Full wwPDB X-ray Structure Validation Report ⓘ

May 13, 2020 – 02:57 am BST

PDB ID	:	1P15
Title	:	Crystal structure of the D2 domain of RPTPa
Authors	:	Sonnenburg, E.D.; Bilwes, A.; Hunter, T.; Noel, J.P.
Deposited on	:	2003-04-11
Resolution	:	2.00 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:

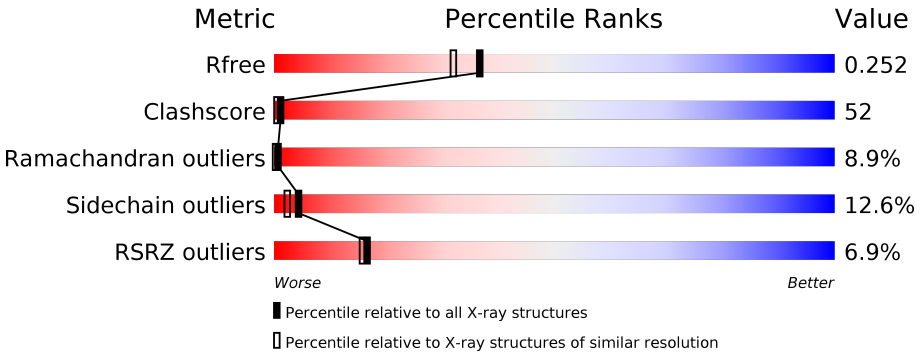
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.13
EDS	:	2.11
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation 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 2.00 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	8085 (2.00-2.00)
Clashscore	141614	9178 (2.00-2.00)
Ramachandran outliers	138981	9054 (2.00-2.00)
Sidechain outliers	138945	9053 (2.00-2.00)
RSRZ outliers	127900	7900 (2.00-2.00)

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	253	10%, 36%, 41%, 14%, 6%
1	B	253	4%, 43%, 44%, 10%

2 Entry composition

There are 2 unique types of molecules in this entry. The entry contains 4089 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 Protein-tyrosine phosphatase alpha.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	245	Total	C	N	O	S	0	0	0
			1984	1252	348	372	12			
1	B	246	Total	C	N	O	S	0	0	0
			1990	1258	346	374	12			

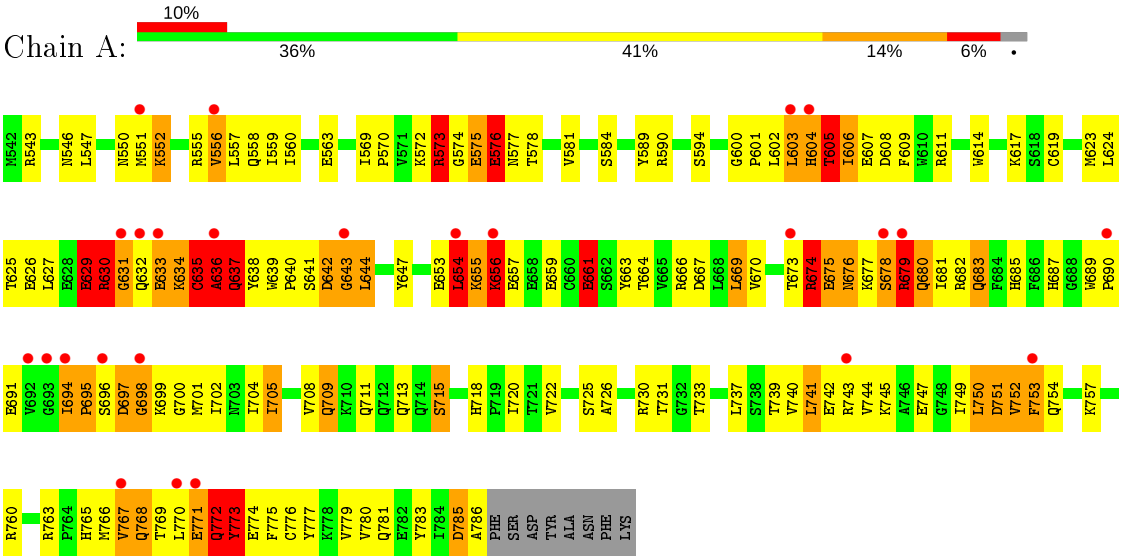
- Molecule 2 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	A	64	Total	O	0	0
			64	64		
2	B	51	Total	O	0	0
			51	51		

