:K:498:VAL:HG11	1:K:515:ILE:HG21	1.78	0.66
1:F:643:ARG:HH12	1:F:704:GLY:C	1.98	0.65
1:A:749:ARG:HH22	1:F:544:GLU:HG2	1.61	0.65
1:E:575:ASN:OD1	1:E:576:TYR:N	2.29	0.65
1:I:476:LYS:HD3	1:I:753:VAL:HG21	1.77	0.65
1:K:677:MET:HE3	1:K:702:LEU:HA	1.79	0.64
1:E:720:ALA:O	1:E:724:ILE:HG12	1.98	0.64
1:K:636:GLU:OE2	1:K:673:ARG:NH2	2.30	0.64
1:C:486:ILE:HD13	1:C:761:VAL:HG22	1.78	0.63
1:C:578:ASP:OD1	1:C:581:ARG:NH2	2.30	0.63
1:I:574:ILE:HG23	1:I:579:ALA:HB2	1.80	0.63
1:D:481:LEU:HD22	1:D:486:ILE:HD11	1.80	0.63
1:B:560:VAL:HG21	1:B:587:ILE:HD11	1.80	0.63
1:J:535:ARG:HB3	1:J:540:ILE:HD12	1.81	0.63
1:F:605:ASP:OD1	1:F:606:LYS:N	2.32	0.63
1:J:486:ILE:HD13	1:J:761:VAL:HG22	1.81	0.62
1:A:628:ALA:HB2	1:A:710:VAL:HG21	1.80	0.62
1:I:754:ASP:HA	1:I:757:VAL:HG22	1.79	0.62
1:F:610:LEU:HD22	1:F:711:PHE:HE1	1.65	0.62
1:F:502:ILE:HG23	1:F:510:LEU:HD11	1.81	0.62
1:B:752:THR:HG23	1:B:755:GLY:H	1.65	0.62
1:H:449:ARG:NH1	1:H:637:TYR:OH	2.33	0.62
1:E:502:ILE:HG13	1:E:503:LYS:N	2.15	0.62
1:D:498:VAL:HG21	1:D:515:ILE:HD13	1.82	0.62
1:B:547:ARG:NH2	1:G:573:SER:O	2.27	0.62
1:C:440:LYS:HD2	1:C:440:LYS:N	2.16	0.61
1:J:544:GLU:OE1	1:J:547:ARG:NH2	2.33	0.61
1:C:450:VAL:HA	1:C:768:GLN:NE2	2.13	0.61
1:J:715:GLU:O	1:J:719:ILE:HG12	2.00	0.61
1:A:727:ILE:HD11	1:B:688:VAL:HG11	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:449:ARG:HA	1:F:452:GLN:HG2	1.83	0.60
1:L:496:GLU:O	1:L:500:GLU:HG3	2.02	0.60
1:E:498:VAL:O	1:E:502:ILE:HG23	2.01	0.60
1:D:439:SER:N	1:D:731:GLU:OE1	2.35	0.60
1:H:541:ASN:HD21	1:E:749:ARG:NH2	2.00	0.60
1:H:494:TYR:HB2	1:H:497:ARG:HG2	1.84	0.60
1:J:729:LYS:HG3	1:I:729:LYS:CB	2.31	0.59
1:K:647:LEU:HD11	1:K:709:LEU:HB3	1.83	0.59
1:A:600:PHE:HB2	1:A:733:ILE:CG1	2.33	0.59
1:D:598:LEU:HD11	1:D:609:VAL:HG13	1.84	0.59
1:H:541:ASN:HD21	1:E:749:ARG:HH21	1.50	0.59
1:E:502:ILE:HB	1:E:510:LEU:HD11	1.85	0.59
1:B:537:ARG:NH2	1:H:679:GLU:OE1	2.34	0.59
1:I:575:ASN:OD1	1:I:576:TYR:N	2.36	0.59
1:K:644:VAL:HG22	1:K:708:VAL:HB	1.83	0.59
1:H:509:LEU:HD12	1:H:509:LEU:O	2.03	0.58
1:I:486:ILE:HD13	1:I:761:VAL:HG22	1.85	0.58
1:L:637:TYR:HE1	1:L:765:LEU:HD21	1.68	0.58
1:B:664:LYS:HE3	1:B:668:ILE:HD11	1.83	0.58
1:B:447:ILE:O	1:B:450:VAL:HG12	2.03	0.58
1:B:536:GLN:HB2	1:H:699:PHE:CE2	2.39	0.58
1:H:505:LEU:HB2	1:H:507:ILE:HD11	1.85	0.58
1:F:610:LEU:HD22	1:F:711:PHE:CE1	2.38	0.58
1:B:580:VAL:HG23	1:B:737:LEU:HD11	1.86	0.57
1:C:468:GLU:OE1	1:C:572:SER:N	2.37	0.57
1:I:691:GLU:OE1	1:I:695:ARG:NH1	2.38	0.57
1:C:498:VAL:HG11	1:C:515:ILE:HD13	1.84	0.57
1:A:486:ILE:HD13	1:A:761:VAL:HG22	1.86	0.57
1:J:636:GLU:OE1	1:J:673:ARG:NH2	2.38	0.57
1:J:692:ILE:HG23	1:J:696:LEU:HD12	1.87	0.57
1:G:628:ALA:HB1	1:G:644:VAL:HG11	1.87	0.57
1:C:642:PRO:HG2	1:C:676:LEU:CD1	2.35	0.57
1:J:729:LYS:HG3	1:I:729:LYS:HB2	1.86	0.57
1:A:722:LYS:HE2	1:B:683:GLN:OE1	2.05	0.56
1:F:447:ILE:HD11	1:F:761:VAL:HG22	1.88	0.56
1:J:560:VAL:HG21	1:J:587:ILE:HD11	1.87	0.56
1:B:670:ARG:NH1	1:B:678:ILE:O	2.39	0.56
1:F:578:ASP:OD1	1:F:581:ARG:NH2	2.39	0.56
1:B:510:LEU:O	1:B:513:VAL:HG22	2.05	0.56
1:B:560:VAL:CG2	1:B:587:ILE:HD11	2.35	0.56
1:A:751:THR:HG22	1:A:752:THR:O	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:601:VAL:HB	1:H:608:LEU:HB2	1.86	0.56
1:C:440:LYS:HD2	1:C:440:LYS:H	1.71	0.55
1:B:442:PHE:HE2	1:B:762:PHE:HZ	1.53	0.55
1:G:498:VAL:HG11	1:G:515:ILE:HG21	1.88	0.55
1:L:481:LEU:HD11	1:L:757:VAL:HG13	1.88	0.55
1:D:628:ALA:HB2	1:D:710:VAL:HG21	1.87	0.55
1:B:589:VAL:HG11	1:B:595:PRO:HD3	1.88	0.55
1:J:578:ASP:OD1	1:J:581:ARG:NH2	2.38	0.55
1:B:499:LYS:NZ	1:B:511:ASN:O	2.38	0.55
1:C:600:PHE:HB2	1:C:733:ILE:HG12	1.87	0.55
1:A:644:VAL:HG22	1:A:708:VAL:HB	1.89	0.55
1:B:468:GLU:OE2	1:B:572:SER:HB2	2.06	0.55
1:H:495:PRO:HA	1:H:515:ILE:HG21	1.89	0.55
1:D:560:VAL:HG21	1:D:587:ILE:HD11	1.89	0.55
1:D:736:PHE:HE1	1:D:759:SER:HA	1.71	0.55
1:B:601:VAL:HG22	1:B:608:LEU:HB3	1.88	0.55
1:D:752:THR:OG1	1:D:753:VAL:N	2.39	0.54
1:D:541:ASN:CG	1:K:749:ARG:HH12	2.11	0.54
1:G:579:ALA:HB3	1:G:746:VAL:HG11	1.87	0.54
1:G:642:PRO:HG2	1:G:676:LEU:HD21	1.89	0.54
1:H:643:ARG:HG2	1:H:677:MET:HE2	1.88	0.54
1:B:754:ASP:O	1:B:758:ASN:ND2	2.40	0.54
