Full wwPDB X-ray Structure Validation Report ⓘ

May 22, 2020 – 04:44 am BST

PDB ID	:	6BBH
Title	:	The CRAC channel Orai in an unlatched-closed conformation; K163W loss-of-function mutation
Authors	:	Long, S.B.; Hou, X.; Burstein, S.
Deposited on	:	2017-10-18
Resolution	:	6.10 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 following versions of software and data (see references ⓘ) were used in the production of this report:

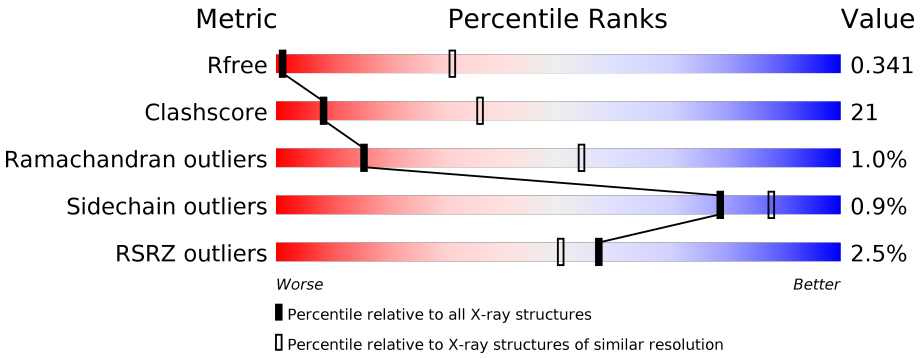
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.13
EDS	:	2.11
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.11

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 6.10 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	1002 (8.30-3.88)
Clashscore	141614	1051 (8.30-3.90)
Ramachandran outliers	138981	1018 (8.30-3.86)
Sidechain outliers	138945	1019 (8.30-3.82)
RSRZ outliers	127900	1015 (8.20-3.78)

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 on the lower bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	214	% 43% 26% • 30%
1	B	214	45% 25% 30%
1	C	214	3% 45% 24% • 30%
1	D	214	% 45% 24% • 30%
1	E	214	% 44% 25% 30%
1	F	214	44% 25% • 30%

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Mol	Chain	Length	Quality of chain
1	G	214	2% 44% 25% 30%
1	H	214	% 45% 23% 30%
1	I	214	44% 24% 30%
1	J	214	% 45% 24% 30%
1	K	214	2% 46% 23% 30%
1	L	214	% 43% 26% 30%
1	M	214	2% 43% 25% 30%
1	N	214	2% 45% 24% 30%
1	O	214	2% 45% 24% 30%
1	P	214	% 43% 26% 30%
1	Q	214	3% 42% 27% 30%
1	R	214	% 45% 23% 30%
1	S	214	3% 43% 26% 30%
1	T	214	2% 45% 24% 30%
1	U	214	3% 43% 26% 30%
1	V	214	5% 44% 25% 30%
1	W	214	3% 44% 25% 30%
1	X	214	% 41% 28% 30%

2 Entry composition

There is only 1 type of molecule in this entry. The entry contains 27360 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 Calcium release-activated calcium channel protein 1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	150	Total	C	N	O	S	0	0	0
			1140	761	178	190	11			
1	B	150	Total	C	N	O	S	0	0	0
			1140	761	178	190	11			
1	C	150	Total	C	N	O	S	0	0	0
			1140	761	178	190	11			
1	D	150	Total	C	N	O	S	0	0	0
			1140	761	178	190	11			
1	E	150	Total	C	N	O	S	0	0	0
			1140	761	178	190	11			
1	F	150	Total	C	N	O	S	0	0	0
			1140	761	178	190	11			
1	G	150	Total	C	N	O	S	0	0	0
			1140	761	178	190	11			
1	H	150	Total	C	N	O	S	0	0	0
			1140	761	178	190	11			
1	I	150	Total	C	N	O	S	0	0	0
			1140	761	178	190	11			
1	J	150	Total	C	N	O	S	0	0	0
			1140	761	178	190	11			
1	K	150	Total	C	N	O	S	0	0	0
			1140	761	178	190	11			
1	L	150	Total	C	N	O	S	0	0	0
			1140	761	178	190	11			
1	M	150	Total	C	N	O	S	0	0	0
			1140	761	178	190	11			
1	N	150	Total	C	N	O	S	0	0	0
			1140	761	178	190	11			
1	O	150	Total	C	N	O	S	0	0	0
			1140	761	178	190	11			
1	P	150	Total	C	N	O	S	0	0	0
			1140	761	178	190	11			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	Q	150	Total	C	N	O	S	0	0	0
			1140	761	178	190	11			
1	R	150	Total	C	N	O	S	0	0	0
			1140	761	178	190	11			
1	S	150	Total	C	N	O	S	0	0	0
			1140	761	178	190	11			
1	T	150	Total	C	N	O	S	0	0	0
			1140	761	178	190	11			
1	U	150	Total	C	N	O	S	0	0	0
			1140	761	178	190	11			
1	V	150	Total	C	N	O	S	0	0	0
			1140	761	178	190	11			
1	W	150	Total	C	N	O	S	0	0	0
			1140	761	178	190	11			
1	X	150	Total	C	N	O	S	0	0	0
			1140	761	178	190	11			

There are 192 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	163	TRP	LYS	engineered mutation	UNP Q9U6B8
A	224	SER	CYS	engineered mutation	UNP Q9U6B8
A	283	THR	CYS	engineered mutation	UNP Q9U6B8
A	342	GLU	-	expression tag	UNP Q9U6B8
A	343	GLY	-	expression tag	UNP Q9U6B8
A	344	GLU	-	expression tag	UNP Q9U6B8
A	345	GLU	-	expression tag	UNP Q9U6B8
A	346	PHE	-	expression tag	UNP Q9U6B8
B	163	TRP	LYS	engineered mutation	UNP Q9U6B8
B	224	SER	CYS	engineered mutation	UNP Q9U6B8
B	283	THR	CYS	engineered mutation	UNP Q9U6B8
B	342	GLU	-	expression tag	UNP Q9U6B8
B	343	GLY	-	expression tag	UNP Q9U6B8
B	344	GLU	-	expression tag	UNP Q9U6B8
B	345	GLU	-	expression tag	UNP Q9U6B8
B	346	PHE	-	expression tag	UNP Q9U6B8
C	163	TRP	LYS	engineered mutation	UNP Q9U6B8
C	224	SER	CYS	engineered mutation	UNP Q9U6B8
C	283	THR	CYS	engineered mutation	UNP Q9U6B8
C	342	GLU	-	expression tag	UNP Q9U6B8
C	343	GLY	-	expression tag	UNP Q9U6B8
C	344	GLU	-	expression tag	UNP Q9U6B8
C	345	GLU	-	expression tag	UNP Q9U6B8

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Chain	Residue	Modelled	Actual	Comment	Reference
C	346	PHE	-	expression tag	UNP Q9U6B8
D	163	TRP	LYS	engineered mutation	UNP Q9U6B8
D	224	SER	CYS	engineered mutation	UNP Q9U6B8
D	283	THR	CYS	engineered mutation	UNP Q9U6B8
D	342	GLU	-	expression tag	UNP Q9U6B8
D	343	GLY	-	expression tag	UNP Q9U6B8
D	344	GLU	-	expression tag	UNP Q9U6B8
D	345	GLU	-	expression tag	UNP Q9U6B8
D	346	PHE	-	expression tag	UNP Q9U6B8
E	163	TRP	LYS	engineered mutation	UNP Q9U6B8
E	224	SER	CYS	engineered mutation	UNP Q9U6B8
E	283	THR	CYS	engineered mutation	UNP Q9U6B8
E	342	GLU	-	expression tag	UNP Q9U6B8
E	343	GLY	-	expression tag	UNP Q9U6B8
E	344	GLU	-	expression tag	UNP Q9U6B8
E	345	GLU	-	expression tag	UNP Q9U6B8
E	346	PHE	-	expression tag	UNP Q9U6B8
F	163	TRP	LYS	engineered mutation	UNP Q9U6B8
F	224	SER	CYS	engineered mutation	UNP Q9U6B8
F	283	THR	CYS	engineered mutation	UNP Q9U6B8
F	342	GLU	-	expression tag	UNP Q9U6B8
F	343	GLY	-	expression tag	UNP Q9U6B8
F	344	GLU	-	expression tag	UNP Q9U6B8
F	345	GLU	-	expression tag	UNP Q9U6B8
F	346	PHE	-	expression tag	UNP Q9U6B8
G	163	TRP	LYS	engineered mutation	UNP Q9U6B8
G	224	SER	CYS	engineered mutation	UNP Q9U6B8
G	283	THR	CYS	engineered mutation	UNP Q9U6B8
G	342	GLU	-	expression tag	UNP Q9U6B8
G	343	GLY	-	expression tag	UNP Q9U6B8
G	344	GLU	-	expression tag	UNP Q9U6B8
G	345	GLU	-	expression tag	UNP Q9U6B8
G	346	PHE	-	expression tag	UNP Q9U6B8
H	163	TRP	LYS	engineered mutation	UNP Q9U6B8
H	224	SER	CYS	engineered mutation	UNP Q9U6B8
H	283	THR	CYS	engineered mutation	UNP Q9U6B8
H	342	GLU	-	expression tag	UNP Q9U6B8
H	343	GLY	-	expression tag	UNP Q9U6B8
H	344	GLU	-	expression tag	UNP Q9U6B8
H	345	GLU	-	expression tag	UNP Q9U6B8
H	346	PHE	-	expression tag	UNP Q9U6B8
I	163	TRP	LYS	engineered mutation	UNP Q9U6B8

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Chain	Residue	Modelled	Actual	Comment	Reference
I	224	SER	CYS	engineered mutation	UNP Q9U6B8
I	283	THR	CYS	engineered mutation	UNP Q9U6B8
I	342	GLU	-	expression tag	UNP Q9U6B8
I	343	GLY	-	expression tag	UNP Q9U6B8
I	344	GLU	-	expression tag	UNP Q9U6B8
I	345	GLU	-	expression tag	UNP Q9U6B8
I	346	PHE	-	expression tag	UNP Q9U6B8
J	163	TRP	LYS	engineered mutation	UNP Q9U6B8
J	224	SER	CYS	engineered mutation	UNP Q9U6B8
J	283	THR	CYS	engineered mutation	UNP Q9U6B8
J	342	GLU	-	expression tag	UNP Q9U6B8
J	343	GLY	-	expression tag	UNP Q9U6B8
J	344	GLU	-	expression tag	UNP Q9U6B8
J	345	GLU	-	expression tag	UNP Q9U6B8
J	346	PHE	-	expression tag	UNP Q9U6B8
K	163	TRP	LYS	engineered mutation	UNP Q9U6B8
K	224	SER	CYS	engineered mutation	UNP Q9U6B8
K	283	THR	CYS	engineered mutation	UNP Q9U6B8
K	342	GLU	-	expression tag	UNP Q9U6B8
K	343	GLY	-	expression tag	UNP Q9U6B8
K	344	GLU	-	expression tag	UNP Q9U6B8
K	345	GLU	-	expression tag	UNP Q9U6B8
K	346	PHE	-	expression tag	UNP Q9U6B8
L	163	TRP	LYS	engineered mutation	UNP Q9U6B8
L	224	SER	CYS	engineered mutation	UNP Q9U6B8
L	283	THR	CYS	engineered mutation	UNP Q9U6B8
L	342	GLU	-	expression tag	UNP Q9U6B8
L	343	GLY	-	expression tag	UNP Q9U6B8
L	344	GLU	-	expression tag	UNP Q9U6B8
L	345	GLU	-	expression tag	UNP Q9U6B8
L	346	PHE	-	expression tag	UNP Q9U6B8
M	163	TRP	LYS	engineered mutation	UNP Q9U6B8
M	224	SER	CYS	engineered mutation	UNP Q9U6B8
M	283	THR	CYS	engineered mutation	UNP Q9U6B8
M	342	GLU	-	expression tag	UNP Q9U6B8
M	343	GLY	-	expression tag	UNP Q9U6B8
M	344	GLU	-	expression tag	UNP Q9U6B8
M	345	GLU	-	expression tag	UNP Q9U6B8
M	346	PHE	-	expression tag	UNP Q9U6B8
N	163	TRP	LYS	engineered mutation	UNP Q9U6B8
N	224	SER	CYS	engineered mutation	UNP Q9U6B8
N	283	THR	CYS	engineered mutation	UNP Q9U6B8

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Chain	Residue	Modelled	Actual	Comment	Reference
N	342	GLU	-	expression tag	UNP Q9U6B8
N	343	GLY	-	expression tag	UNP Q9U6B8
N	344	GLU	-	expression tag	UNP Q9U6B8
N	345	GLU	-	expression tag	UNP Q9U6B8
N	346	PHE	-	expression tag	UNP Q9U6B8
O	163	TRP	LYS	engineered mutation	UNP Q9U6B8
O	224	SER	CYS	engineered mutation	UNP Q9U6B8
O	283	THR	CYS	engineered mutation	UNP Q9U6B8
O	342	GLU	-	expression tag	UNP Q9U6B8
O	343	GLY	-	expression tag	UNP Q9U6B8
O	344	GLU	-	expression tag	UNP Q9U6B8
O	345	GLU	-	expression tag	UNP Q9U6B8
O	346	PHE	-	expression tag	UNP Q9U6B8
P	163	TRP	LYS	engineered mutation	UNP Q9U6B8
P	224	SER	CYS	engineered mutation	UNP Q9U6B8
P	283	THR	CYS	engineered mutation	UNP Q9U6B8
P	342	GLU	-	expression tag	UNP Q9U6B8
P	343	GLY	-	expression tag	UNP Q9U6B8
P	344	GLU	-	expression tag	UNP Q9U6B8
P	345	GLU	-	expression tag	UNP Q9U6B8
P	346	PHE	-	expression tag	UNP Q9U6B8
Q	163	TRP	LYS	engineered mutation	UNP Q9U6B8
Q	224	SER	CYS	engineered mutation	UNP Q9U6B8
Q	283	THR	CYS	engineered mutation	UNP Q9U6B8
Q	342	GLU	-	expression tag	UNP Q9U6B8
Q	343	GLY	-	expression tag	UNP Q9U6B8
Q	344	GLU	-	expression tag	UNP Q9U6B8
Q	345	GLU	-	expression tag	UNP Q9U6B8
Q	346	PHE	-	expression tag	UNP Q9U6B8
R	163	TRP	LYS	engineered mutation	UNP Q9U6B8
R	224	SER	CYS	engineered mutation	UNP Q9U6B8
R	283	THR	CYS	engineered mutation	UNP Q9U6B8
R	342	GLU	-	expression tag	UNP Q9U6B8
R	343	GLY	-	expression tag	UNP Q9U6B8
R	344	GLU	-	expression tag	UNP Q9U6B8
R	345	GLU	-	expression tag	UNP Q9U6B8
R	346	PHE	-	expression tag	UNP Q9U6B8
S	163	TRP	LYS	engineered mutation	UNP Q9U6B8
S	224	SER	CYS	engineered mutation	UNP Q9U6B8
S	283	THR	CYS	engineered mutation	UNP Q9U6B8
S	342	GLU	-	expression tag	UNP Q9U6B8
S	343	GLY	-	expression tag	UNP Q9U6B8

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Chain	Residue	Modelled	Actual	Comment	Reference
S	344	GLU	-	expression tag	UNP Q9U6B8
S	345	GLU	-	expression tag	UNP Q9U6B8
S	346	PHE	-	expression tag	UNP Q9U6B8
T	163	TRP	LYS	engineered mutation	UNP Q9U6B8
T	224	SER	CYS	engineered mutation	UNP Q9U6B8
T	283	THR	CYS	engineered mutation	UNP Q9U6B8
T	342	GLU	-	expression tag	UNP Q9U6B8
T	343	GLY	-	expression tag	UNP Q9U6B8
T	344	GLU	-	expression tag	UNP Q9U6B8
T	345	GLU	-	expression tag	UNP Q9U6B8
T	346	PHE	-	expression tag	UNP Q9U6B8
U	163	TRP	LYS	engineered mutation	UNP Q9U6B8
U	224	SER	CYS	engineered mutation	UNP Q9U6B8
U	283	THR	CYS	engineered mutation	UNP Q9U6B8
U	342	GLU	-	expression tag	UNP Q9U6B8
U	343	GLY	-	expression tag	UNP Q9U6B8
U	344	GLU	-	expression tag	UNP Q9U6B8
U	345	GLU	-	expression tag	UNP Q9U6B8
U	346	PHE	-	expression tag	UNP Q9U6B8
V	163	TRP	LYS	engineered mutation	UNP Q9U6B8
V	224	SER	CYS	engineered mutation	UNP Q9U6B8
V	283	THR	CYS	engineered mutation	UNP Q9U6B8
V	342	GLU	-	expression tag	UNP Q9U6B8
V	343	GLY	-	expression tag	UNP Q9U6B8
V	344	GLU	-	expression tag	UNP Q9U6B8
V	345	GLU	-	expression tag	UNP Q9U6B8
V	346	PHE	-	expression tag	UNP Q9U6B8
W	163	TRP	LYS	engineered mutation	UNP Q9U6B8
W	224	SER	CYS	engineered mutation	UNP Q9U6B8
W	283	THR	CYS	engineered mutation	UNP Q9U6B8
W	342	GLU	-	expression tag	UNP Q9U6B8
W	343	GLY	-	expression tag	UNP Q9U6B8
W	344	GLU	-	expression tag	UNP Q9U6B8
W	345	GLU	-	expression tag	UNP Q9U6B8
W	346	PHE	-	expression tag	UNP Q9U6B8
X	163	TRP	LYS	engineered mutation	UNP Q9U6B8
X	224	SER	CYS	engineered mutation	UNP Q9U6B8
X	283	THR	CYS	engineered mutation	UNP Q9U6B8
X	342	GLU	-	expression tag	UNP Q9U6B8
X	343	GLY	-	expression tag	UNP Q9U6B8
X	344	GLU	-	expression tag	UNP Q9U6B8
X	345	GLU	-	expression tag	UNP Q9U6B8

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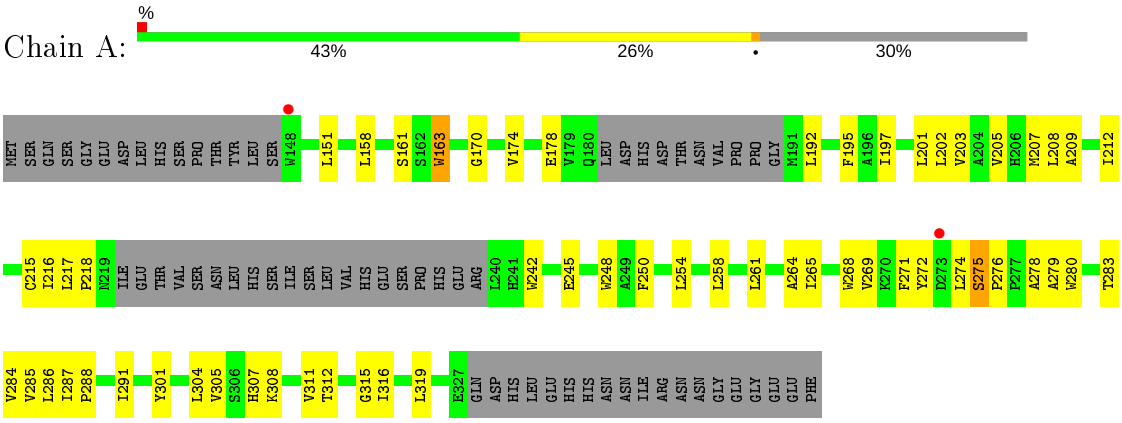
Chain	Residue	Modelled	Actual	Comment	Reference
X	346	PHE	-	expression tag	UNP Q9U6B8

3 Residue-property plots (i)

These plots are drawn for all protein, RNA and DNA 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.