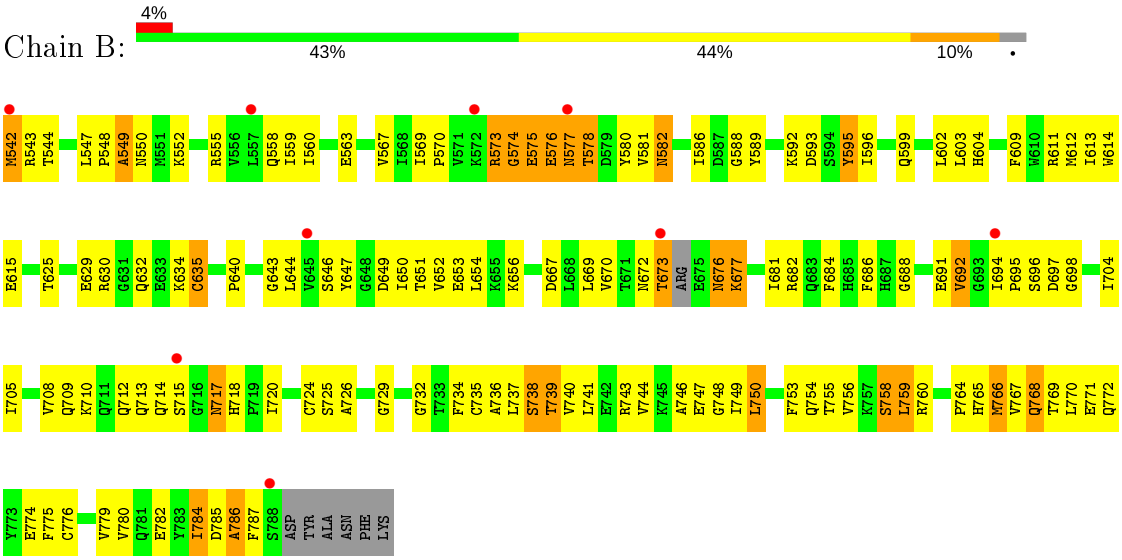
3 Residue-property plots (i)

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: Protein-tyrosine phosphatase alpha



- Molecule 1: Protein-tyrosine phosphatase alpha



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 31	Depositor
Cell constants a, b, c, α, β, γ	59.10Å 59.10Å 152.66Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	51.18 – 2.00 51.18 – 1.95	Depositor EDS
% Data completeness (in resolution range)	94.6 (51.18-2.00) 93.8 (51.18-1.95)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.41 (at 1.95Å)	Xtriage
Refinement program	CNS 1.1	Depositor
R, R_{free}	0.203 , 0.255 0.206 , 0.252	Depositor DCC
R_{free} test set	3468 reflections (8.52%)	wwPDB-VP
Wilson B-factor (Å^2)	34.3	Xtriage
Anisotropy	0.045	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.37 , 42.3	EDS
L-test for twinning[2]	$< \|L\| > = 0.39$, $< L^2 > = 0.21$	Xtriage
Estimated twinning fraction	0.135 for -h,-k,l 0.137 for h,-h-k,-l 0.446 for -k,-h,-l	Xtriage
F_o,F_c correlation	0.95	EDS
Total number of atoms	4089	wwPDB-VP
Average B, all atoms (Å^2)	40.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.42% 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	0.55	4/2026 (0.2%)	1.06	14/2739 (0.5%)
1	B	0.42	0/2032	0.74	0/2746
All	All	0.49	4/4058 (0.1%)	0.91	14/5485 (0.3%)

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	575	GLU	CB-CG	5.63	1.62	1.52
1	A	636	ALA	CA-CB	-5.53	1.40	1.52
1	A	635	CYS	CB-SG	-5.34	1.73	1.81
1	A	576	GLU	CB-CG	5.25	1.62	1.52