1:E:573:SER:HA	1:E:749:ARG:HH11	1.72	0.54
1:F:679:GLU:OE2	1:H:537:ARG:NH1	2.37	0.54
1:G:601:VAL:HB	1:G:608:LEU:HB2	1.88	0.54
1:F:723:LEU:HD13	1:E:684:ALA:HB1	1.89	0.54
1:J:663:LYS:NZ	1:J:667:GLU:OE2	2.33	0.54
1:H:449:ARG:HG2	1:H:453:ASN:HD21	1.73	0.54
1:K:754:ASP:OD1	1:K:754:ASP:N	2.28	0.54
1:D:495:PRO:HA	1:D:515:ILE:HG12	1.90	0.54
1:A:696:LEU:HD11	1:B:750:THR:HG22	1.90	0.54
1:G:729:LYS:HD3	1:H:729:LYS:HB3	1.89	0.54
1:E:502:ILE:HB	1:E:510:LEU:CD1	2.38	0.54
1:J:601:VAL:HB	1:J:608:LEU:HB2	1.91	0.53
1:C:642:PRO:HG2	1:C:676:LEU:HD11	1.89	0.53
1:D:569:VAL:HG21	1:D:760:VAL:HG22	1.91	0.53
1:L:447:ILE:O	1:L:450:VAL:HG12	2.08	0.53
1:H:447:ILE:O	1:H:450:VAL:HG12	2.09	0.53
1:D:449:ARG:HA	1:D:452:GLN:HG2	1.90	0.53
1:D:554:TYR:CE2	1:D:582:PRO:HG3	2.42	0.53
1:F:751:THR:HG22	1:F:752:THR:O	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:754:ASP:HA	1:J:757:VAL:HG12	1.90	0.53
1:L:467:PRO:HA	1:L:492:LEU:HB2	1.91	0.53
1:L:475:LEU:HD13	1:L:502:ILE:HG22	1.90	0.53
1:K:449:ARG:HH11	1:K:449:ARG:CG	2.18	0.53
1:D:685:ASP:OD2	1:D:686:THR:N	2.42	0.53
1:L:721:TYR:OH	1:L:748:GLN:OE1	2.27	0.53
1:D:751:THR:HG22	1:D:752:THR:O	2.08	0.53
1:B:756:ILE:O	1:B:760:VAL:HG23	2.09	0.53
1:I:578:ASP:HA	1:I:581:ARG:NH1	2.24	0.53
1:B:481:LEU:HD21	1:B:757:VAL:HG13	1.89	0.53
1:F:440:LYS:HA	1:F:443:ILE:HG22	1.91	0.53
1:F:772:GLU:HG3	1:F:775:LYS:HE3	1.90	0.53
1:G:449:ARG:O	1:G:453:ASN:ND2	2.39	0.53
1:B:547:ARG:HH12	1:G:573:SER:C	2.12	0.53
1:K:491:LEU:HB2	1:K:515:ILE:HG12	1.90	0.53
1:F:724:ILE:HD13	1:E:727:ILE:HD11	1.91	0.52
1:G:729:LYS:NZ	1:H:729:LYS:HG2	2.24	0.52
1:L:547:ARG:HH12	1:I:573:SER:C	2.12	0.52
1:C:589:VAL:HG11	1:C:595:PRO:HD3	1.91	0.52
1:L:498:VAL:HG21	1:L:515:ILE:HG12	1.92	0.52
1:H:770:ILE:O	1:H:774:LEU:HG	2.09	0.52
1:D:596:ALA:HB1	1:D:612:ASP:HB2	1.91	0.52
1:L:603:LEU:HD12	1:L:606:LYS:HE3	1.92	0.52
1:A:608:LEU:HD23	1:A:709:LEU:HD21	1.90	0.52
1:G:729:LYS:HZ3	1:H:729:LYS:HG2	1.75	0.52
1:C:690:PRO:O	1:C:694:GLU:HG2	2.08	0.52
1:I:449:ARG:HD2	1:I:637:TYR:OH	2.10	0.52
1:I:771:LYS:O	1:I:775:LYS:HG2	2.09	0.52
1:E:465:VAL:HG21	1:E:559:MET:HE3	1.92	0.52
1:F:540:ILE:HG23	1:F:544:GLU:HB3	1.92	0.52
1:F:643:ARG:HH12	1:F:704:GLY:CA	2.23	0.52
1:G:544:GLU:HG2	1:G:547:ARG:NH1	2.16	0.52
1:A:472:THR:HG23	1:A:505:LEU:HD11	1.92	0.51
1:J:561:ASN:OD1	1:J:562:GLN:NE2	2.41	0.51
1:A:495:PRO:HA	1:A:515:ILE:HG21	1.91	0.51
1:E:609:VAL:HG21	1:E:631:ALA:HB1	1.90	0.51
1:B:507:ILE:HD12	1:B:508:PRO:HD2	1.92	0.51
1:D:502:ILE:HG13	1:D:503:LYS:N	2.25	0.51
1:B:605:ASP:OD1	1:B:606:LYS:N	2.37	0.51
1:B:449:ARG:NH1	1:B:637:TYR:OH	2.44	0.51
1:H:754:ASP:O	1:H:757:VAL:HG22	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:729:LYS:CD	1:H:729:LYS:H	2.23	0.51
1:J:636:GLU:CD	1:J:673:ARG:HH22	2.13	0.51
1:I:511:ASN:O	1:I:512:ASP:HB2	2.10	0.51
1:D:598:LEU:HD13	1:D:611:ALA:HB2	1.93	0.51
1:B:723:LEU:HD22	1:B:727:ILE:HD11	1.93	0.51
1:G:642:PRO:HG2	1:G:676:LEU:CD2	2.41	0.51
1:H:591:LYS:HG3	1:H:592:GLU:HG2	1.93	0.51
1:C:605:ASP:OD1	1:C:606:LYS:N	2.44	0.51
1:A:598:LEU:HG	1:A:609:VAL:HG13	1.93	0.51
1:J:656:GLU:OE2	1:J:660:ARG:NH2	2.44	0.51
1:I:478:LEU:HA	1:I:481:LEU:HG	1.93	0.50
1:F:772:GLU:HA	1:F:775:LYS:HE3	1.93	0.50
1:H:437:SER:O	1:H:441:VAL:HG23	2.12	0.50
1:I:447:ILE:O	1:I:450:VAL:HG12	2.11	0.50
1:J:686:THR:HG22	1:J:693:MET:HE1	1.93	0.50
1:I:670:ARG:NH1	1:I:678:ILE:O	2.41	0.50
1:G:577:ALA:O	1:G:580:VAL:HG12	2.12	0.50
1:K:494:TYR:O	1:K:498:VAL:HG12	2.11	0.50
1:F:628:ALA:HB2	1:F:710:VAL:HG21	1.94	0.50
1:A:683:GLN:OE1	1:B:722:LYS:NZ	2.45	0.50
1:G:677:MET:HG3	1:G:701:GLY:O	2.11	0.50
1:H:478:LEU:O	1:H:482:VAL:HG22	2.12	0.50
1:H:571:GLY:HA2	1:H:574:ILE:HG12	1.94	0.50
1:F:608:LEU:HD11	1:F:707:ASN:HA	1.94	0.49
1:E:567:GLY:HA2	1:E:743:SER:O	2.12	0.49
1:H:769:TYR:O	1:H:773:VAL:HG13	2.11	0.49
1:K:651:ASN:ND2	1:K:683:GLN:OE1	2.45	0.49
1:K:658:THR:HG23	1:K:659:PRO:HD3	1.93	0.49
1:J:465:VAL:HA	1:J:490:ILE:HB	1.93	0.49
1:L:647:LEU:HD11	1:L:709:LEU:HB3	1.94	0.49
1:K:447:ILE:HG23	1:K:486:ILE:HD11	1.94	0.49
1:L:771:LYS:HA	1:L:774:LEU:HD12	1.94	0.49
1:H:693:MET:CE	1:H:702:LEU:HD23	2.42	0.49
1:F:772:GLU:O	1:F:775:LYS:HG2	2.11	0.49
1:J:729:LYS:HE2	1:I:729:LYS:HD2	1.94	0.49