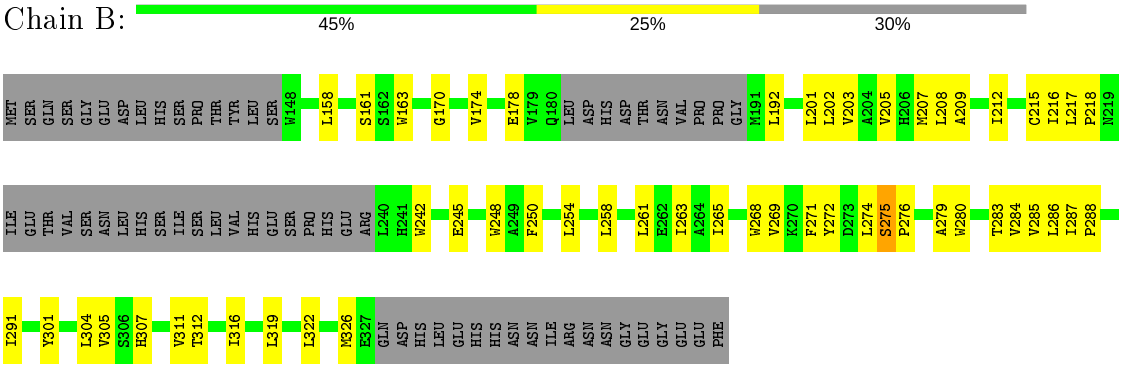
- Molecule 1: Calcium release-activated calcium channel protein 1

Chain A:



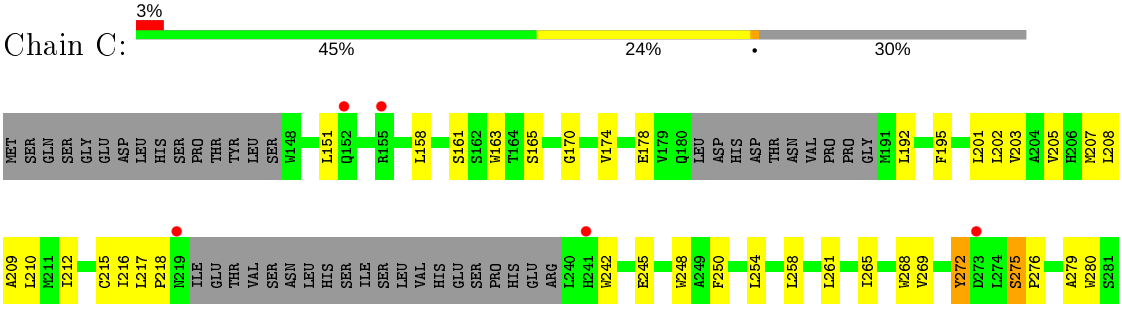
- Molecule 1: Calcium release-activated calcium channel protein 1

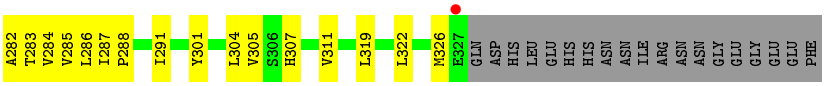
Chain B:



- Molecule 1: Calcium release-activated calcium channel protein 1

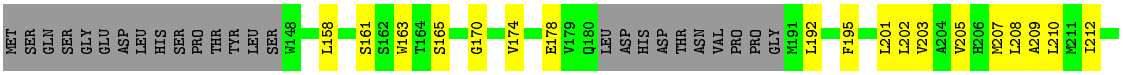
Chain C:

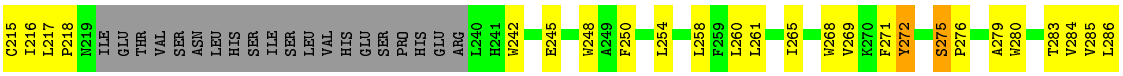


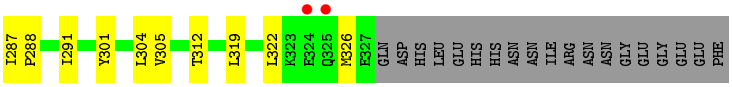


• Molecule 1: Calcium release-activated calcium channel protein 1

Chain D:

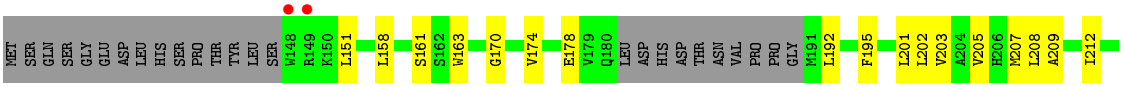


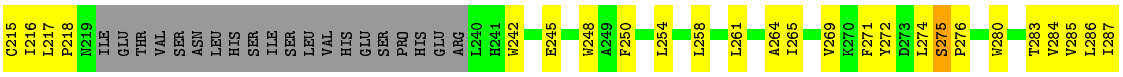


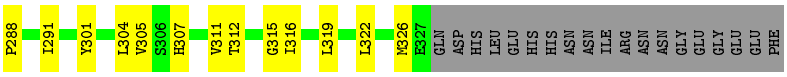


• Molecule 1: Calcium release-activated calcium channel protein 1

Chain E:

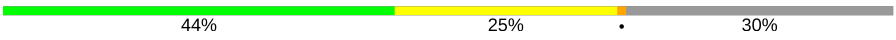


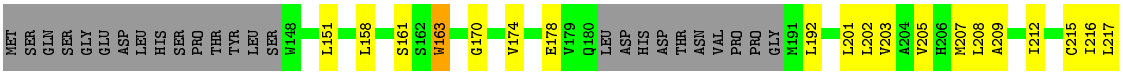


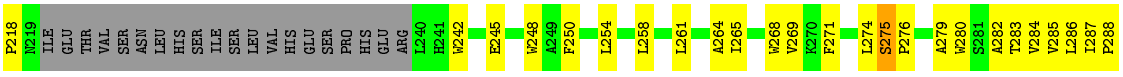


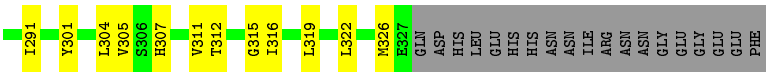
• Molecule 1: Calcium release-activated calcium channel protein 1

Chain F:



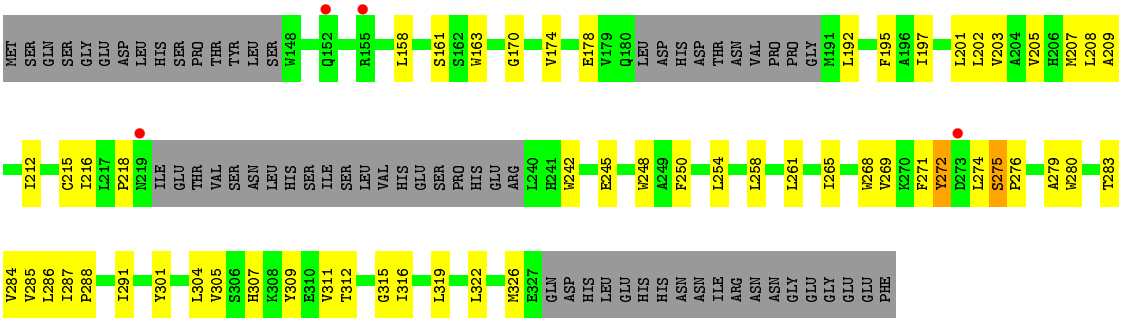






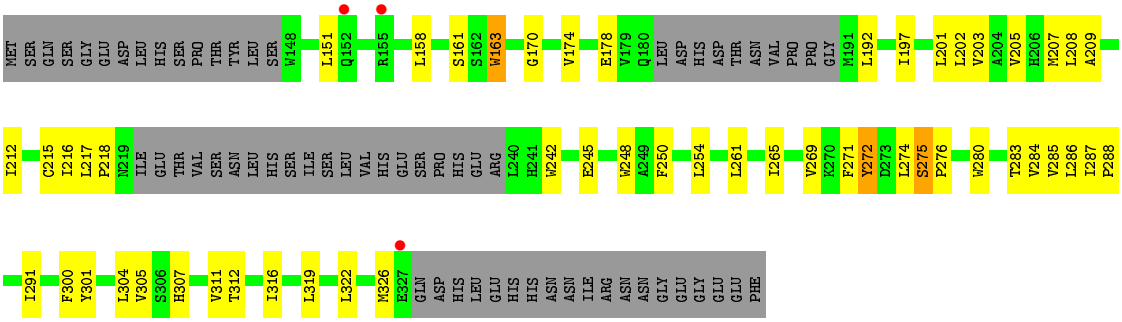
• Molecule 1: Calcium release-activated calcium channel protein 1

Chain G:



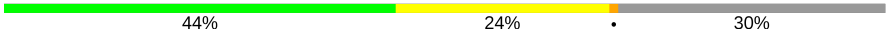
• Molecule 1: Calcium release-activated calcium channel protein 1

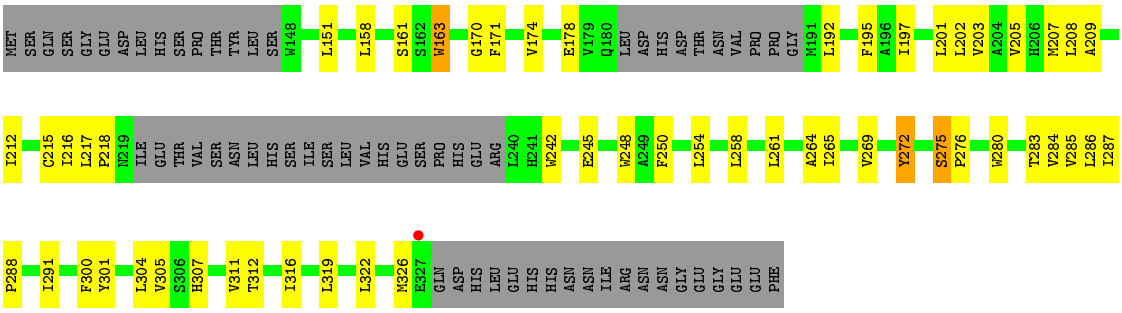
Chain H:



• Molecule 1: Calcium release-activated calcium channel protein 1

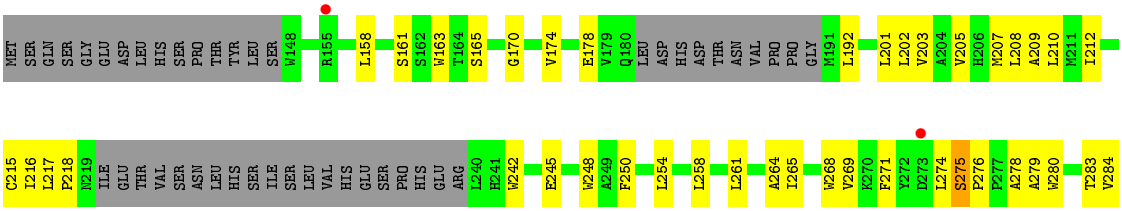
Chain I:

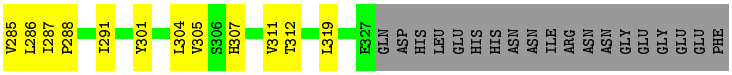




• Molecule 1: Calcium release-activated calcium channel protein 1

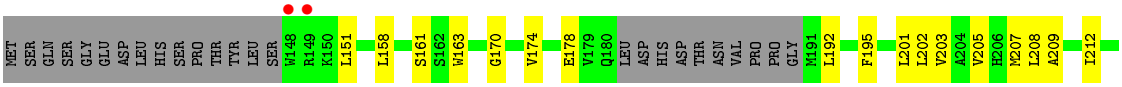
Chain J:

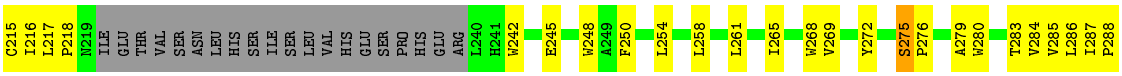


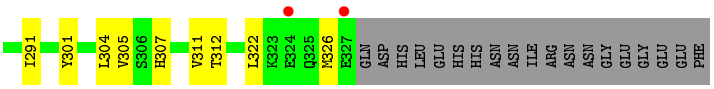


• Molecule 1: Calcium release-activated calcium channel protein 1

Chain K:

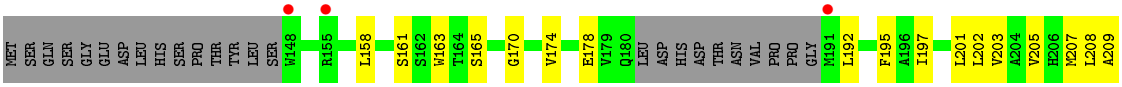


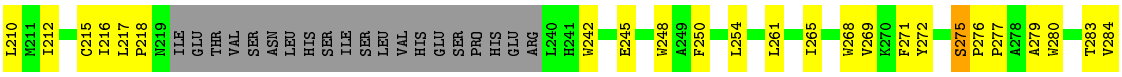


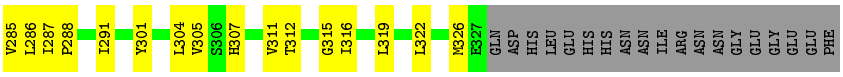


• Molecule 1: Calcium release-activated calcium channel protein 1

Chain L:

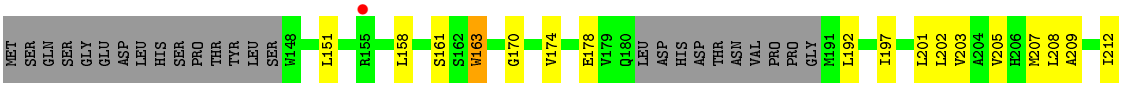


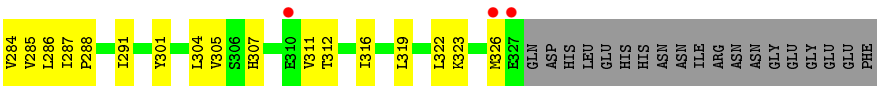




• Molecule 1: Calcium release-activated calcium channel protein 1

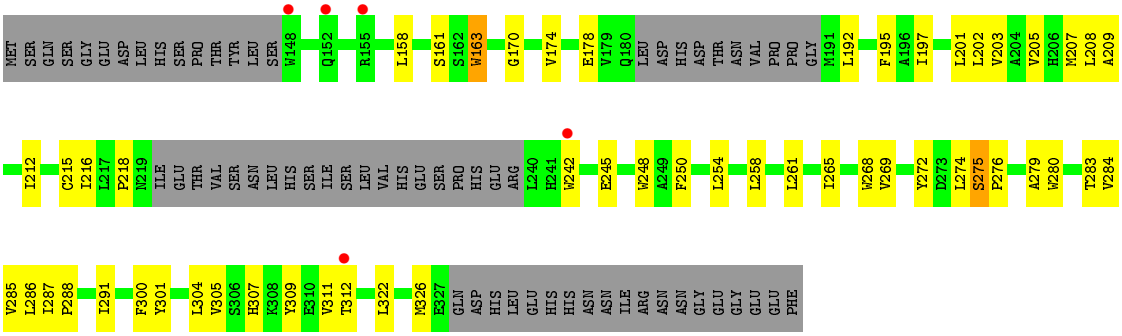
Chain M:





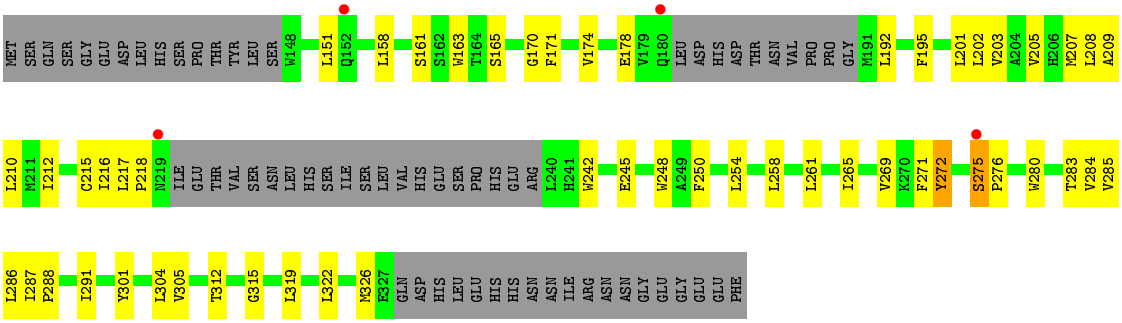
• Molecule 1: Calcium release-activated calcium channel protein 1

Chain N:



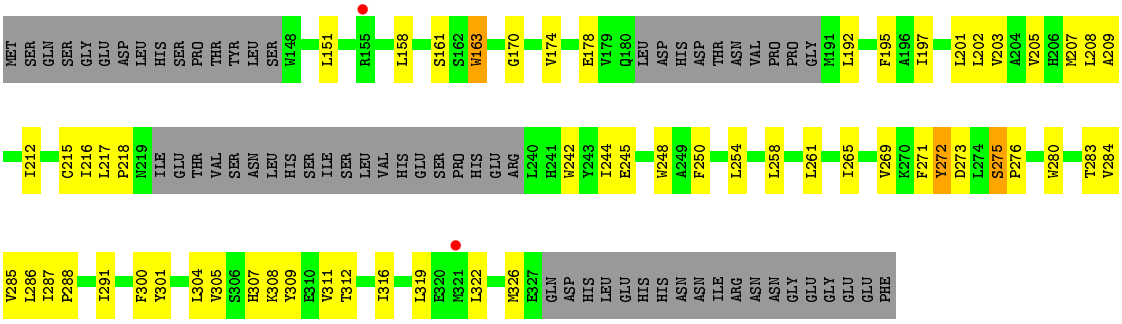
• Molecule 1: Calcium release-activated calcium channel protein 1

Chain O:



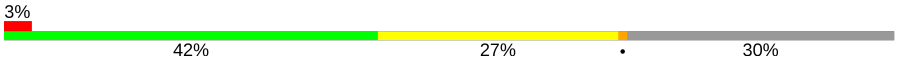
• Molecule 1: Calcium release-activated calcium channel protein 1

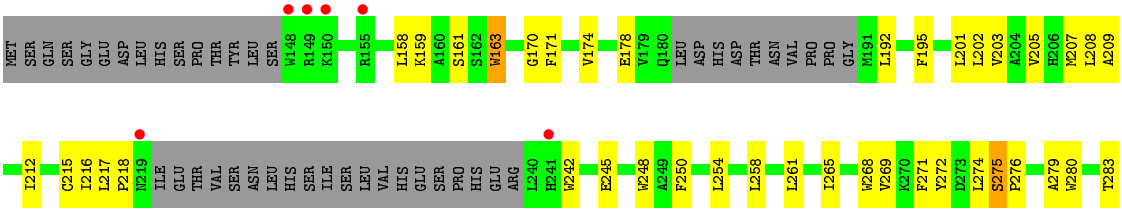
Chain P:

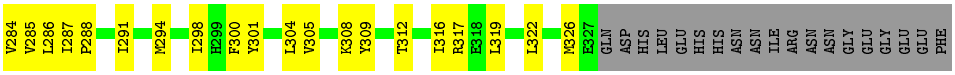


• Molecule 1: Calcium release-activated calcium channel protein 1

Chain Q:

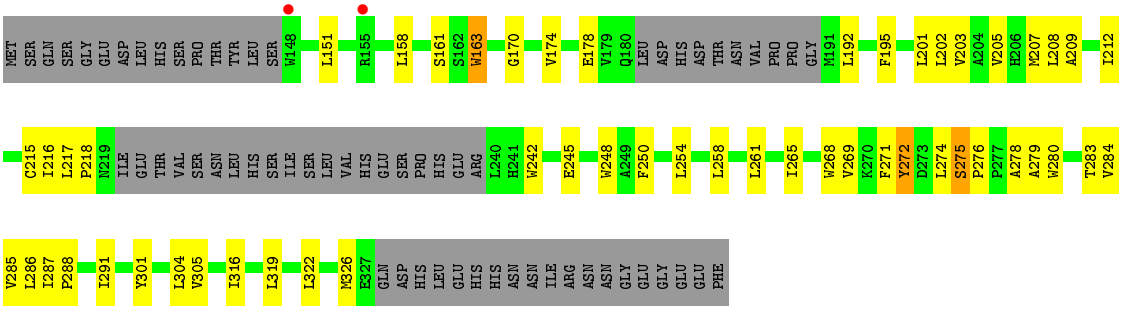






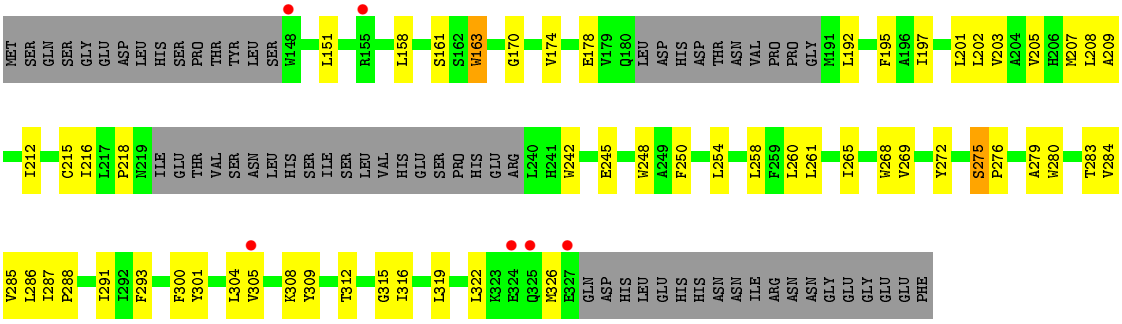
• Molecule 1: Calcium release-activated calcium channel protein 1

Chain R:



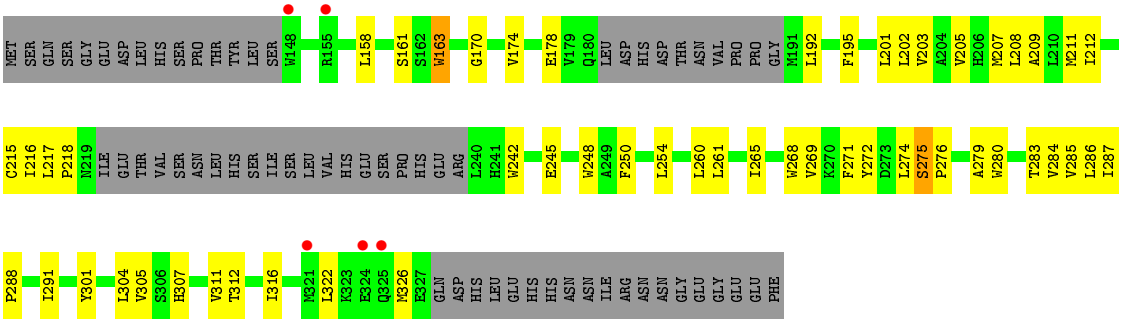
• Molecule 1: Calcium release-activated calcium channel protein 1

Chain S:



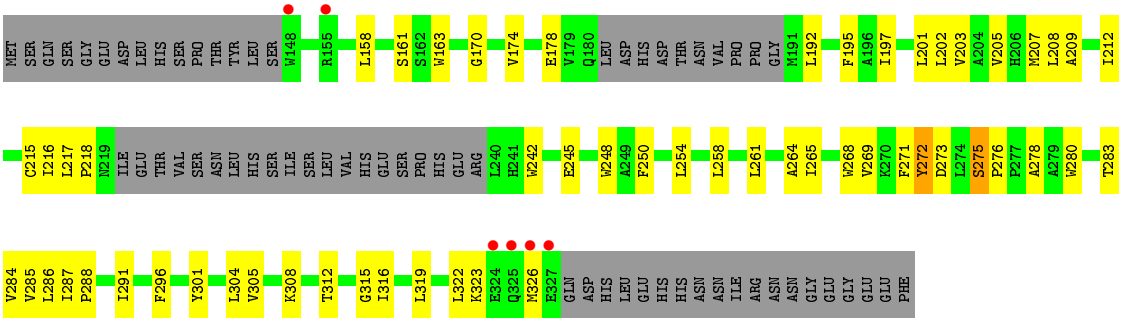
• Molecule 1: Calcium release-activated calcium channel protein 1

Chain T:



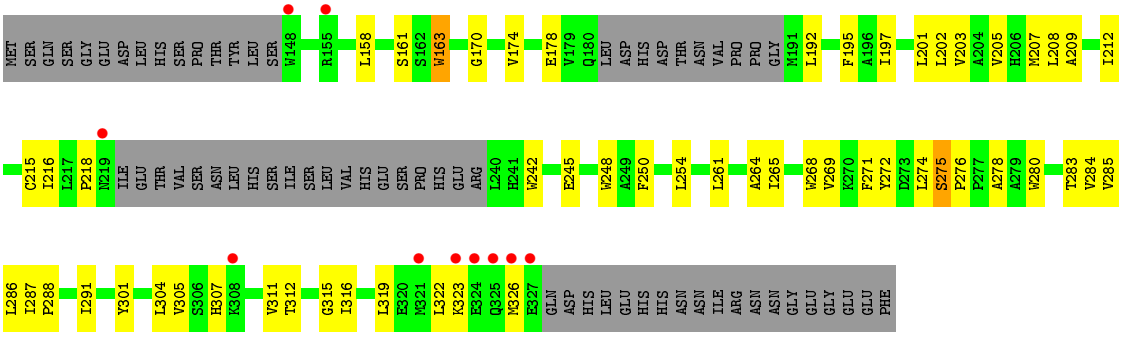
• Molecule 1: Calcium release-activated calcium channel protein 1

Chain U:



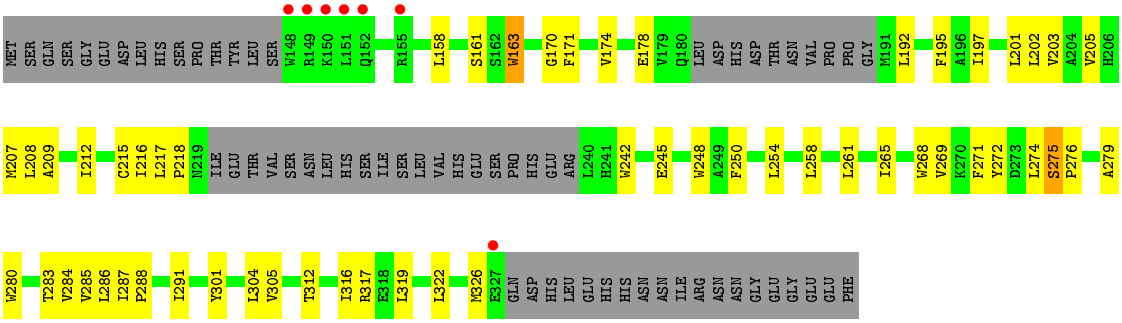
• Molecule 1: Calcium release-activated calcium channel protein 1

Chain V:



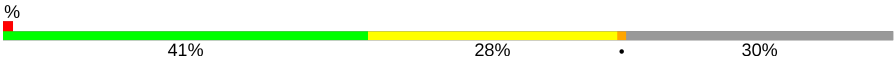
• Molecule 1: Calcium release-activated calcium channel protein 1

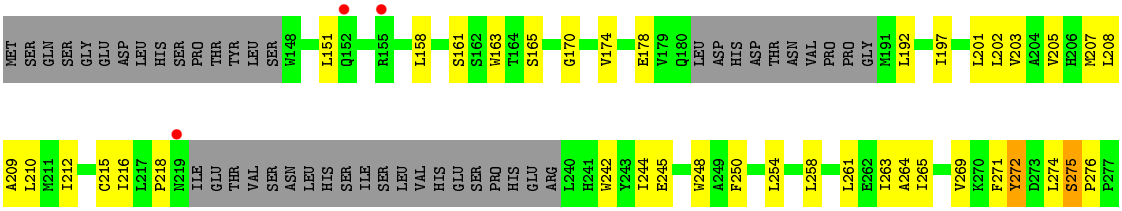
Chain W:



• Molecule 1: Calcium release-activated calcium channel protein 1

Chain X:






A278
A279
W280
T283
V284
V285
L286
I287
P288
I291
F300
Y301
L304
V305
S306
H307
V311
T312
V313
S314
G315
I316
R317
E318
L319
L322
K323
M326
E327
GLN
ASP
HIS
LEU
GLU
HIS
HIS
ASN
ASN
ILE
ARG
ASN
ASN
GLY
GLU
GLY
GLU
GLU
PHE

4 Data and refinement statistics (i)

Property	Value	Source
Space group	I 41	Depositor
Cell constants a, b, c, α, β, γ	247.46Å 247.46Å 210.16Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	19.99 – 6.10 19.99 – 6.10	Depositor EDS
% Data completeness (in resolution range)	99.7 (19.99-6.10) 100.0 (19.99-6.10)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.06	Depositor
$< I/\sigma(I) >$ [1]	1.41 (at 5.92Å)	Xtriage
Refinement program	PHENIX 1.12_2829	Depositor
R, R_{free}	0.314 , 0.341 0.314 , 0.341	Depositor DCC
R_{free} test set	1530 reflections (10.39%)	wwPDB-VP
Wilson B-factor (Å^2)	523.4	Xtriage
Anisotropy	0.135	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.23 , 460.3	EDS
L-test for twinning[2]	$< \|L\| > = 0.47$, $< L^2 > = 0.30$	Xtriage
Estimated twinning fraction	0.033 for -k,-h,-l	Xtriage
F_o,F_c correlation	0.89	EDS
Total number of atoms	27360	wwPDB-VP
Average B, all atoms (Å^2)	564.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.35% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

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

5 Model quality

5.1 Standard geometry

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|>5$	RMSZ	#$\|Z\|>5$
1	A	0.26	0/1168	0.43	0/1591
1	B	0.26	0/1168	0.43	0/1591
1	C	0.26	0/1168	0.43	0/1591
1	D	0.26	0/1168	0.43	0/1591
1	E	0.26	0/1168	0.43	0/1591
1	F	0.26	0/1168	0.43	0/1591
1	G	0.26	0/1168	0.43	0/1591
1	H	0.26	0/1168	0.43	0/1591
1	I	0.26	0/1168	0.43	0/1591
1	J	0.26	0/1168	0.43	0/1591
1	K	0.26	0/1168	0.43	0/1591
1	L	0.26	0/1168	0.43	0/1591
1	M	0.26	0/1168	0.43	0/1591
1	N	0.26	0/1168	0.43	0/1591
1	O	0.26	0/1168	0.43	0/1591
1	P	0.26	0/1168	0.43	0/1591
1	Q	0.26	0/1168	0.43	0/1591
1	R	0.26	0/1168	0.43	0/1591
1	S	0.26	0/1168	0.43	0/1591
1	T	0.26	0/1168	0.43	0/1591
1	U	0.26	0/1168	0.43	0/1591
1	V	0.26	0/1168	0.43	0/1591
1	W	0.26	0/1168	0.43	0/1591
1	X	0.26	0/1168	0.43	0/1591
All	All	0.26	0/28032	0.43	0/38184

There are no bond length outliers.

There are no bond angle outliers.

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	1140	0	1140	69	0
1	B	1140	0	1140	47	0
1	C	1140	0	1140	43	0
1	D	1140	0	1140	45	0
1	E	1140	0	1140	52	0
1	F	1140	0	1140	51	0
1	G	1140	0	1140	66	0
1	H	1140	0	1140	51	0
1	I	1140	0	1140	55	0
1	J	1140	0	1140	46	0
1	K	1140	0	1140	41	0
1	L	1140	0	1140	55	0
1	M	1140	0	1140	64	0
1	N	1140	0	1140	49	0
1	O	1140	0	1140	49	0
1	P	1140	0	1140	67	0
1	Q	1140	0	1140	75	0
1	R	1140	0	1140	53	0
1	S	1140	0	1140	61	0
1	T	1140	0	1140	59	0
1	U	1140	0	1140	77	0
1	V	1140	0	1140	68	0
1	W	1140	0	1140	54	0
1	X	1140	0	1140	59	0
All	All	27360	0	27360	1146	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 21.