All (14) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	631	GLY	N-CA-C	-13.19	80.13	113.10
1	A	629	GLU	N-CA-C	-10.49	82.67	111.00
1	A	674	ARG	N-CA-C	-9.06	86.53	111.00
1	A	637	GLN	N-CA-C	-8.79	87.25	111.00
1	A	636	ALA	N-CA-C	8.50	133.96	111.00
1	A	772	GLN	N-CA-C	-8.15	89.00	111.00
1	A	630	ARG	N-CA-C	7.83	132.14	111.00
1	A	675	GLU	N-CA-C	7.46	131.15	111.00
1	A	604	HIS	N-CA-C	-7.32	91.25	111.00
1	A	715	SER	N-CA-C	-6.18	94.31	111.00
1	A	656	LYS	N-CA-C	5.79	126.64	111.00
1	A	577	ASN	N-CA-C	5.70	126.39	111.00
1	A	771	GLU	N-CA-C	-5.36	96.53	111.00
1	A	678	SER	N-CA-C	5.34	125.43	111.00

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	1984	0	1955	255	0
1	B	1990	0	1955	155	0
2	A	64	0	0	10	0
2	B	51	0	0	6	0
All	All	4089	0	3910	410	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 52.

All (410) 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:633:GLU:O	1:A:635:CYS:N	1.74	1.18
1:A:603:LEU:HA	1:A:606:ILE:HG23	1.20	1.18
1:A:603:LEU:HD13	1:A:606:ILE:HD12	1.24	1.14
1:B:673:THR:HG22	1:B:676:ASN:HD22	1.11	1.11
1:B:570:PRO:HD3	1:B:615:GLU:HG3	1.35	1.09
1:B:629:GLU:HB3	1:B:691:GLU:OE1	1.55	1.07
1:A:572:LYS:HB2	1:A:578:THR:HG21	1.35	1.05
1:A:654:LEU:HA	1:A:656:LYS:NZ	1.72	1.03
1:A:656:LYS:H	1:A:656:LYS:HD3	1.23	1.02
1:A:636:ALA:HB2	1:A:638:TYR:CD1	2.00	0.97
1:B:630:ARG:HG3	1:B:691:GLU:HG2	1.47	0.97
1:A:656:LYS:HB2	1:A:666:ARG:CA	1.99	0.93
1:A:637:GLN:HA	1:A:637:GLN:HE21	1.32	0.92
1:A:654:LEU:HA	1:A:656:LYS:HZ3	1.35	0.92
1:A:737:LEU:HD22	2:A:27:HOH:O	1.72	0.89
1:B:735:CYS:O	1:B:739:THR:HG23	1.73	0.89
1:A:678:SER:OG	1:A:679:ARG:HG2	1.73	0.88
1:B:574:GLY:O	1:B:576:GLU:HG2	1.73	0.88
1:A:603:LEU:CA	1:A:606:ILE:HG23	2.03	0.87
1:A:679:ARG:O	1:A:681:ILE:N	2.08	0.86
1:A:627:LEU:HD21	1:A:639:TRP:CH2	2.11	0.85
1:A:603:LEU:HA	1:A:606:ILE:CG2	2.06	0.85
1:A:636:ALA:CB	1:A:638:TYR:CD1	2.61	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:737:LEU:HD21	1:A:776:CYS:HA	1.60	0.83
1:B:673:THR:CG2	1:B:676:ASN:HD22	1.91	0.83
1:A:682:ARG:HB3	1:A:711:GLN:OE1	1.78	0.82
1:A:765:HIS:HB3	1:A:768:GLN:HG2	1.61	0.82
1:A:575:GLU:HB3	1:A:576:GLU:HG2	1.62	0.81