1:L:643:ARG:HB3	1:L:702:LEU:HD11	1.94	0.49
1:A:447:ILE:HG12	1:A:486:ILE:HD11	1.93	0.49
1:F:754:ASP:O	1:F:758:ASN:ND2	2.46	0.49
1:L:656:GLU:OE1	1:L:660:ARG:NH1	2.46	0.49
1:D:576:TYR:CE1	1:D:746:VAL:HG23	2.48	0.49
1:F:644:VAL:HB	1:F:678:ILE:HG23	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:507:ILE:HD12	1:L:508:PRO:HD2	1.95	0.49
1:E:601:VAL:HG22	1:E:608:LEU:HB2	1.95	0.49
1:F:502:ILE:HD13	1:F:510:LEU:HD13	1.95	0.48
1:H:746:VAL:HG12	1:H:747:LEU:O	2.12	0.48
1:J:499:LYS:O	1:J:502:ILE:HG13	2.12	0.48
1:J:719:ILE:HD12	1:I:647:LEU:HB3	1.95	0.48
1:C:649:TYR:CG	1:D:714:LEU:HD23	2.49	0.48
1:D:647:LEU:O	1:D:662:MET:HG3	2.13	0.48
1:J:481:LEU:HD11	1:J:757:VAL:HA	1.95	0.48
1:L:561:ASN:HD22	1:L:562:GLN:NE2	2.11	0.48
1:H:644:VAL:HB	1:H:678:ILE:HG23	1.95	0.48
1:K:572:SER:HB3	1:K:747:LEU:HD12	1.96	0.48
1:J:729:LYS:HE2	1:I:729:LYS:CD	2.43	0.48
1:A:729:LYS:HD3	1:B:729:LYS:HE2	1.96	0.48
1:H:560:VAL:CG2	1:H:587:ILE:HD11	2.44	0.48
1:A:444:ARG:HE	1:A:444:ARG:HA	1.77	0.48
1:J:729:LYS:HG3	1:I:729:LYS:HB3	1.95	0.48
1:L:596:ALA:HB1	1:L:612:ASP:HB2	1.96	0.48
1:H:605:ASP:OD1	1:H:606:LYS:N	2.40	0.48
1:D:494:TYR:O	1:D:498:VAL:HG13	2.13	0.48
1:C:700:SER:O	1:H:703:LYS:HE3	2.13	0.48
1:J:606:LYS:HZ1	1:J:640:ILE:HG21	1.79	0.48
1:G:468:GLU:H	1:G:468:GLU:HG2	1.41	0.47
1:L:594:ILE:HD12	1:L:595:PRO:HD2	1.96	0.47
1:E:601:VAL:CG2	1:E:608:LEU:HB2	2.44	0.47
1:G:775:LYS:O	1:G:776:SER:OG	2.19	0.47
1:G:579:ALA:HB3	1:G:746:VAL:CG1	2.43	0.47
1:I:478:LEU:HD23	1:I:481:LEU:HD21	1.97	0.47
1:G:663:LYS:O	1:G:667:GLU:HG2	2.15	0.47
1:J:530:LYS:HD3	1:J:562:GLN:NE2	2.29	0.47
1:L:613:THR:HA	1:L:717:SER:HB2	1.96	0.47
1:H:595:PRO:HB2	1:H:615:VAL:HG11	1.97	0.47
1:C:444:ARG:HG2	1:G:504:ALA:HA	1.95	0.47
1:F:502:ILE:HG12	1:F:510:LEU:HD22	1.95	0.47
1:H:723:LEU:HD23	1:H:723:LEU:HA	1.58	0.47
1:E:610:LEU:HD22	1:E:711:PHE:CE1	2.50	0.47
1:D:447:ILE:O	1:D:450:VAL:HG12	2.15	0.47
1:E:692:ILE:HG23	1:E:696:LEU:HD12	1.97	0.47
1:F:753:VAL:O	1:F:757:VAL:HG23	2.15	0.47
1:J:669:ALA:HB1	1:J:678:ILE:HD13	1.96	0.47
1:H:492:LEU:HD21	1:H:559:MET:HE1	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:551:ASP:OD1	1:I:552:PRO:HD2	2.13	0.47
1:K:492:LEU:HD21	1:K:559:MET:HE1	1.95	0.47
1:C:544:GLU:OE2	1:C:547:ARG:NH2	2.44	0.47
1:J:673:ARG:HG2	1:J:675:ASP:OD1	2.15	0.47
1:L:548:LEU:HD22	1:L:554:TYR:CE1	2.50	0.47
1:K:723:LEU:O	1:K:727:ILE:HG12	2.15	0.47
1:E:472:THR:HG23	1:E:505:LEU:HD22	1.96	0.47
1:C:600:PHE:HB2	1:C:733:ILE:CG1	2.44	0.47
1:B:532:TYR:HE1	1:B:541:ASN:HA	1.80	0.47
1:F:647:LEU:O	1:F:662:MET:HG3	2.15	0.47
1:L:477:ALA:O	1:L:481:LEU:HD13	2.14	0.47
1:C:614:THR:HG23	1:C:615:VAL:HG23	1.97	0.47
1:A:602:LEU:HD11	1:A:733:ILE:HG12	1.96	0.47
1:H:494:TYR:HB2	1:H:497:ARG:CG	2.45	0.47
1:I:751:THR:HG22	1:I:752:THR:O	2.15	0.47
1:L:478:LEU:O	1:L:482:VAL:HG22	2.15	0.46
1:K:498:VAL:CG1	1:K:515:ILE:HD13	2.45	0.46
1:D:497:ARG:HD2	1:D:497:ARG:HA	1.69	0.46
1:C:647:LEU:O	1:C:662:MET:HG3	2.14	0.46
1:A:754:ASP:HA	1:A:757:VAL:CG1	2.45	0.46
1:B:436:GLY:CA	1:B:731:GLU:OE2	2.59	0.46
1:F:481:LEU:CD1	1:F:757:VAL:HG22	2.46	0.46
1:F:726:GLN:OE1	1:E:689:ASN:HB2	2.15	0.46
1:J:724:ILE:HD11	1:I:723:LEU:HD13	1.97	0.46
1:K:572:SER:HB3	1:K:747:LEU:CD1	2.45	0.46
1:C:597:GLY:HA3	1:C:614:THR:HG22	1.98	0.46
1:F:469:GLY:HA2	1:F:491:LEU:HD22	1.96	0.46
1:G:628:ALA:HB2	1:G:710:VAL:HG21	1.96	0.46
1:I:449:ARG:HD2	1:I:637:TYR:CZ	2.51	0.46
1:J:644:VAL:HB	1:J:678:ILE:HG23	1.98	0.46
1:H:560:VAL:HG21	1:H:587:ILE:HD11	1.97	0.46
1:H:600:PHE:HB2	1:H:733:ILE:CG1	2.46	0.46
1:E:573:SER:HA	1:E:749:ARG:NH1	2.30	0.46
1:B:598:LEU:HD12	1:B:599:ASN:N	2.31	0.46
1:J:676:LEU:HA	1:J:676:LEU:HD23	1.72	0.46
1:B:443:ILE:HG12	1:B:758:ASN:OD1	2.15	0.46
1:J:560:VAL:CG2	1:J:587:ILE:HD11	2.46	0.46
1:L:497:ARG:O	1:L:500:GLU:HB2	2.16	0.46
1:A:600:PHE:HB2	1:A:733:ILE:HG13	1.98	0.46
1:A:774:LEU:C	1:A:774:LEU:CD2	2.84	0.46
1:H:465:VAL:HG21	1:H:559:MET:HE3	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:698:PRO:O	1:H:703:LYS:HE2	2.16	0.46
1:B:572:SER:O	1:B:749:ARG:NH1	2.45	0.46
1:K:503:LYS:HE2	1:K:503:LYS:HB2	1.69	0.46
1:D:541:ASN:ND2	1:K:749:ARG:NH1	2.58	0.45
1:A:600:PHE:HB2	1:A:733:ILE:HG12	1.98	0.45