All (1146) 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:319:LEU:HB3	1:G:312:THR:HG23	1.16	1.12
1:Q:312:THR:HG23	1:U:319:LEU:HB3	1.15	1.09
1:Q:312:THR:HA	1:U:319:LEU:HD22	1.27	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:312:THR:HG23	1:H:319:LEU:HB3	1.34	1.08
1:E:319:LEU:HB3	1:I:312:THR:HG23	1.35	1.07
1:M:322:LEU:HD21	1:S:308:LYS:HB3	1.35	1.06
1:B:319:LEU:HB3	1:L:312:THR:HG23	1.34	1.06
1:P:319:LEU:HB3	1:V:312:THR:HG23	1.38	1.05
1:M:319:LEU:HB3	1:S:312:THR:HG23	1.35	1.03
1:A:312:THR:HG23	1:G:319:LEU:HB3	1.41	1.01
1:Q:308:LYS:HB3	1:U:322:LEU:HD21	1.38	1.01
1:R:316:ILE:HG22	1:T:316:ILE:HG22	1.44	1.00
1:Q:316:ILE:HG22	1:U:316:ILE:HA	1.44	0.96
1:A:319:LEU:HD22	1:G:312:THR:HA	1.50	0.93
1:Q:312:THR:O	1:U:319:LEU:HD13	1.69	0.92
1:P:316:ILE:HA	1:V:316:ILE:HG22	1.50	0.92
1:Q:312:THR:HG23	1:U:319:LEU:CB	2.02	0.89
1:A:316:ILE:HA	1:G:316:ILE:HG22	1.54	0.89
1:Q:316:ILE:HG23	1:U:319:LEU:HD12	1.54	0.89
1:N:268:TRP:HA	1:N:279:ALA:HB1	1.53	0.88
1:R:319:LEU:HB3	1:T:312:THR:HG23	1.56	0.88
1:B:316:ILE:HG22	1:L:316:ILE:HG22	1.57	0.86
1:F:316:ILE:HG22	1:H:316:ILE:HG22	1.56	0.86
1:U:197:ILE:HG23	1:V:285:VAL:HG21	1.56	0.86
1:R:326:MET:SD	1:T:305:VAL:HG13	2.16	0.85
1:Q:312:THR:CG2	1:U:319:LEU:HB3	2.07	0.83
1:O:319:LEU:HB3	1:W:312:THR:HG23	1.59	0.82
1:A:319:LEU:HD13	1:G:312:THR:O	1.81	0.81
1:P:319:LEU:HD22	1:V:312:THR:HA	1.66	0.77
1:B:312:THR:HG23	1:L:319:LEU:HB3	1.67	0.77
1:Q:305:VAL:HG12	1:U:326:MET:SD	2.28	0.74
1:P:197:ILE:HG23	1:Q:285:VAL:HG21	1.69	0.74
1:I:192:LEU:HB3	1:J:278:ALA:HB2	1.70	0.73
1:M:197:ILE:HG23	1:N:285:VAL:HG21	1.70	0.73
1:C:319:LEU:HB3	1:K:312:THR:HG23	1.70	0.72
1:P:319:LEU:HD12	1:V:316:ILE:HG23	1.72	0.71
1:M:319:LEU:HD22	1:S:312:THR:HA	1.71	0.71
1:F:319:LEU:HB3	1:H:312:THR:HG23	1.72	0.70
1:A:319:LEU:HD12	1:G:316:ILE:HG23	1.73	0.70
1:Q:305:VAL:CG1	1:U:326:MET:SD	2.80	0.69
1:Q:316:ILE:CG2	1:U:319:LEU:HD12	2.23	0.69
1:T:268:TRP:CZ3	1:T:280:TRP:HA	2.28	0.68
1:L:268:TRP:HA	1:L:279:ALA:HB1	1.76	0.68
1:Q:309:TYR:HB2	1:U:326:MET:HE3	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Q:316:ILE:HG23	1:U:319:LEU:CD1	2.24	0.67
1:D:312:THR:HG23	1:J:319:LEU:HB3	1.75	0.67
1:P:305:VAL:HG13	1:V:326:MET:SD	2.34	0.67
1:Q:301:TYR:O	1:Q:305:VAL:HG23	1.95	0.67
1:M:203:VAL:O	1:M:207:MET:HG2	1.95	0.66
1:Q:308:LYS:CB	1:U:322:LEU:HD21	2.23	0.66
1:A:319:LEU:CB	1:G:312:THR:HG23	2.09	0.66
1:T:268:TRP:HA	1:T:279:ALA:HB1	1.78	0.66
1:V:287:ILE:HB	1:V:288:PRO:HD3	1.78	0.66
1:M:287:ILE:HB	1:M:288:PRO:HD3	1.78	0.66
1:P:312:THR:HG23	1:V:319:LEU:HB3	1.76	0.66
1:M:326:MET:SD	1:S:305:VAL:HG13	2.36	0.66
1:I:287:ILE:HB	1:I:288:PRO:HD3	1.78	0.65
1:F:287:ILE:HB	1:F:288:PRO:HD3	1.78	0.65
1:C:285:VAL:O	1:C:288:PRO:HD2	1.96	0.65
1:N:287:ILE:HB	1:N:288:PRO:HD3	1.79	0.65
1:S:203:VAL:O	1:S:207:MET:HG2	1.97	0.65
1:A:268:TRP:HA	1:A:279:ALA:HB1	1.78	0.65
1:C:215:CYS:O	1:C:218:PRO:HD2	1.96	0.65
1:F:268:TRP:HA	1:F:279:ALA:HB1	1.78	0.65
1:S:287:ILE:HB	1:S:288:PRO:HD3	1.79	0.65
1:L:215:CYS:O	1:L:218:PRO:HD2	1.97	0.64
1:B:287:ILE:HB	1:B:288:PRO:HD3	1.79	0.64
1:A:203:VAL:O	1:A:207:MET:HG2	1.97	0.64
1:A:287:ILE:HB	1:A:288:PRO:HD3	1.80	0.64
1:D:250:PHE:O	1:D:254:LEU:HG	1.98	0.64
1:B:285:VAL:O	1:B:288:PRO:HD2	1.97	0.64
1:A:285:VAL:O	1:A:288:PRO:HD2	1.98	0.64
1:D:287:ILE:HB	1:D:288:PRO:HD3	1.79	0.64
1:T:287:ILE:HB	1:T:288:PRO:HD3	1.78	0.64
1:Q:316:ILE:CG2	1:U:316:ILE:HA	2.23	0.64
1:N:215:CYS:O	1:N:218:PRO:HD2	1.97	0.64
1:Q:287:ILE:HB	1:Q:288:PRO:HD3	1.80	0.64
1:B:203:VAL:O	1:B:207:MET:HG2	1.98	0.64
1:E:312:THR:HG23	1:I:319:LEU:HB3	1.79	0.64
1:S:268:TRP:HA	1:S:279:ALA:HB1	1.79	0.64
1:A:215:CYS:O	1:A:218:PRO:HD2	1.98	0.64
1:G:215:CYS:O	1:G:218:PRO:HD2	1.98	0.64
1:P:287:ILE:HB	1:P:288:PRO:HD3	1.78	0.64
1:C:287:ILE:HB	1:C:288:PRO:HD3	1.80	0.63
1:A:319:LEU:HB3	1:G:312:THR:CG2	2.10	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:203:VAL:O	1:H:207:MET:HG2	1.99	0.63
1:T:215:CYS:O	1:T:218:PRO:HD2	1.98	0.63
1:Q:285:VAL:O	1:Q:288:PRO:HD2	1.98	0.63
1:G:287:ILE:HB	1:G:288:PRO:HD3	1.80	0.63
1:M:250:PHE:O	1:M:254:LEU:HG	1.99	0.63
1:E:285:VAL:O	1:E:288:PRO:HD2	1.98	0.63
1:T:250:PHE:O	1:T:254:LEU:HG	1.99	0.63
1:V:250:PHE:O	1:V:254:LEU:HG	1.99	0.63
1:P:308:LYS:HE3	1:V:322:LEU:HD21	1.80	0.63
1:F:250:PHE:O	1:F:254:LEU:HG	1.99	0.63
1:L:277:PRO:HB3	1:X:313:VAL:HG12	1.80	0.63
1:P:319:LEU:HD13	1:V:312:THR:O	1.97	0.63
1:R:319:LEU:HD13	1:T:312:THR:HA	1.81	0.63
1:U:287:ILE:HB	1:U:288:PRO:HD3	1.80	0.63
1:X:287:ILE:HB	1:X:288:PRO:HD3	1.81	0.63
1:E:287:ILE:HB	1:E:288:PRO:HD3	1.80	0.63
1:N:203:VAL:O	1:N:207:MET:HG2	1.99	0.62
1:I:285:VAL:O	1:I:288:PRO:HD2	1.98	0.62
1:M:326:MET:SD	1:S:305:VAL:CG1	2.86	0.62
1:O:203:VAL:O	1:O:207:MET:HG2	1.98	0.62
1:O:215:CYS:O	1:O:218:PRO:HD2	1.99	0.62
1:P:215:CYS:O	1:P:218:PRO:HD2	1.99	0.62
1:R:287:ILE:HB	1:R:288:PRO:HD3	1.81	0.62
1:D:215:CYS:O	1:D:218:PRO:HD2	2.00	0.62
1:H:287:ILE:HB	1:H:288:PRO:HD3	1.79	0.62
1:I:203:VAL:O	1:I:207:MET:HG2	1.99	0.62
1:Q:250:PHE:O	1:Q:254:LEU:HG	2.00	0.62
1:C:250:PHE:O	1:C:254:LEU:HG	1.99	0.62
1:P:203:VAL:O	1:P:207:MET:HG2	1.99	0.62
1:W:215:CYS:O	1:W:218:PRO:HD2	1.99	0.62
1:L:287:ILE:HB	1:L:288:PRO:HD3	1.80	0.62
1:O:250:PHE:O	1:O:254:LEU:HG	2.00	0.62
1:U:250:PHE:O	1:U:254:LEU:HG	1.99	0.62
1:J:287:ILE:HB	1:J:288:PRO:HD3	1.80	0.62
1:K:287:ILE:HB	1:K:288:PRO:HD3	1.81	0.62
1:B:215:CYS:O	1:B:218:PRO:HD2	1.99	0.62
1:N:250:PHE:O	1:N:254:LEU:HG	2.00	0.62
1:W:287:ILE:HB	1:W:288:PRO:HD3	1.80	0.62
1:G:250:PHE:O	1:G:254:LEU:HG	2.00	0.62
1:G:285:VAL:O	1:G:288:PRO:HD2	1.99	0.62
1:H:250:PHE:O	1:H:254:LEU:HG	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:215:CYS:O	1:J:218:PRO:HD2	1.99	0.62
1:R:250:PHE:O	1:R:254:LEU:HG	1.99	0.62
1:U:203:VAL:O	1:U:207:MET:HG2	2.00	0.62
1:U:215:CYS:O	1:U:218:PRO:HD2	1.99	0.62
1:F:215:CYS:O	1:F:218:PRO:HD2	2.00	0.61
1:V:203:VAL:O	1:V:207:MET:HG2	1.99	0.61
1:X:203:VAL:O	1:X:207:MET:HG2	2.00	0.61
1:K:203:VAL:O	1:K:207:MET:HG2	1.99	0.61
1:M:319:LEU:CB	1:S:312:THR:HG23	2.22	0.61
1:V:208:LEU:O	1:V:212:ILE:HG13	2.00	0.61
1:B:250:PHE:O	1:B:254:LEU:HG	2.00	0.61
1:D:285:VAL:O	1:D:288:PRO:HD2	2.00	0.61
1:E:203:VAL:O	1:E:207:MET:HG2	2.00	0.61
1:S:250:PHE:O	1:S:254:LEU:HG	2.00	0.61
1:O:208:LEU:O	1:O:212:ILE:HG13	2.00	0.61
1:W:203:VAL:O	1:W:207:MET:HG2	2.01	0.61
1:W:250:PHE:O	1:W:254:LEU:HG	2.01	0.61
1:J:250:PHE:O	1:J:254:LEU:HG	2.00	0.61
1:N:285:VAL:O	1:N:288:PRO:HD2	2.00	0.61
1:H:285:VAL:O	1:H:288:PRO:HD2	2.00	0.61
1:M:285:VAL:O	1:M:288:PRO:HD2	2.01	0.61
1:K:215:CYS:O	1:K:218:PRO:HD2	2.01	0.61
1:K:250:PHE:O	1:K:254:LEU:HG	2.00	0.61
1:L:277:PRO:HB3	1:X:313:VAL:CG1	2.31	0.61
1:E:215:CYS:O	1:E:218:PRO:HD2	2.00	0.61
1:I:215:CYS:O	1:I:218:PRO:HD2	2.00	0.61
1:R:203:VAL:O	1:R:207:MET:HG2	2.01	0.61
1:W:285:VAL:O	1:W:288:PRO:HD2	2.00	0.61
1:L:250:PHE:O	1:L:254:LEU:HG	2.01	0.61
1:P:250:PHE:O	1:P:254:LEU:HG	2.00	0.61
1:X:250:PHE:O	1:X:254:LEU:HG	2.01	0.61
1:N:312:THR:HG23	1:X:319:LEU:HB3	1.83	0.60
1:Q:203:VAL:O	1:Q:207:MET:HG2	2.01	0.60
1:S:215:CYS:O	1:S:218:PRO:HD2	2.01	0.60
1:S:285:VAL:HG21	1:X:197:ILE:HG23	1.83	0.60
1:I:250:PHE:O	1:I:254:LEU:HG	2.01	0.60
1:K:208:LEU:O	1:K:212:ILE:HG13	2.00	0.60
1:M:316:ILE:HG22	1:S:316:ILE:HG22	1.83	0.60
1:O:287:ILE:HB	1:O:288:PRO:HD3	1.81	0.60
1:A:278:ALA:HB2	1:F:192:LEU:HB3	1.83	0.60
1:D:203:VAL:O	1:D:207:MET:HG2	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:203:VAL:O	1:J:207:MET:HG2	2.01	0.60
1:Q:312:THR:HA	1:U:319:LEU:CD2	2.18	0.60
1:H:208:LEU:O	1:H:212:ILE:HG13	2.01	0.60
1:L:203:VAL:O	1:L:207:MET:HG2	2.01	0.60
1:E:250:PHE:O	1:E:254:LEU:HG	2.01	0.60
1:L:208:LEU:O	1:L:212:ILE:HG13	2.01	0.60
1:R:215:CYS:O	1:R:218:PRO:HD2	2.01	0.60
1:A:208:LEU:O	1:A:212:ILE:HG13	2.01	0.60
1:S:300:PHE:CD1	1:X:244:ILE:HD11	2.37	0.60
1:A:250:PHE:O	1:A:254:LEU:HG	2.01	0.60
1:K:268:TRP:HA	1:K:279:ALA:HB1	1.84	0.60
1:T:203:VAL:O	1:T:207:MET:HG2	2.02	0.59
1:T:285:VAL:O	1:T:288:PRO:HD2	2.01	0.59
1:S:208:LEU:O	1:S:212:ILE:HG13	2.01	0.59
1:M:215:CYS:O	1:M:218:PRO:HD2	2.03	0.59
1:W:208:LEU:O	1:W:212:ILE:HG13	2.02	0.59
1:X:215:CYS:O	1:X:218:PRO:HD2	2.01	0.59
1:D:319:LEU:HB3	1:J:312:THR:HG23	1.84	0.59
1:G:208:LEU:O	1:G:212:ILE:HG13	2.02	0.59
1:M:208:LEU:O	1:M:212:ILE:HG13	2.01	0.59
1:N:208:LEU:O	1:N:212:ILE:HG13	2.02	0.59
1:Q:208:LEU:O	1:Q:212:ILE:HG13	2.01	0.59
1:B:208:LEU:O	1:B:212:ILE:HG13	2.02	0.59
1:D:208:LEU:O	1:D:212:ILE:HG13	2.01	0.59
1:J:208:LEU:O	1:J:212:ILE:HG13	2.02	0.59
1:P:208:LEU:O	1:P:212:ILE:HG13	2.01	0.59
1:Q:215:CYS:O	1:Q:218:PRO:HD2	2.02	0.59
1:U:208:LEU:O	1:U:212:ILE:HG13	2.01	0.59
1:D:201:LEU:O	1:D:205:VAL:HG23	2.02	0.59
1:T:208:LEU:O	1:T:212:ILE:HG13	2.02	0.59
1:X:208:LEU:O	1:X:212:ILE:HG13	2.03	0.59
1:R:208:LEU:O	1:R:212:ILE:HG13	2.02	0.59
1:H:215:CYS:O	1:H:218:PRO:HD2	2.03	0.59
1:X:285:VAL:O	1:X:288:PRO:HD2	2.03	0.59
1:E:208:LEU:O	1:E:212:ILE:HG13	2.02	0.59
1:I:208:LEU:O	1:I:212:ILE:HG13	2.03	0.58
1:K:285:VAL:O	1:K:288:PRO:HD2	2.03	0.58
1:L:261:LEU:O	1:L:265:ILE:HG12	2.03	0.58
1:F:208:LEU:O	1:F:212:ILE:HG13	2.02	0.58
1:F:261:LEU:O	1:F:265:ILE:HG12	2.03	0.58
1:I:301:TYR:O	1:I:305:VAL:HG23	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:T:261:LEU:O	1:T:265:ILE:HG12	2.03	0.58
1:N:261:LEU:O	1:N:265:ILE:HG12	2.03	0.58
1:R:285:VAL:O	1:R:288:PRO:HD2	2.04	0.58
1:U:285:VAL:O	1:U:288:PRO:HD2	2.04	0.58
1:C:203:VAL:O	1:C:207:MET:HG2	2.02	0.58
1:C:261:LEU:O	1:C:265:ILE:HG12	2.03	0.58
1:V:215:CYS:O	1:V:218:PRO:HD2	2.03	0.58
1:D:205:VAL:HG11	1:D:254:LEU:HB2	1.86	0.58
1:O:261:LEU:O	1:O:265:ILE:HG12	2.03	0.58
1:G:261:LEU:O	1:G:265:ILE:HG12	2.04	0.58
1:M:201:LEU:O	1:M:205:VAL:HG23	2.03	0.58
1:C:208:LEU:O	1:C:212:ILE:HG13	2.04	0.58
1:K:201:LEU:O	1:K:205:VAL:HG23	2.04	0.58
1:R:261:LEU:O	1:R:265:ILE:HG12	2.03	0.58
1:A:261:LEU:O	1:A:265:ILE:HG12	2.04	0.58
1:V:264:ALA:CB	1:V:286:LEU:HD22	2.33	0.58
1:F:203:VAL:O	1:F:207:MET:HG2	2.03	0.58
1:G:203:VAL:O	1:G:207:MET:HG2	2.02	0.58
1:K:261:LEU:O	1:K:265:ILE:HG12	2.04	0.58
1:K:301:TYR:O	1:K:305:VAL:HG23	2.04	0.58
1:V:285:VAL:O	1:V:288:PRO:HD2	2.03	0.58
1:V:195:PHE:HD2	1:W:271:PHE:HZ	1.52	0.58
1:E:261:LEU:O	1:E:265:ILE:HG12	2.04	0.57
1:H:261:LEU:O	1:H:265:ILE:HG12	2.05	0.57
1:P:244:ILE:HD11	1:Q:300:PHE:CD1	2.39	0.57
1:Q:261:LEU:O	1:Q:265:ILE:HG12	2.04	0.57
1:Q:316:ILE:HG22	1:U:316:ILE:CA	2.26	0.57
1:W:261:LEU:O	1:W:265:ILE:HG12	2.04	0.57
1:X:264:ALA:CB	1:X:286:LEU:HD22	2.34	0.57
1:L:201:LEU:O	1:L:205:VAL:HG23	2.05	0.57
1:S:285:VAL:O	1:S:288:PRO:HD2	2.04	0.57
1:P:319:LEU:CD1	1:V:316:ILE:HG23	2.34	0.57
1:V:261:LEU:O	1:V:265:ILE:HG12	2.03	0.57
1:N:301:TYR:O	1:N:305:VAL:HG23	2.05	0.57
1:Q:309:TYR:HB2	1:U:326:MET:CE	2.34	0.57
1:R:205:VAL:HG11	1:R:254:LEU:HB2	1.86	0.57
1:S:205:VAL:HG11	1:S:254:LEU:HB2	1.87	0.57
1:Q:312:THR:CA	1:U:319:LEU:HD22	2.19	0.57
1:X:261:LEU:O	1:X:265:ILE:HG12	2.05	0.57
1:R:301:TYR:O	1:R:305:VAL:HG23	2.05	0.57
1:D:261:LEU:O	1:D:265:ILE:HG12	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:261:LEU:O	1:I:265:ILE:HG12	2.04	0.57
1:S:261:LEU:O	1:S:265:ILE:HG12	2.05	0.57
1:S:301:TYR:O	1:S:305:VAL:HG23	2.04	0.57
1:V:201:LEU:O	1:V:205:VAL:HG23	2.05	0.57
1:U:261:LEU:O	1:U:265:ILE:HG12	2.05	0.56
1:E:205:VAL:HG11	1:E:254:LEU:HB2	1.87	0.56
1:P:319:LEU:HD12	1:V:316:ILE:CG2	2.35	0.56
1:J:285:VAL:O	1:J:288:PRO:HD2	2.05	0.56
1:N:205:VAL:HG11	1:N:254:LEU:HB2	1.87	0.56
1:P:261:LEU:O	1:P:265:ILE:HG12	2.04	0.56
1:T:201:LEU:O	1:T:205:VAL:HG23	2.05	0.56
1:P:285:VAL:O	1:P:288:PRO:HD2	2.04	0.56
1:J:301:TYR:O	1:J:305:VAL:HG23	2.05	0.56
1:P:205:VAL:HG11	1:P:254:LEU:HB2	1.86	0.56
1:Q:201:LEU:O	1:Q:205:VAL:HG23	2.05	0.56
1:V:301:TYR:O	1:V:305:VAL:HG23	2.05	0.56
1:A:271:PHE:HB2	1:A:279:ALA:HB2	1.88	0.56
1:H:205:VAL:HG11	1:H:254:LEU:HB2	1.87	0.56
1:J:261:LEU:O	1:J:265:ILE:HG12	2.05	0.56
1:T:205:VAL:HG11	1:T:254:LEU:HB2	1.88	0.56
1:W:201:LEU:O	1:W:205:VAL:HG23	2.06	0.56
1:E:319:LEU:HD12	1:I:316:ILE:HG23	1.87	0.56
1:J:205:VAL:HG11	1:J:254:LEU:HB2	1.87	0.56
1:L:280:TRP:NE1	1:X:317:ARG:NH1	2.54	0.56
1:A:205:VAL:HG11	1:A:254:LEU:HB2	1.88	0.56
1:C:212:ILE:HA	1:C:215:CYS:SG	2.45	0.56
1:O:201:LEU:O	1:O:205:VAL:HG23	2.05	0.56
1:I:264:ALA:CB	1:I:286:LEU:HD22	2.36	0.56
1:O:285:VAL:O	1:O:288:PRO:HD2	2.06	0.56
1:R:201:LEU:O	1:R:205:VAL:HG23	2.06	0.56
1:N:309:TYR:HE1	1:X:323:LYS:HG3	1.71	0.56
1:E:301:TYR:O	1:E:305:VAL:HG23	2.05	0.56
1:G:205:VAL:HG11	1:G:254:LEU:HB2	1.88	0.56
1:L:205:VAL:HG11	1:L:254:LEU:HB2	1.87	0.56
1:U:205:VAL:HG11	1:U:254:LEU:HB2	1.88	0.56
1:H:201:LEU:O	1:H:205:VAL:HG23	2.06	0.56
1:I:201:LEU:O	1:I:205:VAL:HG23	2.06	0.56
1:L:285:VAL:O	1:L:288:PRO:HD2	2.05	0.55
1:P:201:LEU:O	1:P:205:VAL:HG23	2.06	0.55
1:S:201:LEU:O	1:S:205:VAL:HG23	2.07	0.55
1:V:197:ILE:HG23	1:W:285:VAL:HG21	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:201:LEU:O	1:X:205:VAL:HG23	2.06	0.55
1:O:205:VAL:HG11	1:O:254:LEU:HB2	1.88	0.55
1:C:201:LEU:O	1:C:205:VAL:HG23	2.07	0.55
1:M:261:LEU:O	1:M:265:ILE:HG12	2.06	0.55
1:C:205:VAL:HG11	1:C:254:LEU:HB2	1.88	0.55
1:K:205:VAL:HG11	1:K:254:LEU:HB2	1.88	0.55
1:X:205:VAL:HG11	1:X:254:LEU:HB2	1.89	0.55
1:N:197:ILE:HG23	1:O:285:VAL:HG21	1.88	0.55
1:P:301:TYR:O	1:P:305:VAL:HG23	2.06	0.55
1:O:312:THR:HG23	1:W:319:LEU:HB3	1.89	0.55
1:F:285:VAL:O	1:F:288:PRO:HD2	2.06	0.55
1:V:170:GLY:O	1:V:174:VAL:HG23	2.07	0.55
1:W:205:VAL:HG11	1:W:254:LEU:HB2	1.89	0.55
1:B:261:LEU:O	1:B:265:ILE:HG12	2.05	0.55
1:B:301:TYR:O	1:B:305:VAL:HG23	2.06	0.55
1:G:201:LEU:O	1:G:205:VAL:HG23	2.05	0.55
1:H:301:TYR:O	1:H:305:VAL:HG23	2.07	0.55
1:M:244:ILE:HD11	1:N:300:PHE:CD1	2.41	0.55
1:B:201:LEU:O	1:B:205:VAL:HG23	2.06	0.55
1:E:170:GLY:O	1:E:174:VAL:HG23	2.06	0.55
1:M:205:VAL:HG11	1:M:254:LEU:HB2	1.87	0.55
1:C:285:VAL:C	1:C:288:PRO:HD2	2.27	0.55
1:E:201:LEU:O	1:E:205:VAL:HG23	2.07	0.55
1:Q:309:TYR:O	1:Q:312:THR:HB	2.07	0.55
1:V:205:VAL:HG11	1:V:254:LEU:HB2	1.88	0.55
1:A:285:VAL:C	1:A:288:PRO:HD2	2.28	0.54
1:E:285:VAL:C	1:E:288:PRO:HD2	2.28	0.54
1:I:170:GLY:O	1:I:174:VAL:HG23	2.07	0.54
1:I:205:VAL:HG11	1:I:254:LEU:HB2	1.87	0.54
1:S:212:ILE:HA	1:S:215:CYS:SG	2.47	0.54
1:W:280:TRP:O	1:W:284:VAL:HG23	2.07	0.54
1:X:301:TYR:O	1:X:305:VAL:HG23	2.07	0.54
1:O:280:TRP:O	1:O:284:VAL:HG23	2.08	0.54
1:U:201:LEU:O	1:U:205:VAL:HG23	2.07	0.54
1:L:280:TRP:O	1:L:284:VAL:HG23	2.08	0.54
1:M:312:THR:HG23	1:S:319:LEU:HB3	1.89	0.54
1:B:170:GLY:O	1:B:174:VAL:HG23	2.07	0.54
1:Q:285:VAL:C	1:Q:288:PRO:HD2	2.28	0.54
1:P:309:TYR:HE1	1:V:323:LYS:HE2	1.71	0.54
1:C:301:TYR:O	1:C:305:VAL:HG23	2.08	0.54
1:J:201:LEU:O	1:J:205:VAL:HG23	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:170:GLY:O	1:N:174:VAL:HG23	2.08	0.54
1:U:301:TYR:O	1:U:305:VAL:HG23	2.08	0.54
1:V:195:PHE:CD2	1:W:271:PHE:HZ	2.26	0.54
1:F:280:TRP:O	1:F:284:VAL:HG23	2.08	0.54
1:Q:170:GLY:O	1:Q:174:VAL:HG23	2.07	0.54
1:S:212:ILE:O	1:S:216:ILE:HG13	2.08	0.54
1:U:170:GLY:O	1:U:174:VAL:HG23	2.08	0.54
1:U:315:GLY:O	1:U:319:LEU:HG	2.07	0.54
1:X:212:ILE:HA	1:X:215:CYS:SG	2.47	0.54
1:A:319:LEU:CD1	1:G:316:ILE:HG23	2.38	0.54
1:B:285:VAL:C	1:B:288:PRO:HD2	2.29	0.54
1:F:201:LEU:O	1:F:205:VAL:HG23	2.08	0.54
1:K:170:GLY:O	1:K:174:VAL:HG23	2.07	0.54
1:L:170:GLY:O	1:L:174:VAL:HG23	2.08	0.54
1:N:268:TRP:HA	1:N:279:ALA:CB	2.30	0.54
1:R:212:ILE:HA	1:R:215:CYS:SG	2.47	0.54
1:Q:316:ILE:HG22	1:U:316:ILE:HG22	1.90	0.54
1:A:195:PHE:CD2	1:B:271:PHE:HZ	2.25	0.54
1:G:285:VAL:C	1:G:288:PRO:HD2	2.28	0.54
1:H:170:GLY:O	1:H:174:VAL:HG23	2.07	0.54
1:I:212:ILE:HA	1:I:215:CYS:SG	2.47	0.54
1:Q:205:VAL:HG11	1:Q:254:LEU:HB2	1.88	0.54
1:A:201:LEU:O	1:A:205:VAL:HG23	2.07	0.53
1:B:205:VAL:HG11	1:B:254:LEU:HB2	1.89	0.53
1:H:212:ILE:HA	1:H:215:CYS:SG	2.48	0.53
1:D:280:TRP:O	1:D:284:VAL:HG23	2.07	0.53
1:M:301:TYR:O	1:M:305:VAL:HG23	2.09	0.53
1:P:170:GLY:O	1:P:174:VAL:HG23	2.08	0.53
1:U:192:LEU:HB3	1:V:278:ALA:HB2	1.90	0.53
1:W:212:ILE:HA	1:W:215:CYS:SG	2.48	0.53
1:F:212:ILE:HA	1:F:215:CYS:SG	2.48	0.53
1:L:277:PRO:CB	1:X:313:VAL:HG11	2.39	0.53
1:W:301:TYR:O	1:W:305:VAL:HG23	2.09	0.53
1:L:280:TRP:CD1	1:X:317:ARG:NH1	2.76	0.53
1:A:170:GLY:O	1:A:174:VAL:HG23	2.08	0.53
1:F:170:GLY:O	1:F:174:VAL:HG23	2.08	0.53
1:G:170:GLY:O	1:G:174:VAL:HG23	2.08	0.53
1:H:215:CYS:HB2	1:I:300:PHE:CE2	2.44	0.53
1:P:280:TRP:O	1:P:284:VAL:HG23	2.09	0.53
1:X:212:ILE:O	1:X:216:ILE:HG13	2.09	0.53
1:I:285:VAL:C	1:I:288:PRO:HD2	2.29	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:264:ALA:CB	1:J:286:LEU:HD22	2.39	0.53
1:M:280:TRP:O	1:M:284:VAL:HG23	2.08	0.53
1:N:201:LEU:O	1:N:205:VAL:HG23	2.09	0.53
1:U:212:ILE:HA	1:U:215:CYS:SG	2.49	0.53
1:U:280:TRP:O	1:U:284:VAL:HG23	2.09	0.53
1:W:170:GLY:O	1:W:174:VAL:HG23	2.09	0.53
1:X:170:GLY:O	1:X:174:VAL:HG23	2.09	0.53
1:N:212:ILE:O	1:N:216:ILE:HG13	2.09	0.53
1:C:195:PHE:CD2	1:D:271:PHE:HZ	2.27	0.52
1:L:301:TYR:O	1:L:305:VAL:HG23	2.09	0.52
1:O:170:GLY:O	1:O:174:VAL:HG23	2.09	0.52
1:P:212:ILE:O	1:P:216:ILE:HG13	2.09	0.52
1:V:280:TRP:O	1:V:284:VAL:HG23	2.08	0.52
1:A:212:ILE:HA	1:A:215:CYS:SG	2.49	0.52
1:G:212:ILE:HA	1:G:215:CYS:SG	2.49	0.52
1:A:316:ILE:HG22	1:G:316:ILE:HA	1.91	0.52
1:H:280:TRP:O	1:H:284:VAL:HG23	2.08	0.52