1:B:595:TYR:OH	1:B:739:THR:HG22	1.80	0.81
1:B:567:VAL:HG21	1:B:596:ILE:HG23	1.63	0.81
1:A:603:LEU:CD1	1:A:606:ILE:HD12	2.07	0.80
1:B:734:PHE:O	1:B:738:SER:HB2	1.81	0.80
1:A:656:LYS:HB2	1:A:666:ARG:HA	1.64	0.79
1:A:633:GLU:C	1:A:635:CYS:H	1.85	0.79
1:A:589:TYR:CD1	1:A:743:ARG:HG2	2.17	0.78
1:A:690:PRO:HD2	1:A:695:PRO:HD3	1.64	0.78
1:B:542:MET:SD	1:B:543:ARG:HG3	2.23	0.78
1:A:636:ALA:O	1:A:637:GLN:HB2	1.82	0.78
1:A:632:GLN:O	1:A:634:LYS:N	2.16	0.78
1:A:578:THR:HG22	1:A:578:THR:O	1.84	0.78
1:A:773:TYR:HD1	1:A:773:TYR:C	1.86	0.78
1:B:673:THR:HG22	1:B:676:ASN:ND2	1.96	0.77
1:A:656:LYS:HD3	1:A:656:LYS:N	1.99	0.77
1:A:606:ILE:HD11	1:A:647:TYR:CD1	2.19	0.77
1:B:543:ARG:HH12	1:B:563:GLU:HB2	1.49	0.77
1:A:569:ILE:HD11	1:A:581:VAL:HG21	1.68	0.76
1:B:667:ASP:OD2	1:B:682:ARG:HD2	1.84	0.76
1:A:555:ARG:HD2	1:A:600:GLY:O	1.86	0.75
1:A:750:LEU:HD22	1:A:750:LEU:N	2.00	0.75
1:B:770:LEU:O	1:B:774:GLU:HG3	1.87	0.74
1:A:773:TYR:O	1:A:776:CYS:N	2.21	0.73
1:A:653:GLU:HG2	1:A:669:LEU:HB3	1.70	0.73
1:A:656:LYS:CB	1:A:667:ASP:N	2.51	0.73
1:B:570:PRO:CD	1:B:615:GLU:HG3	2.14	0.73
1:A:632:GLN:HG2	1:A:633:GLU:N	2.04	0.72
1:B:744:VAL:O	1:B:748:GLY:HA2	1.89	0.72
1:A:679:ARG:O	1:A:680:GLN:C	2.28	0.72
1:B:756:VAL:HA	1:B:759:LEU:HD23	1.70	0.72
1:A:773:TYR:CD1	1:A:773:TYR:C	2.60	0.71
1:B:629:GLU:OE1	1:B:691:GLU:HB2	1.90	0.71
1:A:603:LEU:O	1:A:603:LEU:HD12	1.90	0.71
1:A:606:ILE:HD13	1:A:607:GLU:N	2.06	0.71
1:A:637:GLN:HA	1:A:637:GLN:NE2	2.03	0.70
1:B:691:GLU:O	1:B:692:VAL:HG23	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:543:ARG:NH1	1:A:560:ILE:O	2.25	0.70
1:A:775:PHE:O	1:A:779:VAL:HG23	1.91	0.70
1:B:694:ILE:HB	2:B:48:HOH:O	1.92	0.69
1:A:656:LYS:CD	1:A:656:LYS:H	2.02	0.69
1:B:630:ARG:CG	1:B:691:GLU:HG2	2.21	0.69
1:A:656:LYS:O	1:A:657:GLU:HG2	1.91	0.69
1:B:670:VAL:HG21	1:B:681:ILE:CD1	2.23	0.69
1:A:654:LEU:HA	1:A:656:LYS:HZ2	1.58	0.68
1:A:656:LYS:HB2	1:A:666:ARG:CB	2.22	0.68
1:B:673:THR:CG2	1:B:673:THR:O	2.40	0.68
1:B:712:GLN:OE1	1:B:720:ILE:HG12	1.94	0.68
1:B:558:GLN:HG2	1:B:765:HIS:NE2	2.09	0.67
1:A:627:LEU:HD21	1:A:639:TRP:HH2	1.54	0.67