1:B:675:ASP:OD1	1:B:675:ASP:N	2.40	0.45
1:L:754:ASP:O	1:L:758:ASN:ND2	2.50	0.45
1:H:770:ILE:O	1:H:773:VAL:HG22	2.16	0.45
1:K:472:THR:HG22	1:K:476:LYS:HD2	1.99	0.45
1:C:460:GLU:OE2	1:C:771:LYS:NZ	2.49	0.45
1:A:754:ASP:HA	1:A:757:VAL:HG12	1.98	0.45
1:A:756:ILE:O	1:A:760:VAL:HG23	2.16	0.45
1:F:559:MET:HE1	1:F:565:ALA:HB2	1.98	0.45
1:F:770:ILE:HA	1:F:773:VAL:HG22	1.97	0.45
1:J:723:LEU:HD23	1:J:723:LEU:HA	1.68	0.45
1:E:455:ALA:O	1:E:456:ALA:HB3	2.16	0.45
1:B:676:LEU:HA	1:B:676:LEU:HD23	1.69	0.45
1:F:447:ILE:HD13	1:F:447:ILE:HA	1.75	0.45
1:C:542:LEU:O	1:C:546:GLU:HG3	2.15	0.45
1:D:481:LEU:HD21	1:D:757:VAL:HG13	1.97	0.45
1:D:527:PHE:CE1	1:D:562:GLN:HG3	2.51	0.45
1:B:723:LEU:HD23	1:B:723:LEU:HA	1.73	0.45
1:J:481:LEU:HD21	1:J:760:VAL:HG11	1.98	0.45
1:I:541:ASN:ND2	1:K:696:LEU:O	2.48	0.45
1:C:699:PHE:HD1	1:K:532:TYR:HH	1.64	0.45
1:D:507:ILE:HD11	1:D:509:LEU:HG	1.99	0.45
1:D:636:GLU:HG3	1:D:642:PRO:HG3	1.98	0.45
1:B:669:ALA:HB1	1:B:678:ILE:HD13	1.99	0.45
1:F:686:THR:HG22	1:F:693:MET:HE1	1.98	0.45
1:L:481:LEU:HD11	1:L:757:VAL:HA	1.99	0.45
1:H:467:PRO:HA	1:H:492:LEU:HB2	1.99	0.45
1:H:749:ARG:HG3	1:H:750:THR:HG23	1.99	0.45
1:K:437:SER:O	1:K:440:LYS:N	2.50	0.45
1:E:540:ILE:HG23	1:E:544:GLU:HB3	1.98	0.45
1:E:498:VAL:HG11	1:E:515:ILE:HG12	1.99	0.45
1:E:723:LEU:O	1:E:727:ILE:HG12	2.17	0.45
1:D:481:LEU:CD2	1:D:757:VAL:HG13	2.47	0.45
1:B:598:LEU:CD1	1:B:609:VAL:HG13	2.42	0.45
1:B:660:ARG:HG2	1:B:660:ARG:HH11	1.82	0.45
1:F:769:TYR:O	1:F:773:VAL:HG13	2.16	0.45
1:J:594:ILE:HD12	1:J:595:PRO:HD2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:440:LYS:N	1:L:440:LYS:HD2	2.30	0.45
1:L:494:TYR:CE1	1:L:517:HIS:CE1	3.05	0.45
1:L:672:LEU:O	1:L:673:ARG:HG2	2.17	0.45
1:K:628:ALA:HB2	1:K:710:VAL:HG21	1.99	0.45
1:E:447:ILE:HG23	1:E:486:ILE:HD11	1.98	0.45
1:H:747:LEU:HB3	1:H:751:THR:HG21	1.99	0.45
1:I:440:LYS:HA	1:I:443:ILE:HG22	1.99	0.45
1:I:497:ARG:O	1:I:500:GLU:HB3	2.17	0.45
1:E:648:SER:OG	1:E:649:TYR:N	2.48	0.45
1:K:507:ILE:HG21	1:K:510:LEU:HD13	1.99	0.45
1:D:729:LYS:HD2	1:D:729:LYS:HA	1.80	0.45
1:J:477:ALA:O	1:J:481:LEU:HD13	2.17	0.45
1:L:724:ILE:CD1	1:K:727:ILE:HD11	2.43	0.45
1:K:647:LEU:O	1:K:662:MET:HG3	2.17	0.45
1:D:769:TYR:O	1:D:773:VAL:HG23	2.17	0.44
1:A:524:TYR:O	1:A:528:VAL:HG13	2.17	0.44
1:G:544:GLU:CG	1:G:547:ARG:HH12	2.17	0.44
1:J:467:PRO:HA	1:J:492:LEU:HD12	1.99	0.44
1:I:478:LEU:HD13	1:I:510:LEU:HD21	1.99	0.44
1:G:647:LEU:O	1:G:662:MET:HG3	2.17	0.44
1:G:749:ARG:C	1:G:751:THR:H	2.21	0.44
1:J:579:ALA:O	1:J:582:PRO:HD2	2.18	0.44
1:C:669:ALA:HB1	1:C:678:ILE:HD13	2.00	0.44
1:F:544:GLU:OE2	1:F:547:ARG:NE	2.43	0.44
1:J:589:VAL:HG11	1:J:595:PRO:HD3	2.00	0.44
1:J:643:ARG:HB3	1:J:702:LEU:CD1	2.47	0.44
1:H:628:ALA:HB2	1:H:710:VAL:HG21	1.99	0.44
1:I:756:ILE:O	1:I:760:VAL:HG23	2.18	0.44
1:A:453:ASN:OD1	1:A:768:GLN:CD	2.53	0.44
1:A:647:LEU:O	1:A:662:MET:HG3	2.17	0.44
1:A:723:LEU:HD23	1:A:723:LEU:HA	1.64	0.44
1:L:715:GLU:O	1:L:719:ILE:HG12	2.18	0.44
1:I:478:LEU:CD1	1:I:491:LEU:HD11	2.47	0.44
1:J:501:LYS:HA	1:J:504:ALA:HB3	1.99	0.44
1:L:756:ILE:O	1:L:760:VAL:HG23	2.18	0.44
1:E:478:LEU:HD23	1:E:478:LEU:HA	1.73	0.44
1:E:694:GLU:OE2	1:E:703:LYS:NZ	2.31	0.44
1:C:466:PHE:HB2	1:C:491:LEU:HD23	2.00	0.44
1:B:580:VAL:CG2	1:B:737:LEU:HD11	2.47	0.44
1:F:594:ILE:HD12	1:F:595:PRO:HD2	2.00	0.44
1:F:618:ASN:OD1	1:F:661:LYS:NZ	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:672:LEU:HD23	1:G:672:LEU:HA	1.70	0.44
1:H:689:ASN:CG	1:H:692:ILE:HD12	2.38	0.44
1:K:507:ILE:CG2	1:K:510:LEU:HD13	2.48	0.44
1:E:754:ASP:O	1:E:758:ASN:ND2	2.51	0.44
1:D:518:PRO:HB3	1:D:555:PHE:CG	2.53	0.44
1:F:608:LEU:CD1	1:F:707:ASN:HA	2.47	0.44
1:J:535:ARG:HD3	1:J:540:ILE:HD12	2.00	0.44
1:L:525:PHE:O	1:L:528:VAL:HG22	2.18	0.44
1:L:644:VAL:HG22	1:L:708:VAL:HB	2.00	0.44
1:H:642:PRO:HG2	1:H:676:LEU:HD21	1.99	0.44
1:D:758:ASN:O	1:D:762:PHE:HD2	2.01	0.44
1:G:685:ASP:OD1	1:G:685:ASP:N	2.50	0.44
1:D:481:LEU:HD22	1:D:486:ILE:CD1	2.45	0.43
1:G:764:ALA:O	1:G:768:GLN:HG2	2.17	0.43
1:D:593:GLY:O	1:D:594:ILE:HD12	2.18	0.43
1:A:444:ARG:NH1	1:A:484:GLU:OE1	2.51	0.43
1:F:498:VAL:CG1	1:F:515:ILE:HD13	2.48	0.43