1:H:285:VAL:C	1:H:288:PRO:HD2	2.30	0.52
1:M:278:ALA:HB2	1:R:192:LEU:HB3	1.91	0.52
1:O:212:ILE:HA	1:O:215:CYS:SG	2.50	0.52
1:W:285:VAL:C	1:W:288:PRO:HD2	2.29	0.52
1:X:285:VAL:C	1:X:288:PRO:HD2	2.30	0.52
1:J:212:ILE:HA	1:J:215:CYS:SG	2.50	0.52
1:N:285:VAL:C	1:N:288:PRO:HD2	2.30	0.52
1:O:301:TYR:O	1:O:305:VAL:HG23	2.09	0.52
1:T:170:GLY:O	1:T:174:VAL:HG23	2.09	0.52
1:A:319:LEU:HD12	1:G:316:ILE:CG2	2.39	0.52
1:B:192:LEU:N	1:B:192:LEU:HD12	2.24	0.52
1:M:170:GLY:O	1:M:174:VAL:HG23	2.10	0.52
1:N:212:ILE:HA	1:N:215:CYS:SG	2.50	0.52
1:F:205:VAL:HG11	1:F:254:LEU:HB2	1.89	0.52
1:J:280:TRP:O	1:J:284:VAL:HG23	2.10	0.52
1:A:316:ILE:HG22	1:G:316:ILE:HG22	1.91	0.52
1:G:280:TRP:O	1:G:284:VAL:HG23	2.10	0.52
1:G:301:TYR:O	1:G:305:VAL:HG23	2.10	0.52
1:J:212:ILE:O	1:J:216:ILE:HG13	2.10	0.52
1:J:268:TRP:HA	1:J:279:ALA:HB1	1.91	0.52
1:P:212:ILE:HA	1:P:215:CYS:SG	2.49	0.52
1:F:301:TYR:O	1:F:305:VAL:HG23	2.08	0.52
1:I:192:LEU:HB3	1:J:278:ALA:CB	2.38	0.52
1:W:268:TRP:HA	1:W:279:ALA:HB1	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:212:ILE:HA	1:B:215:CYS:SG	2.50	0.52
1:C:280:TRP:O	1:C:284:VAL:HG23	2.10	0.52
1:Q:316:ILE:CB	1:U:316:ILE:HG22	2.40	0.52
1:X:280:TRP:O	1:X:284:VAL:HG23	2.10	0.52
1:A:264:ALA:CB	1:A:286:LEU:HD22	2.41	0.51
1:A:301:TYR:O	1:A:305:VAL:HG23	2.09	0.51
1:D:301:TYR:O	1:D:305:VAL:HG23	2.10	0.51
1:I:280:TRP:O	1:I:284:VAL:HG23	2.10	0.51
1:K:285:VAL:C	1:K:288:PRO:HD2	2.30	0.51
1:D:285:VAL:C	1:D:288:PRO:HD2	2.29	0.51
1:M:285:VAL:C	1:M:288:PRO:HD2	2.30	0.51
1:D:212:ILE:O	1:D:216:ILE:HG13	2.11	0.51
1:L:212:ILE:HA	1:L:215:CYS:SG	2.50	0.51
1:C:170:GLY:O	1:C:174:VAL:HG23	2.10	0.51
1:G:215:CYS:HB2	1:H:300:PHE:CE2	2.45	0.51
1:R:285:VAL:C	1:R:288:PRO:HD2	2.30	0.51
1:B:280:TRP:O	1:B:284:VAL:HG23	2.11	0.51
1:A:312:THR:HG23	1:G:319:LEU:CB	2.27	0.51
1:R:265:ILE:O	1:R:269:VAL:HG23	2.10	0.51
1:U:264:ALA:CB	1:U:286:LEU:HD22	2.41	0.51
1:L:277:PRO:HB2	1:X:313:VAL:HG11	1.92	0.51
1:A:316:ILE:HG22	1:G:316:ILE:CB	2.41	0.51
1:M:265:ILE:O	1:M:269:VAL:HG23	2.11	0.51
1:T:212:ILE:O	1:T:216:ILE:HG13	2.11	0.51
1:L:277:PRO:CB	1:X:313:VAL:CG1	2.89	0.51
1:A:276:PRO:O	1:A:280:TRP:HD1	1.94	0.51
1:K:280:TRP:O	1:K:284:VAL:HG23	2.11	0.51
1:T:192:LEU:HB3	1:U:278:ALA:CB	2.41	0.51
1:I:195:PHE:HD2	1:J:271:PHE:HZ	1.59	0.51
1:J:170:GLY:O	1:J:174:VAL:HG23	2.10	0.51
1:P:174:VAL:O	1:P:178:GLU:HG2	2.11	0.51
1:E:212:ILE:HA	1:E:215:CYS:SG	2.50	0.51
1:L:285:VAL:C	1:L:288:PRO:HD2	2.31	0.51
1:O:285:VAL:C	1:O:288:PRO:HD2	2.31	0.51
1:S:170:GLY:O	1:S:174:VAL:HG23	2.11	0.51
1:S:280:TRP:O	1:S:284:VAL:HG23	2.10	0.50
1:I:195:PHE:CD2	1:J:271:PHE:HZ	2.29	0.50
1:T:212:ILE:HA	1:T:215:CYS:SG	2.51	0.50
1:E:316:ILE:HG22	1:I:316:ILE:HG22	1.93	0.50
1:I:212:ILE:O	1:I:216:ILE:HG13	2.11	0.50
1:R:280:TRP:O	1:R:284:VAL:HG23	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:T:285:VAL:C	1:T:288:PRO:HD2	2.31	0.50
1:U:285:VAL:C	1:U:288:PRO:HD2	2.30	0.50
1:D:195:PHE:CD2	1:E:271:PHE:HZ	2.30	0.50
1:J:285:VAL:C	1:J:288:PRO:HD2	2.31	0.50
1:V:285:VAL:C	1:V:288:PRO:HD2	2.32	0.50
1:R:212:ILE:O	1:R:216:ILE:HG13	2.12	0.50
1:W:212:ILE:O	1:W:216:ILE:HG13	2.11	0.50
1:X:192:LEU:N	1:X:192:LEU:HD12	2.27	0.50
1:A:212:ILE:O	1:A:216:ILE:HG13	2.11	0.50
1:A:280:TRP:O	1:A:284:VAL:HG23	2.12	0.50
1:O:283:THR:O	1:O:286:LEU:HB3	2.11	0.50
1:Q:212:ILE:HA	1:Q:215:CYS:SG	2.52	0.50
1:D:170:GLY:O	1:D:174:VAL:HG23	2.10	0.50
1:F:265:ILE:O	1:F:269:VAL:HG23	2.12	0.50
1:F:285:VAL:C	1:F:288:PRO:HD2	2.32	0.50
1:L:174:VAL:O	1:L:178:GLU:HG2	2.12	0.50
1:N:265:ILE:O	1:N:269:VAL:HG23	2.11	0.50
1:Q:265:ILE:O	1:Q:269:VAL:HG23	2.12	0.50
1:Q:283:THR:O	1:Q:286:LEU:HB3	2.11	0.50
1:S:268:TRP:CZ3	1:S:280:TRP:HA	2.46	0.50
1:V:212:ILE:O	1:V:216:ILE:HG13	2.10	0.50
1:S:285:VAL:C	1:S:288:PRO:HD2	2.31	0.50
1:V:264:ALA:HB1	1:V:286:LEU:HD22	1.92	0.50
1:C:192:LEU:N	1:C:192:LEU:HD12	2.26	0.50
1:E:192:LEU:N	1:E:192:LEU:HD12	2.27	0.50
1:I:197:ILE:HG23	1:J:285:VAL:HG21	1.94	0.50
1:L:212:ILE:O	1:L:216:ILE:HG13	2.12	0.50
1:K:212:ILE:O	1:K:216:ILE:HG13	2.12	0.49
1:P:285:VAL:C	1:P:288:PRO:HD2	2.32	0.49
1:T:209:ALA:HA	1:T:212:ILE:HD12	1.94	0.49
1:G:212:ILE:O	1:G:216:ILE:HG13	2.12	0.49
1:F:319:LEU:HD13	1:H:312:THR:HA	1.95	0.49
1:I:192:LEU:HD12	1:I:192:LEU:N	2.27	0.49
1:L:304:LEU:HD23	1:L:304:LEU:C	2.33	0.49
1:R:170:GLY:O	1:R:174:VAL:HG23	2.11	0.49
1:U:212:ILE:O	1:U:216:ILE:HG13	2.12	0.49
1:A:265:ILE:O	1:A:269:VAL:HG23	2.12	0.49
1:E:280:TRP:O	1:E:284:VAL:HG23	2.12	0.49
1:P:192:LEU:N	1:P:192:LEU:HD12	2.27	0.49
1:T:272:TYR:O	1:T:276:PRO:HG3	2.13	0.49
1:P:309:TYR:CE1	1:V:323:LYS:HE2	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:192:LEU:HD12	1:A:192:LEU:N	2.27	0.49
1:B:212:ILE:O	1:B:216:ILE:HG13	2.11	0.49
1:F:212:ILE:O	1:F:216:ILE:HG13	2.13	0.49
1:J:265:ILE:O	1:J:269:VAL:HG23	2.12	0.49
1:M:192:LEU:HD12	1:M:192:LEU:N	2.28	0.49
1:T:192:LEU:N	1:T:192:LEU:HD12	2.28	0.49
1:U:283:THR:O	1:U:286:LEU:HB3	2.12	0.49
1:E:212:ILE:O	1:E:216:ILE:HG13	2.13	0.49
1:F:316:ILE:CG2	1:H:316:ILE:HG22	2.36	0.49
1:I:174:VAL:O	1:I:178:GLU:HG2	2.13	0.49
1:K:265:ILE:O	1:K:269:VAL:HG23	2.13	0.49
1:S:192:LEU:N	1:S:192:LEU:HD12	2.28	0.49
1:W:272:TYR:O	1:W:276:PRO:HG3	2.13	0.49
1:X:265:ILE:O	1:X:269:VAL:HG23	2.13	0.49
1:S:195:PHE:HD2	1:T:271:PHE:HZ	1.61	0.49
1:D:192:LEU:N	1:D:192:LEU:HD12	2.27	0.49
1:M:212:ILE:HA	1:M:215:CYS:SG	2.52	0.49
1:Q:316:ILE:HB	1:U:316:ILE:HG22	1.95	0.49
1:V:212:ILE:HA	1:V:215:CYS:SG	2.53	0.49
1:O:265:ILE:O	1:O:269:VAL:HG23	2.13	0.49
1:A:195:PHE:HD2	1:B:271:PHE:HZ	1.58	0.49
1:A:316:ILE:CA	1:G:316:ILE:HG22	2.33	0.49
1:U:287:ILE:O	1:U:291:ILE:HG13	2.13	0.49
1:A:304:LEU:C	1:A:304:LEU:HD23	2.34	0.48
1:H:212:ILE:O	1:H:216:ILE:HG13	2.12	0.48
1:O:192:LEU:N	1:O:192:LEU:HD12	2.28	0.48
1:T:265:ILE:O	1:T:269:VAL:HG23	2.13	0.48
1:V:212:ILE:HG21	1:V:248:TRP:HB2	1.95	0.48
1:Q:268:TRP:HA	1:Q:279:ALA:HB1	1.96	0.48
1:V:192:LEU:N	1:V:192:LEU:HD12	2.28	0.48
1:G:209:ALA:HA	1:G:212:ILE:HD12	1.95	0.48
1:H:192:LEU:HD12	1:H:192:LEU:N	2.28	0.48
1:O:215:CYS:HB2	1:P:300:PHE:CE2	2.48	0.48
1:Q:174:VAL:O	1:Q:178:GLU:HG2	2.13	0.48
1:W:283:THR:O	1:W:286:LEU:HB3	2.13	0.48
1:X:304:LEU:C	1:X:304:LEU:HD23	2.34	0.48
1:B:272:TYR:O	1:B:276:PRO:HG3	2.13	0.48
1:R:319:LEU:HB3	1:T:312:THR:CG2	2.38	0.48
1:W:192:LEU:HB3	1:X:278:ALA:HB2	1.94	0.48
1:W:265:ILE:O	1:W:269:VAL:HG23	2.13	0.48
1:D:212:ILE:HA	1:D:215:CYS:SG	2.53	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:192:LEU:HD12	1:G:192:LEU:N	2.28	0.48
1:T:280:TRP:O	1:T:284:VAL:HG23	2.14	0.48
1:M:271:PHE:HZ	1:R:195:PHE:CD2	2.31	0.48
1:M:264:ALA:CB	1:M:286:LEU:HD22	2.44	0.48
1:R:283:THR:O	1:R:286:LEU:HB3	2.14	0.48
1:F:192:LEU:HD12	1:F:192:LEU:N	2.28	0.48
1:I:265:ILE:O	1:I:269:VAL:HG23	2.14	0.48
1:K:212:ILE:HA	1:K:215:CYS:SG	2.53	0.48
1:M:212:ILE:O	1:M:216:ILE:HG13	2.13	0.48
1:Q:212:ILE:O	1:Q:216:ILE:HG13	2.13	0.48
1:P:195:PHE:HD2	1:Q:271:PHE:HZ	1.62	0.48
1:Q:280:TRP:O	1:Q:284:VAL:HG23	2.13	0.48
1:S:265:ILE:O	1:S:269:VAL:HG23	2.13	0.48
1:T:195:PHE:HD2	1:U:271:PHE:HZ	1.61	0.48
1:V:283:THR:O	1:V:286:LEU:HB3	2.12	0.48
1:A:174:VAL:O	1:A:178:GLU:HG2	2.14	0.48
1:O:212:ILE:O	1:O:216:ILE:HG13	2.13	0.48
1:R:326:MET:CE	1:T:305:VAL:HG13	2.43	0.48
1:U:192:LEU:N	1:U:192:LEU:HD12	2.29	0.48
1:U:209:ALA:HA	1:U:212:ILE:HD12	1.96	0.48
1:G:265:ILE:O	1:G:269:VAL:HG23	2.14	0.48
1:H:209:ALA:HA	1:H:212:ILE:HD12	1.96	0.48
1:J:192:LEU:HD12	1:J:192:LEU:N	2.29	0.48
1:K:209:ALA:HA	1:K:212:ILE:HD12	1.96	0.48
1:W:174:VAL:O	1:W:178:GLU:HG2	2.14	0.48
1:E:304:LEU:HD23	1:E:304:LEU:C	2.34	0.48
1:H:174:VAL:O	1:H:178:GLU:HG2	2.14	0.48
1:I:283:THR:O	1:I:286:LEU:HB3	2.14	0.48
1:N:192:LEU:N	1:N:192:LEU:HD12	2.29	0.48
1:M:271:PHE:HZ	1:R:195:PHE:HD2	1.62	0.48
1:R:212:ILE:HG21	1:R:248:TRP:HB2	1.96	0.48
1:U:212:ILE:HG21	1:U:248:TRP:HB2	1.95	0.48
1:V:272:TYR:O	1:V:276:PRO:HG3	2.14	0.48
1:W:192:LEU:N	1:W:192:LEU:HD12	2.28	0.48
1:C:268:TRP:HA	1:C:279:ALA:HB1	1.95	0.47
1:R:174:VAL:O	1:R:178:GLU:HG2	2.14	0.47
1:C:212:ILE:O	1:C:216:ILE:HG13	2.14	0.47
1:L:265:ILE:O	1:L:269:VAL:HG23	2.14	0.47
1:O:272:TYR:O	1:O:276:PRO:HG3	2.14	0.47
1:S:304:LEU:C	1:S:304:LEU:HD23	2.35	0.47
1:U:174:VAL:O	1:U:178:GLU:HG2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:305:VAL:HG13	1:G:326:MET:SD	2.54	0.47
1:D:287:ILE:O	1:D:291:ILE:HG13	2.15	0.47
1:J:209:ALA:HA	1:J:212:ILE:HD12	1.96	0.47
1:O:287:ILE:O	1:O:291:ILE:HG13	2.14	0.47
1:P:316:ILE:HG22	1:V:316:ILE:CB	2.44	0.47
1:T:304:LEU:C	1:T:304:LEU:HD23	2.35	0.47
1:X:287:ILE:O	1:X:291:ILE:HG13	2.14	0.47
1:D:195:PHE:HD2	1:E:271:PHE:HZ	1.61	0.47
1:I:212:ILE:HG21	1:I:248:TRP:HB2	1.96	0.47
1:P:212:ILE:HG21	1:P:248:TRP:HB2	1.96	0.47
1:Q:192:LEU:N	1:Q:192:LEU:HD12	2.29	0.47
1:W:287:ILE:O	1:W:291:ILE:HG13	2.14	0.47
1:G:195:PHE:CD2	1:H:271:PHE:HZ	2.33	0.47
1:Q:272:TYR:O	1:Q:276:PRO:HG3	2.15	0.47
1:K:195:PHE:CD2	1:L:271:PHE:HZ	2.33	0.47
1:A:212:ILE:HG21	1:A:248:TRP:HB2	1.97	0.47
1:A:283:THR:O	1:A:286:LEU:HB3	2.15	0.47
1:F:304:LEU:C	1:F:304:LEU:HD23	2.35	0.47
1:L:192:LEU:N	1:L:192:LEU:HD12	2.30	0.47
1:M:244:ILE:HD11	1:N:300:PHE:CE1	2.50	0.47
1:N:304:LEU:HD23	1:N:304:LEU:C	2.35	0.47
1:P:304:LEU:C	1:P:304:LEU:HD23	2.34	0.47
1:D:283:THR:O	1:D:286:LEU:HB3	2.15	0.47
1:E:307:HIS:O	1:E:311:VAL:HG23	2.15	0.47
1:F:212:ILE:HG21	1:F:248:TRP:HB2	1.97	0.47
1:J:174:VAL:O	1:J:178:GLU:HG2	2.14	0.47
1:P:265:ILE:O	1:P:269:VAL:HG23	2.14	0.47
1:Q:322:LEU:O	1:Q:326:MET:HB2	2.15	0.47
1:V:242:TRP:O	1:V:245:GLU:HB3	2.15	0.47
1:E:264:ALA:CB	1:E:286:LEU:HD22	2.45	0.47
1:N:212:ILE:HG21	1:N:248:TRP:HB2	1.97	0.47
1:R:268:TRP:HA	1:R:279:ALA:HB1	1.97	0.47
1:V:174:VAL:O	1:V:178:GLU:HG2	2.14	0.47
1:P:319:LEU:CB	1:V:312:THR:HG23	2.27	0.47
1:O:212:ILE:HG21	1:O:248:TRP:HB2	1.97	0.47
1:P:209:ALA:HA	1:P:212:ILE:HD12	1.97	0.47
1:Q:209:ALA:HA	1:Q:212:ILE:HD12	1.95	0.47
1:U:268:TRP:HZ3	1:U:283:THR:HB	1.80	0.47
1:W:209:ALA:HA	1:W:212:ILE:HD12	1.97	0.47
1:W:304:LEU:C	1:W:304:LEU:HD23	2.34	0.47
1:K:192:LEU:HD12	1:K:192:LEU:N	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:212:ILE:HG21	1:L:248:TRP:HB2	1.97	0.47
1:M:174:VAL:O	1:M:178:GLU:HG2	2.14	0.47
1:T:268:TRP:HA	1:T:279:ALA:CB	2.44	0.47
1:J:304:LEU:C	1:J:304:LEU:HD23	2.34	0.46
1:K:272:TYR:O	1:K:276:PRO:HG3	2.15	0.46
1:K:195:PHE:HD2	1:L:271:PHE:HZ	1.61	0.46
1:U:192:LEU:HB3	1:V:278:ALA:CB	2.46	0.46
1:W:212:ILE:HG21	1:W:248:TRP:HB2	1.97	0.46
1:X:212:ILE:HG21	1:X:248:TRP:HB2	1.97	0.46
1:B:268:TRP:HA	1:B:279:ALA:HB1	1.97	0.46
1:I:287:ILE:O	1:I:291:ILE:HG13	2.15	0.46
1:D:174:VAL:O	1:D:178:GLU:HG2	2.15	0.46
1:H:265:ILE:O	1:H:269:VAL:HG23	2.15	0.46
1:K:283:THR:O	1:K:286:LEU:HB3	2.14	0.46
1:Q:212:ILE:HG21	1:Q:248:TRP:HB2	1.97	0.46
1:R:192:LEU:HD12	1:R:192:LEU:N	2.30	0.46
1:T:212:ILE:HG21	1:T:248:TRP:HB2	1.97	0.46
1:B:283:THR:O	1:B:286:LEU:HB3	2.15	0.46
1:D:265:ILE:O	1:D:269:VAL:HG23	2.15	0.46
1:C:195:PHE:HD2	1:D:271:PHE:HZ	1.61	0.46
1:F:264:ALA:CB	1:F:286:LEU:HD22	2.45	0.46
1:G:212:ILE:HG21	1:G:248:TRP:HB2	1.97	0.46
1:H:212:ILE:HG21	1:H:248:TRP:HB2	1.96	0.46
1:K:174:VAL:O	1:K:178:GLU:HG2	2.15	0.46
1:M:322:LEU:O	1:M:326:MET:HB2	2.16	0.46
1:N:280:TRP:O	1:N:284:VAL:HG23	2.14	0.46
1:J:307:HIS:O	1:J:311:VAL:HG23	2.15	0.46
1:R:272:TYR:O	1:R:276:PRO:HG3	2.15	0.46
1:S:174:VAL:O	1:S:178:GLU:HG2	2.15	0.46
1:S:209:ALA:HA	1:S:212:ILE:HD12	1.96	0.46
1:S:275:SER:N	1:S:276:PRO:HD3	2.31	0.46
1:T:283:THR:O	1:T:286:LEU:HB3	2.15	0.46
1:V:304:LEU:HD23	1:V:304:LEU:C	2.36	0.46
1:X:174:VAL:O	1:X:178:GLU:HG2	2.16	0.46
1:K:275:SER:N	1:K:276:PRO:HD3	2.31	0.46
1:L:275:SER:N	1:L:276:PRO:HD3	2.31	0.46
1:W:242:TRP:O	1:W:245:GLU:HB3	2.16	0.46
1:W:275:SER:N	1:W:276:PRO:HD3	2.31	0.46
1:I:272:TYR:O	1:I:276:PRO:HG3	2.16	0.46
1:J:212:ILE:HG21	1:J:248:TRP:HB2	1.97	0.46
1:N:209:ALA:HA	1:N:212:ILE:HD12	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:P:287:ILE:O	1:P:291:ILE:HG13	2.16	0.46
1:Q:309:TYR:OH	1:U:323:LYS:HE2	2.16	0.46
1:C:209:ALA:HA	1:C:212:ILE:HD12	1.97	0.46
1:G:268:TRP:HA	1:G:279:ALA:HB1	1.98	0.46
1:I:275:SER:N	1:I:276:PRO:HD3	2.31	0.46
1:I:304:LEU:HD23	1:I:304:LEU:C	2.37	0.46
1:L:272:TYR:O	1:L:276:PRO:HG3	2.15	0.46
1:M:304:LEU:C	1:M:304:LEU:HD23	2.36	0.46
1:O:275:SER:N	1:O:276:PRO:HD3	2.31	0.46
1:R:275:SER:N	1:R:276:PRO:HD3	2.31	0.46
1:R:326:MET:SD	1:T:305:VAL:CG1	2.97	0.46
1:T:242:TRP:O	1:T:245:GLU:HB3	2.16	0.46
1:V:275:SER:N	1:V:276:PRO:HD3	2.31	0.46
1:P:312:THR:HG21	1:V:323:LYS:HB2	1.97	0.46
1:B:275:SER:N	1:B:276:PRO:HD3	2.31	0.46
1:D:202:LEU:C	1:D:202:LEU:HD23	2.37	0.46
1:E:174:VAL:O	1:E:178:GLU:HG2	2.16	0.46
1:F:275:SER:N	1:F:276:PRO:HD3	2.31	0.46
1:J:275:SER:N	1:J:276:PRO:HD3	2.31	0.46
1:K:212:ILE:HG21	1:K:248:TRP:HB2	1.98	0.46
1:P:272:TYR:O	1:P:276:PRO:HG3	2.16	0.46
1:R:209:ALA:HA	1:R:212:ILE:HD12	1.98	0.46
1:U:275:SER:N	1:U:276:PRO:HD3	2.31	0.46
1:X:283:THR:O	1:X:286:LEU:HB3	2.16	0.46
1:A:275:SER:N	1:A:276:PRO:HD3	2.31	0.46
1:C:212:ILE:HG21	1:C:248:TRP:HB2	1.97	0.46
1:H:275:SER:N	1:H:276:PRO:HD3	2.31	0.46
1:G:271:PHE:HZ	1:L:195:PHE:CD2	2.34	0.46
1:M:212:ILE:HG21	1:M:248:TRP:HB2	1.97	0.46
1:N:195:PHE:CD2	1:O:271:PHE:HZ	2.34	0.46
1:N:275:SER:N	1:N:276:PRO:HD3	2.31	0.46
1:R:242:TRP:O	1:R:245:GLU:HB3	2.16	0.46
1:R:304:LEU:C	1:R:304:LEU:HD23	2.35	0.46
1:S:283:THR:O	1:S:286:LEU:HB3	2.16	0.46
1:T:287:ILE:O	1:T:291:ILE:HG13	2.15	0.46
1:U:272:TYR:O	1:U:276:PRO:HG3	2.15	0.46
1:S:293:PHE:CE2	1:X:208:LEU:HA	2.51	0.46
1:X:161:SER:HB2	1:X:248:TRP:CZ2	2.51	0.46
1:W:215:CYS:HB2	1:X:300:PHE:CE2	2.51	0.46
1:A:209:ALA:HA	1:A:212:ILE:HD12	1.98	0.45
1:A:242:TRP:O	1:A:245:GLU:HB3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:265:ILE:O	1:C:269:VAL:HG23	2.15	0.45
1:C:283:THR:O	1:C:286:LEU:HB3	2.16	0.45
1:C:307:HIS:O	1:C:311:VAL:HG23	2.17	0.45
1:F:283:THR:O	1:F:286:LEU:HB3	2.15	0.45
1:N:195:PHE:HD2	1:O:271:PHE:HZ	1.63	0.45
1:O:319:LEU:HD12	1:W:316:ILE:HG23	1.97	0.45
1:P:161:SER:HB2	1:P:248:TRP:CZ2	2.52	0.45
1:P:283:THR:O	1:P:286:LEU:HB3	2.16	0.45
1:Q:202:LEU:C	1:Q:202:LEU:HD23	2.37	0.45
1:Q:316:ILE:CG2	1:U:316:ILE:HG22	2.46	0.45
1:S:212:ILE:HG21	1:S:248:TRP:HB2	1.97	0.45
1:S:242:TRP:O	1:S:245:GLU:HB3	2.16	0.45
1:S:287:ILE:O	1:S:291:ILE:HG13	2.16	0.45
1:U:304:LEU:C	1:U:304:LEU:HD23	2.37	0.45
1:V:265:ILE:O	1:V:269:VAL:HG23	2.15	0.45
1:B:265:ILE:O	1:B:269:VAL:HG23	2.16	0.45
1:G:195:PHE:HD2	1:H:271:PHE:HZ	1.63	0.45
1:H:287:ILE:O	1:H:291:ILE:HG13	2.16	0.45
1:K:161:SER:HB2	1:K:248:TRP:CZ2	2.52	0.45
1:M:209:ALA:HA	1:M:212:ILE:HD12	1.97	0.45
1:O:174:VAL:O	1:O:178:GLU:HG2	2.16	0.45
1:P:195:PHE:CD2	1:Q:271:PHE:HZ	2.34	0.45
1:Q:275:SER:N	1:Q:276:PRO:HD3	2.31	0.45
1:Q:319:LEU:HD13	1:U:312:THR:HA	1.98	0.45
1:S:195:PHE:CD2	1:T:271:PHE:HZ	2.33	0.45
1:T:275:SER:N	1:T:276:PRO:HD3	2.31	0.45
1:W:195:PHE:CD2	1:X:271:PHE:HZ	2.34	0.45
1:X:242:TRP:O	1:X:245:GLU:HB3	2.16	0.45
1:C:174:VAL:O	1:C:178:GLU:HG2	2.16	0.45
1:D:209:ALA:HA	1:D:212:ILE:HD12	1.99	0.45
1:E:209:ALA:HA	1:E:212:ILE:HD12	1.96	0.45
1:E:161:SER:HB2	1:E:248:TRP:CZ2	2.51	0.45
1:G:275:SER:N	1:G:276:PRO:HD3	2.31	0.45
1:G:304:LEU:HD23	1:G:304:LEU:C	2.37	0.45
1:K:304:LEU:HD23	1:K:304:LEU:C	2.35	0.45
1:N:174:VAL:O	1:N:178:GLU:HG2	2.16	0.45
1:P:161:SER:CB	1:P:248:TRP:HE1	2.30	0.45
1:T:211:MET:CE	1:U:296:PHE:HD2	2.30	0.45
1:T:195:PHE:CD2	1:U:271:PHE:HZ	2.32	0.45
1:V:287:ILE:O	1:V:291:ILE:HG13	2.17	0.45
1:F:287:ILE:O	1:F:291:ILE:HG13	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:178:GLU:OE2	1:T:178:GLU:HG3	2.16	0.45
1:X:275:SER:N	1:X:276:PRO:HD3	2.31	0.45
1:D:212:ILE:HG21	1:D:248:TRP:HB2	1.97	0.45
1:G:197:ILE:HG23	1:H:285:VAL:HG21	1.98	0.45
1:E:319:LEU:HD12	1:I:316:ILE:CG2	2.46	0.45
1:P:307:HIS:O	1:P:311:VAL:HG23	2.16	0.45
1:T:174:VAL:O	1:T:178:GLU:HG2	2.17	0.45
1:T:192:LEU:HB3	1:U:278:ALA:HB2	1.97	0.45
1:A:272:TYR:O	1:A:276:PRO:HG3	2.16	0.45
1:B:212:ILE:HG21	1:B:248:TRP:HB2	1.98	0.45
1:C:275:SER:N	1:C:276:PRO:HD3	2.31	0.45
1:E:265:ILE:O	1:E:269:VAL:HG23	2.17	0.45
1:A:158:LEU:C	1:A:158:LEU:HD23	2.37	0.45
1:E:242:TRP:O	1:E:245:GLU:HB3	2.17	0.45
1:K:322:LEU:O	1:K:326:MET:HB2	2.17	0.45
1:M:283:THR:O	1:M:286:LEU:HB3	2.16	0.45
1:Q:287:ILE:O	1:Q:291:ILE:HG13	2.17	0.45
1:Q:192:LEU:HB3	1:R:278:ALA:HB2	1.99	0.45
1:S:197:ILE:HG23	1:T:285:VAL:HG21	1.99	0.45
1:T:202:LEU:C	1:T:202:LEU:HD23	2.37	0.45
1:D:242:TRP:O	1:D:245:GLU:HB3	2.17	0.45
1:E:254:LEU:O	1:E:258:LEU:HG	2.17	0.45
1:E:275:SER:N	1:E:276:PRO:HD3	2.31	0.45
1:E:287:ILE:O	1:E:291:ILE:HG13	2.16	0.45
1:I:254:LEU:O	1:I:258:LEU:HG	2.16	0.45
1:N:272:TYR:O	1:N:276:PRO:HG3	2.16	0.45
1:R:275:SER:N	1:R:276:PRO:CD	2.80	0.45
1:B:275:SER:N	1:B:276:PRO:CD	2.80	0.45
1:C:161:SER:CB	1:C:248:TRP:HE1	2.30	0.45
1:H:275:SER:N	1:H:276:PRO:CD	2.80	0.45
1:P:275:SER:N	1:P:276:PRO:HD3	2.31	0.45
1:Q:242:TRP:O	1:Q:245:GLU:HB3	2.17	0.45
1:S:161:SER:CB	1:S:248:TRP:HE1	2.30	0.45
1:U:322:LEU:O	1:U:326:MET:HB2	2.17	0.45
1:B:161:SER:CB	1:B:248:TRP:HE1	2.30	0.45
1:G:242:TRP:O	1:G:245:GLU:HB3	2.17	0.45
1:G:275:SER:N	1:G:276:PRO:CD	2.81	0.45
1:H:304:LEU:HD23	1:H:304:LEU:C	2.37	0.45
1:I:242:TRP:O	1:I:245:GLU:HB3	2.16	0.45
1:I:161:SER:CB	1:I:248:TRP:HE1	2.29	0.45