1:A:552:LYS:HD2	1:A:552:LYS:O	1.95	0.66
1:B:644:LEU:CD2	1:B:653:GLU:HB2	2.25	0.66
1:B:603:LEU:HG	2:B:30:HOH:O	1.95	0.66
1:B:750:LEU:N	1:B:750:LEU:HD12	2.11	0.66
1:A:636:ALA:HB2	1:A:638:TYR:HD1	1.57	0.66
1:A:614:TRP:CZ3	1:A:678:SER:HB2	2.31	0.66
1:A:740:VAL:HG11	1:A:752:VAL:HG22	1.77	0.66
1:A:619:CYS:SG	1:A:679:ARG:HD3	2.36	0.65
1:A:664:THR:HG22	1:A:685:HIS:HB3	1.78	0.65
1:A:771:GLU:HA	1:A:774:GLU:HG3	1.78	0.65
1:A:636:ALA:HB3	1:A:639:TRP:HZ3	1.62	0.65
1:A:698:GLY:O	1:A:702:ILE:HG13	1.97	0.65
1:B:630:ARG:HG3	1:B:691:GLU:CG	2.26	0.65
1:A:602:LEU:HB2	1:A:605:THR:HG23	1.78	0.65
1:A:556:VAL:HG21	1:A:726:ALA:CB	2.27	0.65
1:A:636:ALA:CB	1:A:639:TRP:HZ3	2.09	0.65
1:B:673:THR:HG23	1:B:673:THR:O	1.95	0.65
1:B:676:ASN:O	1:B:676:ASN:OD1	2.15	0.65
1:B:784:ILE:HG13	1:B:785:ASP:N	2.12	0.65
1:A:636:ALA:HB2	1:A:638:TYR:CE1	2.32	0.64
1:A:636:ALA:CB	1:A:639:TRP:CZ3	2.81	0.64
1:A:637:GLN:CA	1:A:637:GLN:HE21	2.09	0.64
1:A:607:GLU:O	1:A:611:ARG:HG3	1.97	0.64
1:B:704:ILE:O	1:B:708:VAL:HG23	1.98	0.64
1:A:629:GLU:HB3	1:A:634:LYS:HE2	1.80	0.63
1:A:547:LEU:HB2	1:A:550:ASN:HD22	1.63	0.63
1:B:543:ARG:NH1	1:B:563:GLU:HB2	2.13	0.63
1:B:712:GLN:NE2	1:B:718:HIS:H	1.97	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:712:GLN:HE21	1:B:718:HIS:H	1.47	0.62
1:A:603:LEU:CA	1:A:606:ILE:CG2	2.73	0.62
1:B:644:LEU:HD21	1:B:653:GLU:HB2	1.81	0.62
1:B:754:GLN:HG2	2:B:29:HOH:O	1.99	0.62
1:B:698:GLY:HA3	1:B:779:VAL:HG22	1.82	0.62
1:B:577:ASN:C	1:B:577:ASN:HD22	2.01	0.62
1:B:650:ILE:HG22	1:B:672:ASN:OD1	1.99	0.62
1:B:694:ILE:CG1	1:B:771:GLU:HB3	2.30	0.61
1:B:694:ILE:HG22	1:B:695:PRO:HD2	1.82	0.61
1:B:705:ILE:O	1:B:709:GLN:HG2	1.99	0.61
1:A:603:LEU:N	1:A:606:ILE:HG22	2.16	0.61
1:A:769:THR:O	1:A:772:GLN:HG2	2.00	0.61
1:A:661:GLU:HG2	2:A:68:HOH:O	2.00	0.61
1:A:699:LYS:HD2	1:A:700:GLY:N	2.16	0.61
1:A:656:LYS:CA	1:A:667:ASP:H	2.14	0.60
1:A:614:TRP:HZ3	1:A:678:SER:HB2	1.64	0.60
1:A:697:ASP:HB3	2:A:65:HOH:O	2.00	0.60
1:B:646:SER:OG	1:B:651:THR:HA	2.01	0.60
1:A:772:GLN:O	1:A:773:TYR:CB	2.49	0.60
1:A:670:VAL:HG21	1:A:681:ILE:HD12	1.83	0.60