1:F:589:VAL:HG11	1:F:595:PRO:HD3	1.99	0.43
1:F:598:LEU:HD13	1:F:611:ALA:HB2	2.00	0.43
1:G:591:LYS:HG2	1:G:592:GLU:HG3	2.01	0.43
1:L:576:TYR:OH	1:L:614:THR:HG21	2.18	0.43
1:B:478:LEU:HD23	1:B:478:LEU:HA	1.87	0.43
1:G:601:VAL:HG13	1:G:730:ALA:HB1	2.00	0.43
1:J:498:VAL:O	1:J:502:ILE:HG23	2.17	0.43
1:I:677:MET:HE1	1:I:703:LYS:O	2.18	0.43
1:K:746:VAL:HG12	1:K:747:LEU:O	2.18	0.43
1:D:536:GLN:HA	1:D:540:ILE:O	2.18	0.43
1:D:643:ARG:HG2	1:D:677:MET:CE	2.44	0.43
1:G:497:ARG:NH1	1:G:500:GLU:OE1	2.52	0.43
1:C:694:GLU:OE1	1:H:704:GLY:N	2.51	0.43
1:B:501:LYS:O	1:B:505:LEU:HD13	2.19	0.43
1:L:440:LYS:HD2	1:L:440:LYS:H	1.84	0.43
1:I:467:PRO:HD2	1:I:569:VAL:O	2.18	0.43
1:H:677:MET:HE1	1:H:703:LYS:O	2.19	0.43
1:I:675:ASP:OD1	1:I:675:ASP:N	2.49	0.43
1:C:478:LEU:HA	1:C:481:LEU:HG	1.99	0.43
1:B:472:THR:HG22	1:B:501:LYS:HE2	2.01	0.43
1:B:647:LEU:O	1:B:662:MET:HG3	2.19	0.43
1:F:719:ILE:O	1:F:723:LEU:HB2	2.19	0.43
1:L:547:ARG:NH1	1:I:573:SER:OG	2.52	0.43
1:D:579:ALA:O	1:D:582:PRO:HD2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:447:ILE:HD13	1:B:484:GLU:HG2	2.00	0.43
1:B:468:GLU:HG3	1:B:474:VAL:HG21	2.01	0.43
1:B:574:ILE:HG13	1:B:579:ALA:CB	2.45	0.43
1:J:647:LEU:O	1:J:662:MET:HG3	2.19	0.43
1:L:579:ALA:O	1:L:582:PRO:HD2	2.18	0.43
1:K:723:LEU:HD23	1:K:723:LEU:HA	1.83	0.43
1:E:610:LEU:HD22	1:E:711:PHE:HE1	1.83	0.43
1:J:664:LYS:O	1:J:668:ILE:HG13	2.19	0.42
1:E:607:PHE:CE2	1:E:640:ILE:HD12	2.54	0.42
1:A:589:VAL:HG11	1:A:595:PRO:HD3	2.00	0.42
1:F:481:LEU:HD11	1:F:757:VAL:HG22	2.02	0.42
1:F:636:GLU:HG3	1:F:642:PRO:HG3	2.01	0.42
1:J:647:LEU:HD11	1:J:709:LEU:HB3	2.01	0.42
1:H:470:THR:O	1:H:501:LYS:HD3	2.19	0.42
1:H:677:MET:CE	1:H:702:LEU:HD12	2.49	0.42
1:I:510:LEU:HD12	1:I:510:LEU:HA	1.90	0.42
1:E:581:ARG:HB3	1:E:582:PRO:HD3	2.01	0.42
1:D:491:LEU:O	1:D:515:ILE:HD12	2.20	0.42
1:B:484:GLU:HB3	1:B:486:ILE:HD12	2.02	0.42
1:G:446:ALA:O	1:G:450:VAL:HG23	2.19	0.42
1:G:589:VAL:HG11	1:G:595:PRO:HD3	2.00	0.42
1:H:455:ALA:O	1:H:456:ALA:HB3	2.18	0.42
1:H:600:PHE:HB2	1:H:733:ILE:HG12	2.01	0.42
1:H:754:ASP:HA	1:H:757:VAL:HG22	2.01	0.42
1:I:578:ASP:HA	1:I:581:ARG:HH12	1.83	0.42
1:E:467:PRO:HD2	1:E:569:VAL:O	2.19	0.42
1:E:647:LEU:HD11	1:E:709:LEU:HB3	2.00	0.42
1:C:673:ARG:HG2	1:C:676:LEU:HD23	2.00	0.42
1:A:689:ASN:CG	1:A:692:ILE:HD12	2.39	0.42
1:G:478:LEU:O	1:G:482:VAL:HB	2.19	0.42
1:G:569:VAL:HG21	1:G:760:VAL:HG22	2.01	0.42
1:C:495:PRO:HA	1:C:515:ILE:HG12	2.02	0.42
1:D:651:ASN:HB3	1:D:697:PHE:CZ	2.54	0.42
1:F:470:THR:O	1:F:501:LYS:HD3	2.19	0.42
1:F:502:ILE:HG12	1:F:510:LEU:CD2	2.50	0.42
1:F:636:GLU:CD	1:F:673:ARG:HH22	2.19	0.42
1:J:606:LYS:HG3	1:J:607:PHE:N	2.35	0.42
1:H:449:ARG:NH1	1:H:453:ASN:HD21	2.16	0.42
1:C:510:LEU:O	1:C:513:VAL:HG22	2.19	0.42
1:C:676:LEU:HA	1:C:676:LEU:HD13	1.78	0.42
1:A:721:TYR:OH	1:A:722:LYS:NZ	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:472:THR:HG22	1:G:505:LEU:HD11	2.01	0.42
1:L:499:LYS:HA	1:L:502:ILE:HG13	2.01	0.42
1:K:581:ARG:HB3	1:K:582:PRO:HD3	2.02	0.42
1:K:677:MET:HE3	1:K:677:MET:HB3	1.90	0.42
1:D:600:PHE:HB2	1:D:733:ILE:HG12	2.02	0.42
1:A:539:GLY:N	1:E:653:SER:HA	2.34	0.42
1:B:573:SER:HA	1:B:749:ARG:NH1	2.35	0.42
1:D:469:GLY:HA2	1:D:491:LEU:HD22	2.01	0.42
1:A:600:PHE:O	1:A:732:VAL:HA	2.20	0.42
1:L:694:GLU:OE2	1:L:703:LYS:HE2	2.20	0.42
1:H:581:ARG:HB3	1:H:582:PRO:HD3	2.02	0.42
1:I:644:VAL:HB	1:I:678:ILE:HG23	2.00	0.42
1:F:534:LEU:HD23	1:F:534:LEU:HA	1.90	0.42
1:F:685:ASP:OD2	1:F:686:THR:N	2.52	0.42
1:G:548:LEU:HA	1:G:548:LEU:HD23	1.87	0.42
1:G:748:GLN:O	1:G:751:THR:HB	2.20	0.42
1:L:607:PHE:CE2	1:L:640:ILE:HD12	2.55	0.42
1:L:669:ALA:HB1	1:L:678:ILE:HD13	2.02	0.42
1:D:775:LYS:O	1:D:776:SER:OG	2.26	0.41
1:A:765:LEU:HA	1:A:765:LEU:HD23	1.72	0.41
1:B:535:ARG:HB3	1:B:540:ILE:HB	2.01	0.41
1:G:571:GLY:C	1:G:573:SER:H	2.22	0.41
1:J:729:LYS:CG	1:I:729:LYS:HB3	2.49	0.41
1:J:736:PHE:HE1	1:J:759:SER:HA	1.85	0.41
1:L:471:SER:O	1:L:475:LEU:HG	2.20	0.41
1:K:535:ARG:HD2	1:K:585:GLN:HB3	2.02	0.41
1:B:438:HIS:CB	1:B:604:GLU:OE2	2.68	0.41
1:J:628:ALA:HB1	1:J:644:VAL:HG11	2.01	0.41
1:C:614:THR:CG2	1:C:615:VAL:HG23	2.49	0.41
1:A:472:THR:HG23	1:A:505:LEU:CD1	2.50	0.41