1:M:242:TRP:O	1:M:245:GLU:HB3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:283:THR:O	1:N:286:LEU:HB3	2.17	0.45
1:P:316:ILE:HG22	1:V:316:ILE:HA	1.99	0.45
1:P:316:ILE:CA	1:V:316:ILE:HG22	2.34	0.45
1:B:174:VAL:O	1:B:178:GLU:HG2	2.16	0.44
1:C:304:LEU:HD23	1:C:304:LEU:C	2.37	0.44
1:D:275:SER:N	1:D:276:PRO:HD3	2.31	0.44
1:G:161:SER:HB2	1:G:248:TRP:CZ2	2.53	0.44
1:J:242:TRP:O	1:J:245:GLU:HB3	2.17	0.44
1:M:275:SER:N	1:M:276:PRO:HD3	2.31	0.44
1:N:202:LEU:HD23	1:N:202:LEU:C	2.37	0.44
1:S:275:SER:N	1:S:276:PRO:CD	2.80	0.44
1:V:170:GLY:HA3	1:W:171:PHE:CD2	2.52	0.44
1:C:161:SER:HB2	1:C:248:TRP:CZ2	2.52	0.44
1:D:268:TRP:HA	1:D:279:ALA:HB1	1.98	0.44
1:D:272:TYR:O	1:D:276:PRO:HG3	2.17	0.44
1:D:304:LEU:C	1:D:304:LEU:HD23	2.38	0.44
1:E:202:LEU:HD23	1:E:202:LEU:C	2.38	0.44
1:H:161:SER:CB	1:H:248:TRP:HE1	2.31	0.44
1:H:202:LEU:C	1:H:202:LEU:HD23	2.37	0.44
1:K:242:TRP:O	1:K:245:GLU:HB3	2.17	0.44
1:M:326:MET:HE3	1:S:305:VAL:O	2.17	0.44
1:P:275:SER:N	1:P:276:PRO:CD	2.81	0.44
1:R:322:LEU:O	1:R:326:MET:HB2	2.17	0.44
1:S:161:SER:HB2	1:S:248:TRP:CZ2	2.53	0.44
1:U:275:SER:N	1:U:276:PRO:CD	2.80	0.44
1:C:275:SER:N	1:C:276:PRO:CD	2.81	0.44
1:K:161:SER:CB	1:K:248:TRP:HE1	2.30	0.44
1:M:276:PRO:O	1:M:280:TRP:HD1	2.00	0.44
1:O:275:SER:N	1:O:276:PRO:CD	2.80	0.44
1:P:242:TRP:O	1:P:245:GLU:HB3	2.18	0.44
1:M:323:LYS:HG3	1:S:309:TYR:HE1	1.82	0.44
1:T:275:SER:N	1:T:276:PRO:CD	2.80	0.44
1:U:265:ILE:O	1:U:269:VAL:HG23	2.17	0.44
1:V:209:ALA:HA	1:V:212:ILE:HD12	1.98	0.44
1:W:202:LEU:C	1:W:202:LEU:HD23	2.38	0.44
1:C:287:ILE:O	1:C:291:ILE:HG13	2.17	0.44
1:D:161:SER:CB	1:D:248:TRP:HE1	2.31	0.44
1:H:242:TRP:O	1:H:245:GLU:HB3	2.17	0.44
1:H:283:THR:O	1:H:286:LEU:HB3	2.17	0.44
1:K:275:SER:N	1:K:276:PRO:CD	2.81	0.44
1:G:271:PHE:HZ	1:L:195:PHE:HD2	1.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:161:SER:CB	1:O:248:TRP:HE1	2.31	0.44
1:Q:275:SER:N	1:Q:276:PRO:CD	2.80	0.44
1:W:275:SER:N	1:W:276:PRO:CD	2.81	0.44
1:C:158:LEU:HD23	1:C:158:LEU:C	2.38	0.44
1:D:254:LEU:O	1:D:258:LEU:HG	2.17	0.44
1:E:161:SER:CB	1:E:248:TRP:HE1	2.31	0.44
1:F:174:VAL:O	1:F:178:GLU:HG2	2.16	0.44
1:G:272:TYR:O	1:G:276:PRO:HG3	2.17	0.44
1:G:283:THR:O	1:G:286:LEU:HB3	2.18	0.44
1:L:275:SER:N	1:L:276:PRO:CD	2.81	0.44
1:M:178:GLU:OE2	1:N:178:GLU:HG3	2.17	0.44
1:Q:304:LEU:C	1:Q:304:LEU:HD23	2.37	0.44
1:R:254:LEU:O	1:R:258:LEU:HG	2.18	0.44
1:S:268:TRP:HA	1:S:279:ALA:CB	2.45	0.44
1:M:323:LYS:HG3	1:S:309:TYR:CE1	2.53	0.44
1:U:271:PHE:O	1:U:273:ASP:N	2.51	0.44
1:A:161:SER:CB	1:A:248:TRP:HE1	2.30	0.44
1:E:212:ILE:HG21	1:E:248:TRP:HB2	1.98	0.44
1:I:202:LEU:HD23	1:I:202:LEU:C	2.38	0.44
1:I:209:ALA:HA	1:I:212:ILE:HD12	1.99	0.44
1:I:275:SER:N	1:I:276:PRO:CD	2.80	0.44
1:J:202:LEU:HD23	1:J:202:LEU:C	2.38	0.44
1:S:163:TRP:CE2	1:T:163:TRP:HZ2	2.36	0.44
1:V:322:LEU:O	1:V:326:MET:HB2	2.17	0.44
1:A:287:ILE:O	1:A:291:ILE:HG13	2.18	0.44
1:B:304:LEU:C	1:B:304:LEU:HD23	2.38	0.44
1:D:275:SER:N	1:D:276:PRO:CD	2.81	0.44
1:E:195:PHE:CD2	1:F:271:PHE:HZ	2.36	0.44
1:G:161:SER:CB	1:G:248:TRP:HE1	2.30	0.44
1:J:275:SER:N	1:J:276:PRO:CD	2.81	0.44
1:M:161:SER:HB2	1:M:248:TRP:CZ2	2.52	0.44
1:R:287:ILE:O	1:R:291:ILE:HG13	2.17	0.44
1:S:202:LEU:C	1:S:202:LEU:HD23	2.38	0.44
1:V:161:SER:HB2	1:V:248:TRP:CZ2	2.53	0.44
1:O:319:LEU:HD12	1:W:316:ILE:CG2	2.48	0.44
1:X:202:LEU:C	1:X:202:LEU:HD23	2.38	0.44
1:X:161:SER:CB	1:X:248:TRP:HE1	2.29	0.44
1:X:272:TYR:O	1:X:276:PRO:HG3	2.17	0.44
1:A:275:SER:N	1:A:276:PRO:CD	2.81	0.44
1:F:209:ALA:HA	1:F:212:ILE:HD12	1.98	0.44
1:F:275:SER:N	1:F:276:PRO:CD	2.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:158:LEU:HD23	1:I:158:LEU:C	2.39	0.44
1:H:197:ILE:HG23	1:I:285:VAL:HG21	1.99	0.44
1:L:158:LEU:HD23	1:L:158:LEU:C	2.39	0.44
1:N:287:ILE:O	1:N:291:ILE:HG13	2.18	0.44
1:O:304:LEU:HD23	1:O:304:LEU:C	2.38	0.44
1:R:202:LEU:C	1:R:202:LEU:HD23	2.38	0.44
1:B:158:LEU:C	1:B:158:LEU:HD23	2.39	0.44
1:E:275:SER:N	1:E:276:PRO:CD	2.81	0.44
1:G:202:LEU:C	1:G:202:LEU:HD23	2.37	0.44
1:I:161:SER:HB2	1:I:248:TRP:CZ2	2.53	0.44
1:J:287:ILE:O	1:J:291:ILE:HG13	2.18	0.44
1:K:202:LEU:HD23	1:K:202:LEU:C	2.38	0.44
1:L:202:LEU:C	1:L:202:LEU:HD23	2.38	0.44
1:L:307:HIS:O	1:L:311:VAL:HG23	2.18	0.44
1:M:319:LEU:HB3	1:S:312:THR:CG2	2.27	0.44
1:O:202:LEU:HD23	1:O:202:LEU:C	2.39	0.44
1:P:202:LEU:C	1:P:202:LEU:HD23	2.38	0.44
1:Q:161:SER:HB2	1:Q:248:TRP:CZ2	2.53	0.44
1:T:322:LEU:O	1:T:326:MET:HB2	2.18	0.44
1:C:242:TRP:O	1:C:245:GLU:HB3	2.18	0.43
1:D:158:LEU:C	1:D:158:LEU:HD23	2.39	0.43
1:G:174:VAL:O	1:G:178:GLU:HG2	2.17	0.43
1:M:272:TYR:O	1:M:276:PRO:HG3	2.18	0.43
1:N:242:TRP:O	1:N:245:GLU:HB3	2.18	0.43
1:N:275:SER:N	1:N:276:PRO:CD	2.81	0.43
1:Q:274:LEU:C	1:Q:276:PRO:CD	2.86	0.43
1:Q:294:MET:O	1:Q:298:ILE:HG13	2.18	0.43
1:U:242:TRP:O	1:U:245:GLU:HB3	2.18	0.43
1:V:202:LEU:C	1:V:202:LEU:HD23	2.38	0.43
1:V:161:SER:CB	1:V:248:TRP:HE1	2.31	0.43
1:X:275:SER:N	1:X:276:PRO:CD	2.81	0.43
1:B:209:ALA:HA	1:B:212:ILE:HD12	2.00	0.43
1:C:202:LEU:HD23	1:C:202:LEU:C	2.38	0.43
1:E:272:TYR:O	1:E:276:PRO:HG3	2.18	0.43
1:M:275:SER:N	1:M:276:PRO:CD	2.81	0.43
1:O:322:LEU:O	1:O:326:MET:HB2	2.18	0.43
1:T:274:LEU:C	1:T:276:PRO:CD	2.87	0.43
1:T:307:HIS:O	1:T:311:VAL:HG23	2.17	0.43
1:X:158:LEU:C	1:X:158:LEU:HD23	2.38	0.43
1:A:312:THR:HA	1:G:319:LEU:HD13	2.00	0.43
1:G:322:LEU:O	1:G:326:MET:HB2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:307:HIS:O	1:K:311:VAL:HG23	2.19	0.43
1:L:242:TRP:O	1:L:245:GLU:HB3	2.18	0.43
1:B:319:LEU:HD13	1:L:312:THR:HA	2.00	0.43
1:O:315:GLY:O	1:O:319:LEU:HG	2.17	0.43
1:V:178:GLU:OE2	1:W:178:GLU:HG3	2.18	0.43
1:W:161:SER:CB	1:W:248:TRP:HE1	2.32	0.43
1:A:312:THR:HA	1:G:319:LEU:HD22	1.99	0.43
1:B:254:LEU:O	1:B:258:LEU:HG	2.19	0.43
1:L:165:SER:HB2	1:L:210:LEU:HD21	2.01	0.43
1:M:161:SER:CB	1:M:248:TRP:HE1	2.30	0.43
1:U:264:ALA:HB1	1:U:286:LEU:HD22	2.00	0.43
1:V:275:SER:N	1:V:276:PRO:CD	2.81	0.43
1:C:272:TYR:O	1:C:276:PRO:HG3	2.18	0.43
1:E:316:ILE:HA	1:I:316:ILE:HG22	2.01	0.43
1:I:322:LEU:O	1:I:326:MET:HB2	2.18	0.43
1:J:158:LEU:HD23	1:J:158:LEU:C	2.38	0.43
1:J:254:LEU:O	1:J:258:LEU:HG	2.18	0.43
1:L:283:THR:O	1:L:286:LEU:HB3	2.18	0.43
1:N:158:LEU:HD23	1:N:158:LEU:C	2.37	0.43
1:O:161:SER:HB2	1:O:248:TRP:CZ2	2.53	0.43
1:S:158:LEU:C	1:S:158:LEU:HD23	2.38	0.43
1:V:163:TRP:CE2	1:W:163:TRP:HZ2	2.36	0.43
1:A:274:LEU:C	1:A:276:PRO:CD	2.87	0.43
1:B:192:LEU:H	1:B:192:LEU:HD12	1.82	0.43
1:B:202:LEU:HD23	1:B:202:LEU:C	2.39	0.43
1:B:242:TRP:O	1:B:245:GLU:HB3	2.18	0.43
1:B:312:THR:HA	1:L:319:LEU:HD13	1.99	0.43
1:L:268:TRP:CZ3	1:L:280:TRP:HA	2.53	0.43
1:Q:195:PHE:CD2	1:R:271:PHE:HZ	2.37	0.43
1:B:161:SER:HB2	1:B:248:TRP:CZ2	2.53	0.43
1:F:158:LEU:C	1:F:158:LEU:HD23	2.39	0.43
1:E:319:LEU:CD1	1:I:316:ILE:HG23	2.49	0.43
1:K:254:LEU:O	1:K:258:LEU:HG	2.19	0.43
1:K:287:ILE:O	1:K:291:ILE:HG13	2.18	0.43
1:U:254:LEU:O	1:U:258:LEU:HG	2.19	0.43
1:X:307:HIS:O	1:X:311:VAL:HG23	2.18	0.43
1:X:322:LEU:O	1:X:326:MET:HB2	2.19	0.43
1:K:158:LEU:C	1:K:158:LEU:HD23	2.39	0.43
1:G:285:VAL:HG21	1:L:197:ILE:HG23	2.00	0.43
1:O:242:TRP:O	1:O:245:GLU:HB3	2.19	0.43
1:O:254:LEU:O	1:O:258:LEU:HG	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:R:161:SER:CB	1:R:248:TRP:HE1	2.31	0.43
1:T:260:LEU:HG	1:T:286:LEU:HD11	2.00	0.43
1:U:161:SER:CB	1:U:248:TRP:HE1	2.31	0.43
1:A:161:SER:HB2	1:A:248:TRP:CZ2	2.54	0.43
1:B:287:ILE:O	1:B:291:ILE:HG13	2.18	0.43
1:E:158:LEU:HD23	1:E:158:LEU:C	2.39	0.43
1:F:307:HIS:O	1:F:311:VAL:HG23	2.19	0.43
1:J:161:SER:CB	1:J:248:TRP:HE1	2.32	0.43
1:M:163:TRP:CE2	1:N:163:TRP:HZ2	2.37	0.43
1:Q:158:LEU:HD23	1:Q:158:LEU:C	2.39	0.43
1:U:161:SER:HB2	1:U:248:TRP:CZ2	2.54	0.43
1:U:202:LEU:HD23	1:U:202:LEU:C	2.38	0.43
1:X:316:ILE:HG13	1:X:317:ARG:N	2.34	0.43
1:A:202:LEU:HD23	1:A:202:LEU:C	2.39	0.43
1:A:307:HIS:O	1:A:311:VAL:HG23	2.19	0.43
1:F:242:TRP:O	1:F:245:GLU:HB3	2.17	0.43
1:Q:161:SER:CB	1:Q:248:TRP:HE1	2.31	0.43
1:T:161:SER:HB2	1:T:248:TRP:CZ2	2.54	0.43
1:T:268:TRP:CG	1:T:279:ALA:HB1	2.54	0.43
1:W:316:ILE:HG13	1:W:317:ARG:N	2.34	0.43
1:O:319:LEU:CD1	1:W:316:ILE:HG23	2.49	0.43
1:A:203:VAL:HG21	1:B:263:ILE:HG12	2.01	0.42
1:C:254:LEU:O	1:C:258:LEU:HG	2.19	0.42
1:E:319:LEU:HD13	1:I:312:THR:O	2.19	0.42
1:F:202:LEU:C	1:F:202:LEU:HD23	2.39	0.42
1:N:307:HIS:O	1:N:311:VAL:HG23	2.19	0.42
1:P:158:LEU:C	1:P:158:LEU:HD23	2.39	0.42
1:P:170:GLY:HA3	1:Q:171:PHE:CD2	2.54	0.42
1:G:158:LEU:HD23	1:G:158:LEU:C	2.39	0.42
1:H:170:GLY:HA3	1:I:171:PHE:CD2	2.55	0.42
1:J:283:THR:O	1:J:286:LEU:HB3	2.19	0.42
1:O:165:SER:HB2	1:O:210:LEU:HD21	2.00	0.42
1:R:158:LEU:HD23	1:R:158:LEU:C	2.39	0.42
1:R:161:SER:HB2	1:R:248:TRP:CZ2	2.53	0.42
1:L:209:ALA:HA	1:L:212:ILE:HD12	2.01	0.42
1:L:161:SER:CB	1:L:248:TRP:HE1	2.31	0.42
1:M:163:TRP:HZ2	1:R:163:TRP:CE2	2.36	0.42
1:N:161:SER:CB	1:N:248:TRP:HE1	2.32	0.42
1:P:322:LEU:O	1:P:326:MET:HB2	2.19	0.42
1:K:250:PHE:CE2	1:K:254:LEU:HD11	2.53	0.42
1:L:161:SER:HB2	1:L:248:TRP:CZ2	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:202:LEU:HD23	1:M:202:LEU:C	2.39	0.42
1:M:278:ALA:CB	1:R:192:LEU:HB3	2.50	0.42
1:T:158:LEU:HD23	1:T:158:LEU:C	2.39	0.42
1:T:250:PHE:CE2	1:T:254:LEU:HD11	2.54	0.42
1:T:192:LEU:CB	1:U:278:ALA:HB2	2.50	0.42
1:X:209:ALA:HA	1:X:212:ILE:HD12	2.02	0.42
1:C:165:SER:HB2	1:C:210:LEU:HD21	2.01	0.42
1:E:283:THR:O	1:E:286:LEU:HB3	2.20	0.42
1:E:315:GLY:O	1:E:319:LEU:HG	2.20	0.42
1:F:161:SER:CB	1:F:248:TRP:HE1	2.32	0.42
1:T:301:TYR:O	1:T:305:VAL:HG23	2.19	0.42
1:U:195:PHE:CD2	1:V:271:PHE:HZ	2.38	0.42
1:V:158:LEU:C	1:V:158:LEU:HD23	2.40	0.42
1:B:322:LEU:O	1:B:326:MET:HB2	2.20	0.42
1:C:282:ALA:O	1:C:285:VAL:HG12	2.20	0.42
1:F:276:PRO:O	1:F:280:TRP:HD1	2.02	0.42
1:O:158:LEU:HD23	1:O:158:LEU:C	2.39	0.42
1:G:254:LEU:O	1:G:258:LEU:HG	2.19	0.42
1:H:158:LEU:HD23	1:H:158:LEU:C	2.39	0.42
1:K:217:LEU:CB	1:K:218:PRO:HD3	2.50	0.42
1:F:322:LEU:O	1:F:326:MET:HB2	2.20	0.42
1:J:161:SER:HB2	1:J:248:TRP:CZ2	2.55	0.42
1:M:158:LEU:C	1:M:158:LEU:HD23	2.39	0.42
1:M:254:LEU:O	1:M:258:LEU:HG	2.20	0.42
1:M:287:ILE:O	1:M:291:ILE:HG13	2.20	0.42
1:P:271:PHE:O	1:P:273:ASP:N	2.52	0.42
1:W:158:LEU:HD23	1:W:158:LEU:C	2.39	0.42
1:A:163:TRP:HZ2	1:F:163:TRP:CE2	2.37	0.42
1:D:192:LEU:H	1:D:192:LEU:HD12	1.85	0.42
1:F:274:LEU:C	1:F:276:PRO:CD	2.88	0.42
1:H:161:SER:HB2	1:H:248:TRP:CZ2	2.55	0.42
1:A:254:LEU:O	1:A:258:LEU:HG	2.20	0.42
1:D:165:SER:HB2	1:D:210:LEU:HD21	2.02	0.42
1:F:254:LEU:O	1:F:258:LEU:HG	2.20	0.42
1:H:272:TYR:O	1:H:276:PRO:HG3	2.18	0.42
1:P:151:LEU:HD23	1:P:151:LEU:C	2.41	0.42
1:T:161:SER:CB	1:T:248:TRP:HE1	2.32	0.42
1:D:322:LEU:O	1:D:326:MET:HB2	2.20	0.41
1:E:195:PHE:HD2	1:F:271:PHE:HZ	1.67	0.41
1:O:250:PHE:CE2	1:O:254:LEU:HD11	2.55	0.41
1:P:308:LYS:HB2	1:V:326:MET:HE1	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:158:LEU:C	1:U:158:LEU:HD23	2.40	0.41
1:M:307:HIS:O	1:M:311:VAL:HG23	2.20	0.41
1:R:217:LEU:CB	1:R:218:PRO:HD3	2.50	0.41
1:R:276:PRO:O	1:R:280:TRP:HD1	2.02	0.41
1:E:217:LEU:CB	1:E:218:PRO:HD3	2.51	0.41
1:F:315:GLY:O	1:F:319:LEU:HG	2.21	0.41
1:K:151:LEU:HD23	1:K:151:LEU:C	2.41	0.41
1:N:274:LEU:C	1:N:276:PRO:CD	2.88	0.41
1:P:319:LEU:HB3	1:V:312:THR:CG2	2.28	0.41
1:S:322:LEU:O	1:S:326:MET:HB2	2.20	0.41
1:B:274:LEU:C	1:B:276:PRO:CD	2.88	0.41
1:E:322:LEU:O	1:E:326:MET:HB2	2.19	0.41
1:H:217:LEU:CB	1:H:218:PRO:HD3	2.51	0.41
1:I:217:LEU:CB	1:I:218:PRO:HD3	2.51	0.41
1:P:308:LYS:HB2	1:V:326:MET:CE	2.50	0.41
1:V:268:TRP:HZ3	1:V:283:THR:HB	1.85	0.41
1:V:315:GLY:O	1:V:319:LEU:HG	2.21	0.41
1:W:161:SER:HB2	1:W:248:TRP:CZ2	2.55	0.41
1:D:161:SER:HB2	1:D:248:TRP:CZ2	2.55	0.41
1:H:274:LEU:C	1:H:276:PRO:CD	2.88	0.41
1:I:307:HIS:O	1:I:311:VAL:HG23	2.19	0.41
1:N:170:GLY:HA3	1:O:171:PHE:CD2	2.55	0.41
1:Q:254:LEU:O	1:Q:258:LEU:HG	2.20	0.41
1:W:322:LEU:O	1:W:326:MET:HB2	2.20	0.41
1:X:165:SER:HB2	1:X:210:LEU:HD21	2.02	0.41
1:X:254:LEU:O	1:X:258:LEU:HG	2.20	0.41
1:A:151:LEU:HD23	1:A:151:LEU:C	2.40	0.41
1:F:151:LEU:HD23	1:F:151:LEU:C	2.41	0.41
1:F:161:SER:HB2	1:F:248:TRP:CZ2	2.55	0.41
1:G:307:HIS:O	1:G:311:VAL:HG23	2.21	0.41
1:A:308:LYS:HB3	1:G:322:LEU:HD21	2.03	0.41
1:J:250:PHE:CE2	1:J:254:LEU:HD11	2.56	0.41
1:O:195:PHE:HD2	1:P:271:PHE:HZ	1.67	0.41
1:P:163:TRP:CE2	1:Q:163:TRP:HZ2	2.39	0.41
1:S:272:TYR:O	1:S:276:PRO:HG3	2.21	0.41
1:A:217:LEU:CB	1:A:218:PRO:HD3	2.50	0.41
1:B:307:HIS:O	1:B:311:VAL:HG23	2.21	0.41
1:D:250:PHE:CE2	1:D:254:LEU:HD11	2.56	0.41
1:H:307:HIS:O	1:H:311:VAL:HG23	2.20	0.41
1:J:165:SER:HB2	1:J:210:LEU:HD21	2.01	0.41
1:I:201:LEU:HD21	1:J:285:VAL:CG2	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:287:ILE:O	1:L:291:ILE:HG13	2.20	0.41
1:O:209:ALA:HA	1:O:212:ILE:HD12	2.02	0.41
1:T:217:LEU:CB	1:T:218:PRO:HD3	2.50	0.41
1:X:276:PRO:O	1:X:280:TRP:HD1	2.02	0.41
1:A:197:ILE:HG23	1:B:285:VAL:HG21	2.03	0.41
1:A:250:PHE:CE2	1:A:254:LEU:HD11	2.55	0.41
1:A:315:GLY:O	1:A:319:LEU:HG	2.21	0.41
1:D:217:LEU:CB	1:D:218:PRO:HD3	2.51	0.41
1:D:260:LEU:HG	1:D:286:LEU:HD11	2.03	0.41
1:H:322:LEU:O	1:H:326:MET:HB2	2.21	0.41
1:M:274:LEU:C	1:M:276:PRO:CD	2.89	0.41
1:Q:217:LEU:CB	1:Q:218:PRO:HD3	2.51	0.41
1:R:274:LEU:C	1:R:276:PRO:CD	2.89	0.41
1:S:151:LEU:C	1:S:151:LEU:HD23	2.41	0.41
1:S:315:GLY:O	1:S:319:LEU:HG	2.21	0.41
1:U:217:LEU:CB	1:U:218:PRO:HD3	2.50	0.41
1:W:250:PHE:CE2	1:W:254:LEU:HD11	2.56	0.41
1:X:274:LEU:C	1:X:276:PRO:CD	2.88	0.41
1:C:192:LEU:H	1:C:192:LEU:HD12	1.86	0.41
1:F:217:LEU:CB	1:F:218:PRO:HD3	2.51	0.41
1:Q:322:LEU:HD21	1:U:308:LYS:HE3	2.03	0.41
1:M:250:PHE:CE2	1:M:254:LEU:HD11	2.56	0.41
1:N:312:THR:HG21	1:X:323:LYS:HB2	2.03	0.41
1:O:217:LEU:CB	1:O:218:PRO:HD3	2.51	0.41
1:P:254:LEU:O	1:P:258:LEU:HG	2.20	0.41
1:M:285:VAL:CG2	1:R:201:LEU:HD21	2.51	0.41
1:V:307:HIS:O	1:V:311:VAL:HG23	2.21	0.41
1:W:254:LEU:O	1:W:258:LEU:HG	2.21	0.41
1:W:203:VAL:HG21	1:X:263:ILE:HG12	2.01	0.41
1:A:316:ILE:HG22	1:G:316:ILE:CA	2.50	0.41
1:E:274:LEU:C	1:E:276:PRO:CD	2.90	0.41
1:G:309:TYR:O	1:G:312:THR:HB	2.20	0.41
1:G:315:GLY:O	1:G:319:LEU:HG	2.21	0.41
1:L:217:LEU:CB	1:L:218:PRO:HD3	2.51	0.41
1:L:322:LEU:O	1:L:326:MET:HB2	2.21	0.41
1:M:319:LEU:HD13	1:S:312:THR:O	2.21	0.41
1:S:260:LEU:HG	1:S:286:LEU:HD11	2.03	0.41
1:V:274:LEU:C	1:V:276:PRO:CD	2.89	0.41
1:X:315:GLY:O	1:X:319:LEU:HG	2.21	0.41
1:C:151:LEU:HD23	1:C:151:LEU:C	2.42	0.40
1:E:250:PHE:CE2	1:E:254:LEU:HD11	2.55	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:163:TRP:CE2	1:I:163:TRP:HZ2	2.39	0.40
1:L:315:GLY:O	1:L:319:LEU:HG	2.22	0.40
1:O:151:LEU:HD23	1:O:151:LEU:C	2.41	0.40
1:P:217:LEU:CB	1:P:218:PRO:HD3	2.52	0.40
1:S:254:LEU:O	1:S:258:LEU:HG	2.20	0.40
1:Q:319:LEU:HB3	1:U:312:THR:HG23	2.02	0.40
1:X:151:LEU:HD23	1:X:151:LEU:C	2.41	0.40
1:A:151:LEU:HD23	1:A:151:LEU:O	2.22	0.40
1:B:217:LEU:CB	1:B:218:PRO:HD3	2.51	0.40
1:F:312:THR:HA	1:H:319:LEU:HD13	2.03	0.40
1:H:151:LEU:C	1:H:151:LEU:HD23	2.41	0.40
1:G:178:GLU:OE2	1:H:178:GLU:HG3	2.21	0.40
1:N:254:LEU:O	1:N:258:LEU:HG	2.20	0.40
1:P:192:LEU:HD12	1:P:192:LEU:H	1.87	0.40
1:P:250:PHE:CE2	1:P:254:LEU:HD11	2.57	0.40
1:S:250:PHE:CE2	1:S:254:LEU:HD11	2.57	0.40
1:C:217:LEU:CB	1:C:218:PRO:HD3	2.51	0.40
1:E:151:LEU:HD23	1:E:151:LEU:C	2.42	0.40
1:G:287:ILE:O	1:G:291:ILE:HG13	2.21	0.40
1:M:217:LEU:CB	1:M:218:PRO:HD3	2.51	0.40
1:N:161:SER:HB2	1:N:248:TRP:CZ2	2.56	0.40
1:N:322:LEU:O	1:N:326:MET:HB2	2.20	0.40
1:Q:316:ILE:HG13	1:Q:317:ARG:N	2.37	0.40
1:U:268:TRP:CE3	1:U:283:THR:OG1	2.68	0.40
1:W:197:ILE:HG23	1:X:285:VAL:HG21	2.03	0.40
1:G:274:LEU:C	1:G:276:PRO:CD	2.90	0.40
1:M:151:LEU:HD23	1:M:151:LEU:C	2.42	0.40
1:Q:159:LYS:O	1:Q:163:TRP:HB2	2.22	0.40
1:W:274:LEU:C	1:W:276:PRO:CD	2.89	0.40
1:C:322:LEU:O	1:C:326:MET:HB2	2.22	0.40
1:F:282:ALA:O	1:F:285:VAL:HG12	2.22	0.40
1:I:151:LEU:HD23	1:I:151:LEU:C	2.42	0.40
1:J:217:LEU:CB	1:J:218:PRO:HD3	2.51	0.40
1:J:274:LEU:C	1:J:276:PRO:CD	2.90	0.40
1:R:151:LEU:HD23	1:R:151:LEU:C	2.42	0.40
1:W:217:LEU:CB	1:W:218:PRO:HD3	2.51	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	144/214 (67%)	140 (97%)	3 (2%)	1 (1%)	22	62
1	B	144/214 (67%)	140 (97%)	3 (2%)	1 (1%)	22	62
1	C	144/214 (67%)	140 (97%)	2 (1%)	2 (1%)	11	46
1	D	144/214 (67%)	140 (97%)	2 (1%)	2 (1%)	11	46
1	E	144/214 (67%)	140 (97%)	3 (2%)	1 (1%)	22	62
1	F	144/214 (67%)	140 (97%)	3 (2%)	1 (1%)	22	62
1	G	144/214 (67%)	140 (97%)	2 (1%)	2 (1%)	11	46
1	H	144/214 (67%)	140 (97%)	2 (1%)	2 (1%)	11	46
1	I	144/214 (67%)	140 (97%)	2 (1%)	2 (1%)	11	46
1	J	144/214 (67%)	140 (97%)	3 (2%)	1 (1%)	22	62
1	K	144/214 (67%)	140 (97%)	3 (2%)	1 (1%)	22	62
1	L	144/214 (67%)	140 (97%)	3 (2%)	1 (1%)	22	62
1	M	144/214 (67%)	140 (97%)	2 (1%)	2 (1%)	11	46
1	N	144/214 (67%)	140 (97%)	3 (2%)	1 (1%)	22	62
1	O	144/214 (67%)	140 (97%)	2 (1%)	2 (1%)	11	46
1	P	144/214 (67%)	140 (97%)	2 (1%)	2 (1%)	11	46
1	Q	144/214 (67%)	140 (97%)	3 (2%)	1 (1%)	22	62
1	R	144/214 (67%)	140 (97%)	2 (1%)	2 (1%)	11	46
1	S	144/214 (67%)	140 (97%)	3 (2%)	1 (1%)	22	62
1	T	144/214 (67%)	140 (97%)	3 (2%)	1 (1%)	22	62
1	U	144/214 (67%)	140 (97%)	2 (1%)	2 (1%)	11	46
1	V	144/214 (67%)	140 (97%)	3 (2%)	1 (1%)	22	62
1	W	144/214 (67%)	140 (97%)	3 (2%)	1 (1%)	22	62
1	X	144/214 (67%)	140 (97%)	2 (1%)	2 (1%)	11	46
All	All	3456/5136 (67%)	3360 (97%)	61 (2%)	35 (1%)	15	54