1:B:570:PRO:HD3	1:B:615:GLU:CG	2.22	0.60
1:A:556:VAL:HG21	1:A:726:ALA:HB2	1.84	0.60
1:A:785:ASP:O	1:A:786:ALA:HB2	2.01	0.60
1:A:656:LYS:HA	1:A:667:ASP:H	1.66	0.59
1:B:577:ASN:HD22	1:B:578:THR:N	2.00	0.59
1:B:776:CYS:O	1:B:780:VAL:HG23	2.02	0.59
1:B:569:ILE:HG22	1:B:612:MET:HA	1.83	0.59
1:B:744:VAL:HG22	1:B:750:LEU:HG	1.84	0.59
1:A:636:ALA:HB3	1:A:639:TRP:CZ3	2.37	0.59
1:B:698:GLY:CA	1:B:779:VAL:HG22	2.33	0.59
1:A:779:VAL:HB	2:A:27:HOH:O	2.03	0.58
1:A:634:LYS:O	1:A:635:CYS:HB2	2.03	0.58
1:A:656:LYS:HB2	1:A:666:ARG:C	2.24	0.58
1:A:772:GLN:O	1:A:772:GLN:CG	2.52	0.58
1:B:548:PRO:O	1:B:549:ALA:CB	2.52	0.58
1:B:743:ARG:HD2	1:B:749:ILE:O	2.04	0.58
1:A:770:LEU:HD23	1:A:773:TYR:HD2	1.69	0.57
1:B:625:THR:OG1	1:B:634:LYS:HE2	2.05	0.57
1:B:634:LYS:O	1:B:635:CYS:HB2	2.03	0.57
1:B:712:GLN:NE2	1:B:718:HIS:O	2.37	0.57
1:A:656:LYS:HB3	1:A:667:ASP:N	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:701:MET:O	1:A:704:ILE:HG22	2.05	0.57
1:A:624:LEU:HD13	1:A:730:ARG:O	2.04	0.57
1:A:572:LYS:CB	1:A:578:THR:HG21	2.24	0.57
1:B:755:THR:O	1:B:759:LEU:HD22	2.05	0.57
1:B:750:LEU:H	1:B:750:LEU:HD12	1.68	0.57
1:A:654:LEU:CA	1:A:656:LYS:NZ	2.59	0.56
1:A:606:ILE:O	1:A:609:PHE:HB3	2.04	0.56
1:A:594:SER:HA	2:A:41:HOH:O	2.03	0.56
1:B:569:ILE:HD12	1:B:611:ARG:NH2	2.19	0.56
1:B:736:ALA:O	1:B:740:VAL:HG23	2.06	0.56
1:A:656:LYS:HB2	1:A:666:ARG:HB3	1.86	0.56
1:A:670:VAL:O	1:A:678:SER:N	2.39	0.56
1:A:654:LEU:O	1:A:655:LYS:HB2	2.05	0.56
1:A:669:LEU:HD11	1:A:677:LYS:HE2	1.87	0.56
1:A:754:GLN:O	1:A:757:LYS:HB3	2.05	0.56
1:B:576:GLU:HG3	1:B:577:ASN:N	2.21	0.56
1:A:737:LEU:HD21	1:A:776:CYS:CA	2.34	0.55
1:B:694:ILE:HG13	1:B:771:GLU:HB3	1.88	0.55
1:B:695:PRO:HG2	1:B:775:PHE:CE1	2.40	0.55
1:B:576:GLU:CG	1:B:577:ASN:H	2.20	0.55
1:A:603:LEU:HD13	1:A:606:ILE:HG23	1.89	0.55
1:A:600:GLY:HA3	1:A:635:CYS:SG	2.46	0.55
1:A:670:VAL:HB	1:A:678:SER:HB3	1.88	0.55
1:B:589:TYR:OH	1:B:746:ALA:HB3	2.07	0.55
1:A:629:GLU:HG2	1:A:691:GLU:HG2	1.89	0.54
1:A:750:LEU:CD2	1:A:750:LEU:N	2.71	0.54
1:A:552:LYS:NZ	1:A:604:HIS:HB2	2.23	0.54
1:A:739:THR:HG21	1:A:743:ARG:HH21	1.73	0.54
1:B:785:ASP:O	1:B:786:ALA:CB	2.56	0.54