1:F:606:LYS:HG3	1:F:607:PHE:N	2.35	0.41
1:G:643:ARG:HD3	1:G:705:GLY:O	2.21	0.41
1:J:609:VAL:CG2	1:J:708:VAL:HG22	2.50	0.41
1:L:487:CYS:O	1:L:489:PRO:HD3	2.21	0.41
1:K:736:PHE:HE1	1:K:759:SER:HA	1.86	0.41
1:C:527:PHE:CE1	1:C:562:GLN:HG3	2.55	0.41
1:F:477:ALA:O	1:F:481:LEU:HD13	2.20	0.41
1:F:772:GLU:HG3	1:F:775:LYS:CE	2.50	0.41
1:J:501:LYS:HZ3	1:J:505:LEU:HD11	1.86	0.41
1:E:628:ALA:HB2	1:E:710:VAL:HG21	2.02	0.41
1:F:495:PRO:HA	1:F:515:ILE:HG21	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:736:PHE:HD1	1:G:745:ASN:HD21	1.69	0.41
1:J:519:SER:HA	1:J:524:TYR:CD2	2.55	0.41
1:H:693:MET:HE3	1:H:702:LEU:HD23	2.03	0.41
1:K:672:LEU:HA	1:K:672:LEU:HD23	1.83	0.41
1:C:444:ARG:NH2	1:C:484:GLU:OE2	2.53	0.41
1:C:479:ALA:HB2	1:C:507:ILE:HG21	2.02	0.41
1:B:476:LYS:O	1:B:479:ALA:HB3	2.19	0.41
1:F:440:LYS:O	1:F:443:ILE:HG22	2.21	0.41
1:G:478:LEU:HD23	1:G:478:LEU:HA	1.62	0.41
1:G:675:ASP:OD1	1:G:675:ASP:N	2.50	0.41
1:J:608:LEU:CD2	1:J:707:ASN:HA	2.50	0.41
1:L:676:LEU:HD23	1:L:676:LEU:HA	1.90	0.41
1:E:676:LEU:HD23	1:E:676:LEU:HA	1.65	0.41
1:D:541:ASN:CG	1:K:749:ARG:NH1	2.73	0.41
1:F:535:ARG:HB3	1:F:540:ILE:HD12	2.02	0.41
1:A:488:GLN:HA	1:A:489:PRO:HD3	1.88	0.41
1:F:449:ARG:NH1	1:F:637:TYR:O	2.54	0.41
1:L:608:LEU:CD2	1:L:707:ASN:HA	2.51	0.41
1:H:676:LEU:HD23	1:H:676:LEU:HA	1.81	0.41
1:I:686:THR:HG22	1:I:693:MET:HE1	2.02	0.41
1:C:642:PRO:HG2	1:C:676:LEU:HD12	2.02	0.41
1:B:551:ASP:HA	1:B:552:PRO:HD2	1.83	0.41
1:B:629:LEU:HD23	1:B:629:LEU:HA	1.84	0.41
1:B:775:LYS:HE2	1:B:775:LYS:HB3	1.87	0.41
1:F:467:PRO:HA	1:F:492:LEU:HB2	2.03	0.41
1:F:478:LEU:HA	1:F:478:LEU:HD23	1.75	0.41
1:G:729:LYS:HZ3	1:H:729:LYS:H	1.68	0.41
1:J:481:LEU:HD21	1:J:760:VAL:CG1	2.51	0.41
1:L:482:VAL:HG23	1:L:509:LEU:HD23	2.03	0.41
1:L:589:VAL:HG11	1:L:595:PRO:HD3	2.03	0.41
1:L:605:ASP:OD1	1:L:606:LYS:N	2.51	0.41
1:H:636:GLU:OE2	1:H:673:ARG:NH2	2.41	0.41
1:I:775:LYS:O	1:I:776:SER:OG	2.32	0.41
1:E:644:VAL:HG22	1:E:708:VAL:HB	2.03	0.41
1:C:449:ARG:HB3	1:C:765:LEU:HD21	2.03	0.41
1:D:560:VAL:CG2	1:D:587:ILE:HD11	2.50	0.41
1:D:581:ARG:HB3	1:D:582:PRO:HD3	2.02	0.41
1:F:644:VAL:HB	1:F:678:ILE:HG12	2.03	0.41
1:I:472:THR:O	1:I:476:LYS:HG3	2.21	0.41
1:E:447:ILE:HG12	1:E:486:ILE:HD11	2.03	0.41
1:D:723:LEU:O	1:D:727:ILE:HG12	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:754:ASP:OD1	1:D:754:ASP:N	2.38	0.40
1:B:605:ASP:OD1	1:B:606:LYS:HG2	2.21	0.40
1:F:481:LEU:HD11	1:F:757:VAL:HA	2.03	0.40
1:F:677:MET:HG3	1:F:701:GLY:O	2.20	0.40
1:G:636:GLU:HG3	1:G:642:PRO:HG3	2.03	0.40
1:G:651:ASN:HB3	1:G:697:PHE:CZ	2.56	0.40
1:I:478:LEU:HD11	1:I:491:LEU:HD11	2.03	0.40
1:K:676:LEU:HD23	1:K:676:LEU:HA	1.75	0.40
1:F:775:LYS:O	1:F:775:LYS:HG3	2.21	0.40
1:J:679:GLU:HG2	1:J:700:SER:OG	2.21	0.40
1:F:511:ASN:OD1	1:F:511:ASN:N	2.53	0.40
1:G:765:LEU:HD23	1:G:765:LEU:HA	1.92	0.40
1:J:488:GLN:HA	1:J:489:PRO:HD3	1.85	0.40
1:K:711:PHE:CD2	1:K:717:SER:HA	2.57	0.40
1:F:598:LEU:HD12	1:F:610:LEU:O	2.21	0.40
1:G:443:ILE:HD12	1:G:758:ASN:OD1	2.21	0.40
1:J:600:PHE:HB2	1:J:733:ILE:CG1	2.51	0.40
1:J:606:LYS:HG3	1:J:607:PHE:H	1.86	0.40
1:K:498:VAL:HG13	1:K:515:ILE:HD13	2.02	0.40
1:C:470:THR:O	1:C:501:LYS:NZ	2.49	0.40
1:C:728:GLY:HA2	1:D:728:GLY:O	2.22	0.40
1:A:497:ARG:O	1:A:500:GLU:HB2	2.21	0.40
1:A:628:ALA:HB1	1:A:644:VAL:HG11	2.02	0.40
1:L:481:LEU:HD21	1:L:760:VAL:HB	2.04	0.40
1:L:541:ASN:OD1	1:L:542:LEU:N	2.54	0.40
1:I:611:ALA:O	1:I:710:VAL:HA	2.22	0.40
1:I:651:ASN:HB3	1:I:697:PHE:CZ	2.56	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	338/362 (93%)	332 (98%)	6 (2%)	0	100	100
1	B	339/362 (94%)	336 (99%)	3 (1%)	0	100	100
1	C	336/362 (93%)	332 (99%)	4 (1%)	0	100	100
1	D	339/362 (94%)	334 (98%)	5 (2%)	0	100	100
1	E	338/362 (93%)	333 (98%)	5 (2%)	0	100	100
1	F	337/362 (93%)	331 (98%)	6 (2%)	0	100	100
1	G	338/362 (93%)	333 (98%)	5 (2%)	0	100	100
1	H	338/362 (93%)	335 (99%)	3 (1%)	0	100	100
1	I	338/362 (93%)	334 (99%)	4 (1%)	0	100	100
1	J	336/362 (93%)	331 (98%)	5 (2%)	0	100	100
1	K	338/362 (93%)	333 (98%)	5 (2%)	0	100	100
1	L	336/362 (93%)	332 (99%)	3 (1%)	1 (0%)	41	65
All	All	4051/4344 (93%)	3996 (99%)	54 (1%)	1 (0%)	100	100