All (35) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	H	272	TYR
1	M	272	TYR
1	P	272	TYR
1	R	272	TYR
1	U	272	TYR
1	D	272	TYR
1	I	272	TYR
1	O	272	TYR
1	X	272	TYR
1	C	272	TYR
1	G	272	TYR
1	A	275	SER
1	B	275	SER
1	C	275	SER
1	D	275	SER
1	E	275	SER
1	F	275	SER
1	G	275	SER
1	H	275	SER
1	I	275	SER
1	J	275	SER
1	K	275	SER
1	L	275	SER
1	M	275	SER
1	N	275	SER
1	O	275	SER
1	P	275	SER
1	Q	275	SER
1	R	275	SER
1	S	275	SER
1	T	275	SER
1	U	275	SER
1	V	275	SER
1	W	275	SER
1	X	275	SER

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	116/190 (61%)	115 (99%)	1 (1%)	78	88
1	B	116/190 (61%)	115 (99%)	1 (1%)	78	88
1	C	116/190 (61%)	115 (99%)	1 (1%)	78	88
1	D	116/190 (61%)	115 (99%)	1 (1%)	78	88
1	E	116/190 (61%)	115 (99%)	1 (1%)	78	88
1	F	116/190 (61%)	115 (99%)	1 (1%)	78	88
1	G	116/190 (61%)	115 (99%)	1 (1%)	78	88
1	H	116/190 (61%)	115 (99%)	1 (1%)	78	88
1	I	116/190 (61%)	115 (99%)	1 (1%)	78	88
1	J	116/190 (61%)	115 (99%)	1 (1%)	78	88
1	K	116/190 (61%)	115 (99%)	1 (1%)	78	88
1	L	116/190 (61%)	115 (99%)	1 (1%)	78	88
1	M	116/190 (61%)	115 (99%)	1 (1%)	78	88
1	N	116/190 (61%)	115 (99%)	1 (1%)	78	88
1	O	116/190 (61%)	115 (99%)	1 (1%)	78	88
1	P	116/190 (61%)	115 (99%)	1 (1%)	78	88
1	Q	116/190 (61%)	115 (99%)	1 (1%)	78	88
1	R	116/190 (61%)	115 (99%)	1 (1%)	78	88
1	S	116/190 (61%)	115 (99%)	1 (1%)	78	88
1	T	116/190 (61%)	115 (99%)	1 (1%)	78	88
1	U	116/190 (61%)	115 (99%)	1 (1%)	78	88
1	V	116/190 (61%)	115 (99%)	1 (1%)	78	88
1	W	116/190 (61%)	115 (99%)	1 (1%)	78	88
1	X	116/190 (61%)	115 (99%)	1 (1%)	78	88
All	All	2784/4560 (61%)	2760 (99%)	24 (1%)	78	88