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	L	508	PRO

5.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	281/301 (93%)	268 (95%)	13 (5%)	27	52
1	B	281/301 (93%)	272 (97%)	9 (3%)	39	67
1	C	282/301 (94%)	274 (97%)	8 (3%)	43	71
1	D	282/301 (94%)	272 (96%)	10 (4%)	36	63
1	E	282/301 (94%)	273 (97%)	9 (3%)	39	67
1	F	281/301 (93%)	278 (99%)	3 (1%)	73	89
1	G	282/301 (94%)	275 (98%)	7 (2%)	47	75

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	H	282/301 (94%)	275 (98%)	7 (2%)	47	75
1	I	282/301 (94%)	277 (98%)	5 (2%)	59	82
1	J	282/301 (94%)	273 (97%)	9 (3%)	39	67
1	K	282/301 (94%)	276 (98%)	6 (2%)	53	79
1	L	282/301 (94%)	271 (96%)	11 (4%)	32	59
All	All	3381/3612 (94%)	3284 (97%)	97 (3%)	42	70

All (97) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	C	476	LYS
1	C	482	VAL
1	C	498	VAL
1	C	609	VAL
1	C	614	THR
1	C	703	LYS
1	C	721	TYR
1	C	729	LYS
1	D	441	VAL
1	D	497	ARG
1	D	498	VAL
1	D	509	LEU
1	D	535	ARG
1	D	609	VAL
1	D	643	ARG
1	D	703	LYS
1	D	721	TYR
1	D	752	THR
1	A	453	ASN
1	A	482	VAL
1	A	509	LEU
1	A	510	LEU
1	A	511	ASN
1	A	512	ASP
1	A	528	VAL
1	A	574	ILE
1	A	721	TYR
1	A	771	LYS
1	A	772	GLU
1	A	774	LEU

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Mol	Chain	Res	Type
1	A	775	LYS
1	B	506	ASP
1	B	535	ARG
1	B	574	ILE
1	B	609	VAL
1	B	660	ARG
1	B	721	TYR
1	B	729	LYS
1	B	731	GLU
1	B	752	THR
1	F	453	ASN
1	F	510	LEU
1	F	721	TYR
1	G	528	VAL
1	G	709	LEU
1	G	721	TYR
1	G	729	LYS
1	G	748	GLN
1	G	750	THR
1	G	752	THR
1	J	439	SER
1	J	441	VAL
1	J	498	VAL
1	J	515	ILE
1	J	569	VAL
1	J	592	GLU
1	J	721	TYR
1	J	727	ILE
1	J	774	LEU
1	L	441	VAL
1	L	457	ASN
1	L	515	ILE
1	L	525	PHE
1	L	528	VAL
1	L	541	ASN
1	L	591	LYS
1	L	614	THR
1	L	703	LYS
1	L	721	TYR
1	L	765	LEU
1	H	444	ARG
1	H	482	VAL

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Mol	Chain	Res	Type
1	H	509	LEU
1	H	526	SER
1	H	658	THR
1	H	703	LYS
1	H	721	TYR
1	I	542	LEU
1	I	658	THR
1	I	703	LYS
1	I	721	TYR
1	I	727	ILE
1	K	449	ARG
1	K	482	VAL
1	K	609	VAL
1	K	658	THR
1	K	721	TYR
1	K	754	ASP
1	E	443	ILE
1	E	449	ARG
1	E	510	LEU
1	E	512	ASP
1	E	514	SER
1	E	609	VAL
1	E	721	TYR
1	E	729	LYS
1	E	731	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (10) such sidechains are listed below:

Mol	Chain	Res	Type
1	C	768	GLN
1	D	541	ASN
1	A	768	GLN
1	F	758	ASN
1	L	562	GLN
1	H	453	ASN
1	H	768	GLN
1	I	517	HIS
1	I	748	GLN
1	E	758	ASN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains [i](#)

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

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 [i](#)

6.1 Protein, DNA and RNA chains [i](#)

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	340/362 (93%)	0.56	27 (7%) 12 11	48, 81, 150, 174	0
1	B	341/362 (94%)	0.44	13 (3%) 40 40	42, 72, 131, 182	0
1	C	338/362 (93%)	0.40	11 (3%) 46 47	36, 63, 119, 183	0
1	D	341/362 (94%)	0.45	12 (3%) 44 44	33, 67, 123, 187	0
1	E	340/362 (93%)	0.69	30 (8%) 10 8	32, 89, 144, 202	0
1	F	339/362 (93%)	0.91	54 (15%) 1 1	61, 100, 154, 187	0
1	G	340/362 (93%)	0.43	5 (1%) 73 76	42, 69, 115, 178	0
1	H	340/362 (93%)	0.63	30 (8%) 10 8	32, 81, 139, 196	0
1	I	340/362 (93%)	0.84	36 (10%) 6 4	32, 87, 160, 241	0
1	J	338/362 (93%)	0.60	24 (7%) 16 14	32, 77, 121, 184	0
1	K	340/362 (93%)	0.60	26 (7%) 13 12	32, 75, 136, 222	0
1	L	338/362 (93%)	0.86	47 (13%) 2 2	36, 89, 171, 267	0
All	All	4075/4344 (93%)	0.62	315 (7%) 13 12	32, 79, 145, 267	0

All (315) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	K	572	SER	9.4
1	K	573	SER	7.0
1	A	774	LEU	6.7
1	E	749	ARG	6.4
1	F	601	VAL	6.1
1	L	472	THR	6.0
1	J	442	PHE	5.5
1	F	572	SER	5.5
1	E	572	SER	5.5
1	I	751	THR	5.4
1	I	574	ILE	5.4

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Mol	Chain	Res	Type	RSRZ
1	F	500	GLU	5.3
1	I	492	LEU	5.3
1	L	565	ALA	5.0
1	F	494	TYR	4.9
1	E	496	GLU	4.9
1	G	729	LYS	4.8
1	A	605	ASP	4.8
1	F	503	LYS	4.6
1	E	504	ALA	4.6
1	J	761	VAL	4.5
1	I	572	SER	4.5
1	I	510	LEU	4.5
1	G	750	THR	4.4
1	J	474	VAL	4.4
1	I	490	ILE	4.4
1	J	640	ILE	4.3
1	L	490	ILE	4.3
1	H	729	LYS	4.3
1	D	605	ASP	4.3
1	L	473	LYS	4.2
1	F	607	PHE	4.2
1	L	487	CYS	4.1
1	A	733	ILE	4.1
1	F	497	ARG	4.1
1	L	489	PRO	4.0
1	J	605	ASP	4.0
1	E	547	ARG	3.9
1	H	600	PHE	3.9
1	F	505	LEU	3.9
1	B	750	THR	3.8
1	L	466	PHE	3.8
1	F	703	LYS	3.8
1	F	492	LEU	3.7
1	L	464	ILE	3.7
1	F	608	LEU	3.7
1	F	696	LEU	3.7
1	L	501	LYS	3.6
1	L	493	GLY	3.6
1	L	749	ARG	3.6
1	H	574	ILE	3.6
1	B	762	PHE	3.5
1	A	638	PHE	3.5

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Mol	Chain	Res	Type	RSRZ
1	L	559	MET	3.5
1	E	498	VAL	3.5
1	K	456	ALA	3.5
1	L	560	VAL	3.5
1	A	442	PHE	3.4
1	A	443	ILE	3.4
1	K	759	SER	3.4
1	J	746	VAL	3.4
1	I	762	PHE	3.4
1	I	442	PHE	3.4
1	F	750	THR	3.4
1	I	498	VAL	3.4
1	L	462	PRO	3.4
1	I	518	PRO	3.4
1	L	510	LEU	3.4
1	L	525	PHE	3.4
1	I	749	ARG	3.3
1	L	465	VAL	3.3
1	I	465	VAL	3.3
1	E	494	TYR	3.3
1	C	481	LEU	3.3
1	F	504	ALA	3.3
1	L	502	ILE	3.3
1	H	443	ILE	3.3
1	D	547	ARG	3.2
1	H	605	ASP	3.2
1	B	547	ARG	3.2
1	I	637	TYR	3.2
1	F	720	ALA	3.2
1	F	610	LEU	3.2
1	H	598	LEU	3.2
1	B	546	GLU	3.2
1	E	774	LEU	3.2
1	L	762	PHE	3.1
1	E	574	ILE	3.1
1	C	505	LEU	3.1
1	L	492	LEU	3.1
1	H	762	PHE	3.1
1	F	583	ILE	3.1
1	K	750	THR	3.1
1	G	749	ARG	3.1
1	K	497	ARG	3.1

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Mol	Chain	Res	Type	RSRZ
1	L	569	VAL	3.1
1	L	564	GLU	3.1
1	K	574	ILE	3.1
1	I	766	GLU	3.1
1	K	638	PHE	3.1
1	E	583	ILE	3.1
1	L	748	GLN	3.1
1	H	760	VAL	3.0
1	F	478	LEU	3.0
1	F	723	LEU	3.0
1	I	743	SER	3.0
1	B	524	TYR	3.0
1	L	555	PHE	3.0
1	I	573	SER	3.0
1	F	506	ASP	3.0
1	I	605	ASP	3.0
1	H	571	GLY	3.0
1	F	507	ILE	3.0
1	E	762	PHE	3.0
1	E	481	LEU	2.9
1	F	438	HIS	2.9
1	K	571	GLY	2.9
1	I	555	PHE	2.9
1	F	747	LEU	2.9
1	L	498	VAL	2.9
1	L	631	ALA	2.9
1	C	547	ARG	2.9
1	L	640	ILE	2.9
1	H	638	PHE	2.9
1	D	478	LEU	2.9
1	B	603	LEU	2.9
1	C	605	ASP	2.9
1	H	570	SER	2.9
1	I	475	LEU	2.9
1	J	515	ILE	2.8
1	K	724	ILE	2.8
1	I	446	ALA	2.8
1	J	569	VAL	2.8
1	E	750	THR	2.8
1	A	486	ILE	2.8
1	J	481	LEU	2.8
1	I	747	LEU	2.8

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Mol	Chain	Res	Type	RSRZ
1	K	478	LEU	2.8
1	E	747	LEU	2.8
1	A	773	VAL	2.8
1	F	493	GLY	2.8
1	L	547	ARG	2.8
1	F	711	PHE	2.8
1	F	732	VAL	2.8
1	A	598	LEU	2.8
1	J	547	ARG	2.8
1	H	733	ILE	2.8
1	K	607	PHE	2.8
1	B	749	ARG	2.8
1	A	446	ALA	2.7
1	I	635	VAL	2.7
1	J	765	LEU	2.7
1	H	749	ARG	2.7
1	H	572	SER	2.7
1	K	579	ALA	2.7
1	F	695	ARG	2.7
1	H	774	LEU	2.7
1	B	727	ILE	2.7
1	K	474	VAL	2.7
1	K	578	ASP	2.7
1	F	774	LEU	2.7
1	E	461	LEU	2.7
1	F	751	THR	2.7
1	L	524	TYR	2.7
1	H	634	ILE	2.7
1	D	760	VAL	2.6
1	L	516	VAL	2.6
1	J	747	LEU	2.6
1	F	554	TYR	2.6
1	A	547	ARG	2.6
1	F	547	ARG	2.6
1	E	503	LYS	2.6
1	L	497	ARG	2.6
1	I	607	PHE	2.6
1	K	762	PHE	2.6
1	C	771	LYS	2.6
1	J	480	THR	2.6
1	H	609	VAL	2.6
1	H	466	PHE	2.6

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Mol	Chain	Res	Type	RSRZ
1	I	491	LEU	2.6
1	I	627	ILE	2.6
1	I	769	TYR	2.6
1	I	569	VAL	2.6
1	I	464	ILE	2.6
1	A	603	LEU	2.6
1	F	550	ALA	2.5
1	E	505	LEU	2.5
1	L	563	GLY	2.5
1	E	470	THR	2.5
1	G	497	ARG	2.5
1	F	761	VAL	2.5
1	A	730	ALA	2.5
1	H	569	VAL	2.5
1	L	506	ASP	2.5
1	H	735	PRO	2.5
1	A	634	ILE	2.5
1	A	609	VAL	2.5
1	F	768	GLN	2.4
1	K	751	THR	2.4
1	F	548	LEU	2.4
1	H	776	SER	2.4
1	F	549	MET	2.4
1	J	606	LYS	2.4
1	L	747	LEU	2.4
1	D	603	LEU	2.4
1	D	606	LYS	2.4
1	H	547	ARG	2.4
1	E	720	ALA	2.4
1	L	515	ILE	2.4
1	F	688	VAL	2.4
1	F	762	PHE	2.4
1	J	706	ALA	2.4
1	A	756	ILE	2.4
1	L	486	ILE	2.4
1	E	691	GLU	2.4
1	C	475	LEU	2.4
1	E	751	THR	2.4
1	K	439	SER	2.4
1	D	641	GLU	2.4
1	B	542	LEU	2.4
1	F	446	ALA	2.4

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Mol	Chain	Res	Type	RSRZ
1	L	688	VAL	2.4
1	A	568	MET	2.3
1	J	446	ALA	2.3
1	H	440	LYS	2.3
1	D	502	ILE	2.3
1	I	756	ILE	2.3
1	J	516	VAL	2.3
1	L	542	LEU	2.3
1	K	486	ILE	2.3
1	A	747	LEU	2.3
1	J	576	TYR	2.3
1	H	676	LEU	2.3
1	H	747	LEU	2.3
1	I	721	TYR	2.3
1	D	591	LYS	2.3
1	L	463	ARG	2.3
1	A	493	GLY	2.3
1	E	610	LEU	2.3
1	J	607	PHE	2.3
1	I	634	ILE	2.3
1	C	542	LEU	2.3
1	K	494	TYR	2.3
1	A	606	LYS	2.3
1	A	732	VAL	2.3
1	L	528	VAL	2.3
1	I	732	VAL	2.3
1	F	496	GLU	2.2
1	H	540	ILE	2.2
1	E	474	VAL	2.2
1	J	608	LEU	2.2
1	F	479	ALA	2.2
1	K	637	TYR	2.2
1	C	525	PHE	2.2
1	A	574	ILE	2.2
1	F	733	ILE	2.2
1	D	491	LEU	2.2
1	K	639	GLY	2.2
1	I	638	PHE	2.2
1	F	599	ASN	2.2
1	B	598	LEU	2.2
1	A	641	GLU	2.2
1	B	436	GLY	2.2

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Mol	Chain	Res	Type	RSRZ
1	L	488	GLN	2.2
1	B	442	PHE	2.2
1	F	513	VAL	2.2
1	F	552	PRO	2.2
1	E	542	LEU	2.2
1	C	504	ALA	2.2
1	E	497	ARG	2.1
1	H	761	VAL	2.1
1	A	478	LEU	2.1
1	A	696	LEU	2.1
1	E	456	ALA	2.1
1	J	604	GLU	2.1
1	J	574	ILE	2.1
1	K	581	ARG	2.1
1	D	542	LEU	2.1
1	F	574	ILE	2.1
1	L	567	GLY	2.1
1	C	637	TYR	2.1
1	A	770	ILE	2.1
1	F	491	LEU	2.1
1	F	470	THR	2.1
1	F	745	ASN	2.1
1	H	439	SER	2.1
1	H	736	PHE	2.1
1	K	736	PHE	2.1
1	L	491	LEU	2.1
1	E	732	VAL	2.1
1	F	508	PRO	2.1
1	B	688	VAL	2.1
1	F	465	VAL	2.1
1	G	481	LEU	2.1
1	J	487	CYS	2.1
1	I	456	ALA	2.1
1	E	573	SER	2.1
1	E	771	LYS	2.0
1	L	678	ILE	2.0
1	L	477	ALA	2.0
1	F	466	PHE	2.0
1	F	600	PHE	2.0
1	J	600	PHE	2.0
1	K	555	PHE	2.0
1	K	522	PRO	2.0

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Mol	Chain	Res	Type	RSRZ
1	A	496	GLU	2.0
1	E	729	LYS	2.0
1	D	774	LEU	2.0
1	F	647	LEU	2.0
1	L	461	LEU	2.0
1	I	745	ASN	2.0
1	C	469	GLY	2.0
1	L	544	GLU	2.0
1	H	548	LEU	2.0
1	I	542	LEU	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.