All (24) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	163	TRP
1	B	163	TRP
1	C	163	TRP

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Mol	Chain	Res	Type
1	D	163	TRP
1	E	163	TRP
1	F	163	TRP
1	G	163	TRP
1	H	163	TRP
1	I	163	TRP
1	J	163	TRP
1	K	163	TRP
1	L	163	TRP
1	M	163	TRP
1	N	163	TRP
1	O	163	TRP
1	P	163	TRP
1	Q	163	TRP
1	R	163	TRP
1	S	163	TRP
1	T	163	TRP
1	U	163	TRP
1	V	163	TRP
1	W	163	TRP
1	X	163	TRP

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (24) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	206	HIS
1	B	206	HIS
1	C	206	HIS
1	D	206	HIS
1	E	206	HIS
1	F	206	HIS
1	G	206	HIS
1	H	206	HIS
1	I	206	HIS
1	J	206	HIS
1	K	206	HIS
1	L	206	HIS
1	M	206	HIS
1	N	206	HIS
1	O	206	HIS
1	P	206	HIS
1	Q	206	HIS

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Mol	Chain	Res	Type
1	R	206	HIS
1	S	206	HIS
1	T	206	HIS
1	U	206	HIS
1	V	206	HIS
1	W	206	HIS
1	X	206	HIS

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no carbohydrates in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
1	A	150/214 (70%)	-0.23	2 (1%)	77	68	476, 510, 583, 638	0
1	B	150/214 (70%)	-0.28	0	100	100	482, 530, 638, 721	0
1	C	150/214 (70%)	-0.16	6 (4%)	38	34	484, 541, 726, 777	0
1	D	150/214 (70%)	-0.26	2 (1%)	77	68	477, 516, 709, 732	0
1	E	150/214 (70%)	-0.28	2 (1%)	77	68	472, 496, 612, 670	0
1	F	150/214 (70%)	-0.34	0	100	100	472, 501, 589, 649	0
1	G	150/214 (70%)	-0.16	4 (2%)	54	47	470, 520, 654, 754	0
1	H	150/214 (70%)	-0.11	3 (2%)	65	58	470, 518, 679, 724	0
1	I	150/214 (70%)	-0.10	1 (0%)	87	82	467, 505, 644, 674	0
1	J	150/214 (70%)	-0.26	2 (1%)	77	68	466, 506, 643, 724	0
1	K	150/214 (70%)	-0.23	4 (2%)	54	47	467, 509, 650, 735	0
1	L	150/214 (70%)	-0.17	3 (2%)	65	58	468, 511, 628, 700	0
1	M	150/214 (70%)	-0.07	4 (2%)	54	47	542, 595, 765, 794	0
1	N	150/214 (70%)	0.12	5 (3%)	46	40	542, 594, 748, 791	0
1	O	150/214 (70%)	-0.15	4 (2%)	54	47	539, 576, 659, 693	0
1	P	150/214 (70%)	-0.17	2 (1%)	77	68	538, 589, 714, 741	0
1	Q	150/214 (70%)	0.01	6 (4%)	38	34	536, 575, 726, 746	0
1	R	150/214 (70%)	-0.06	2 (1%)	77	68	537, 567, 725, 768	0
1	S	150/214 (70%)	-0.18	6 (4%)	38	34	505, 571, 737, 786	0
1	T	150/214 (70%)	-0.22	5 (3%)	46	40	499, 547, 764, 818	0
1	U	150/214 (70%)	0.01	6 (4%)	38	34	499, 549, 804, 853	0
1	V	150/214 (70%)	-0.01	10 (6%)	17	17	502, 562, 811, 833	0
1	W	150/214 (70%)	-0.06	7 (4%)	31	30	506, 565, 755, 791	0
1	X	150/214 (70%)	-0.11	3 (2%)	65	58	509, 579, 754, 802	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
All	All	3600/5136 (70%)	-0.14	89 (2%) 57 50	466, 547, 716, 853	0

All (89) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	M	327	GLU	6.6
1	W	152	GLN	6.6
1	W	148	TRP	5.8
1	W	327	GLU	5.3
1	Q	148	TRP	5.2
1	W	149	ARG	4.6
1	U	325	GLN	4.5
1	V	325	GLN	4.4
1	K	148	TRP	4.4
1	V	324	GLU	4.3
1	U	155	ARG	3.9
1	V	148	TRP	3.7
1	R	155	ARG	3.5
1	C	155	ARG	3.5
1	S	327	GLU	3.5
1	S	324	GLU	3.5
1	C	241	HIS	3.4
1	H	155	ARG	3.4
1	C	327	GLU	3.4
1	D	325	GLN	3.4
1	S	325	GLN	3.3
1	V	327	GLU	3.3
1	M	155	ARG	3.3
1	W	155	ARG	3.2
1	T	321	MET	3.1
1	T	155	ARG	3.1
1	D	324	GLU	3.0
1	I	327	GLU	3.0
1	T	325	GLN	3.0
1	W	151	LEU	3.0
1	L	155	ARG	3.0
1	M	326	MET	3.0
1	U	326	MET	3.0
1	P	321	MET	2.9
1	N	152	GLN	2.9
1	O	275	SER	2.8
1	V	321	MET	2.8

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Mol	Chain	Res	Type	RSRZ
1	Q	219	ASN	2.7
1	N	155	ARG	2.7
1	Q	149	ARG	2.7
1	O	180	GLN	2.7
1	H	327	GLU	2.7
1	Q	155	ARG	2.7
1	L	191	MET	2.7
1	O	219	ASN	2.7
1	X	155	ARG	2.7
1	W	150	LYS	2.6
1	N	242	TRP	2.6
1	X	219	ASN	2.6
1	R	148	TRP	2.6
1	G	155	ARG	2.6
1	T	148	TRP	2.6
1	E	148	TRP	2.6
1	K	327	GLU	2.6
1	S	148	TRP	2.5
1	V	326	MET	2.5
1	H	152	GLN	2.5
1	V	219	ASN	2.5
1	A	273	ASP	2.5
1	M	310	GLU	2.4
1	O	152	GLN	2.4
1	G	219	ASN	2.3
1	G	152	GLN	2.3
1	P	155	ARG	2.3
1	U	324	GLU	2.3
1	G	273	ASP	2.3
1	N	312	THR	2.2
1	C	219	ASN	2.2
1	V	155	ARG	2.2
1	L	148	TRP	2.2
1	Q	241	HIS	2.2
1	X	152	GLN	2.2
1	C	273	ASP	2.2
1	K	324	GLU	2.1
1	N	148	TRP	2.1
1	S	305	VAL	2.1
1	C	152	GLN	2.1
1	A	148	TRP	2.1
1	K	149	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
1	Q	150	LYS	2.1
1	V	308	LYS	2.1
1	J	273	ASP	2.0
1	V	323	LYS	2.0
1	U	327	GLU	2.0
1	T	324	GLU	2.0
1	J	155	ARG	2.0
1	S	155	ARG	2.0
1	E	149	ARG	2.0
1	U	148	TRP	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 carbohydrates 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.