1:A:555:ARG:NH1	1:A:634:LYS:O	2.41	0.54
1:A:641:SER:O	1:A:642:ASP:HB2	2.08	0.54
1:A:679:ARG:HG3	1:A:681:ILE:CG1	2.37	0.54
1:B:589:TYR:CE1	1:B:743:ARG:HA	2.43	0.54
1:A:636:ALA:HB1	1:A:639:TRP:CZ3	2.42	0.54
1:A:572:LYS:H	1:A:578:THR:HB	1.73	0.54
1:B:785:ASP:O	1:B:786:ALA:HB2	2.08	0.53
1:A:552:LYS:HZ1	1:A:604:HIS:HB2	1.72	0.53
1:A:699:LYS:CD	1:A:700:GLY:N	2.71	0.53
1:A:708:VAL:HG12	1:A:720:ILE:HD13	1.90	0.53
1:B:573:ARG:HG2	1:B:574:GLY:N	2.24	0.53
1:B:684:PHE:HB3	1:B:704:ILE:HD11	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:614:TRP:HZ3	1:B:670:VAL:HG23	1.73	0.53
1:A:603:LEU:C	1:A:603:LEU:HD12	2.29	0.53
1:B:670:VAL:HG21	1:B:681:ILE:HD11	1.89	0.53
1:B:737:LEU:O	1:B:741:LEU:HG	2.08	0.53
1:A:773:TYR:HD1	1:A:773:TYR:O	1.92	0.53
1:A:569:ILE:CG2	1:A:570:PRO:HD2	2.40	0.52
1:A:578:THR:HG22	1:A:611:ARG:HH22	1.74	0.52
1:A:614:TRP:HH2	1:A:676:ASN:O	1.91	0.52
1:A:636:ALA:HB1	1:A:638:TYR:CD1	2.41	0.52
1:A:744:VAL:HG13	1:A:745:LYS:N	2.24	0.52
1:A:773:TYR:HE1	1:A:777:TYR:CD2	2.27	0.52
1:A:773:TYR:HE1	1:A:777:TYR:CE2	2.28	0.52
1:B:544:THR:HA	1:B:547:LEU:HD12	1.89	0.52
1:A:602:LEU:HD12	1:A:605:THR:HG21	1.91	0.52
1:A:654:LEU:O	1:A:655:LYS:CB	2.58	0.52
1:A:773:TYR:O	1:A:776:CYS:HB2	2.09	0.52
1:A:578:THR:CG2	1:A:578:THR:O	2.57	0.52
1:A:654:LEU:HD23	1:A:654:LEU:H	1.75	0.52
1:A:626:GLU:OE2	1:A:687:HIS:CD2	2.62	0.51
1:B:549:ALA:O	1:B:552:LYS:NZ	2.40	0.51
1:A:603:LEU:N	1:A:606:ILE:CG2	2.73	0.51
1:A:635:CYS:SG	1:A:636:ALA:N	2.77	0.51
1:A:753:PHE:CD1	1:A:753:PHE:C	2.84	0.51
1:A:750:LEU:H	1:A:750:LEU:HD22	1.73	0.51
1:A:626:GLU:OE2	1:A:687:HIS:HD2	1.92	0.51
1:A:664:THR:HG22	1:A:687:HIS:CE1	2.46	0.51
1:A:770:LEU:HD23	1:A:773:TYR:CD2	2.45	0.51
1:A:771:GLU:HA	1:A:774:GLU:CG	2.40	0.51
1:B:670:VAL:HG21	1:B:681:ILE:HD12	1.91	0.51
1:B:710:LYS:O	1:B:713:GLN:HB3	2.11	0.51
1:A:709:GLN:HE21	1:A:709:GLN:CA	2.23	0.51
1:A:629:GLU:CB	1:A:634:LYS:HE2	2.40	0.51
1:A:772:GLN:O	1:A:773:TYR:HB2	2.10	0.51
1:A:656:LYS:O	1:A:666:ARG:HG2	2.11	0.51
1:A:708:VAL:CG1	1:A:720:ILE:HD13	2.41	0.51
1:B:744:VAL:CG2	1:B:750:LEU:HG	2.41	0.51
1:A:666:ARG:HD2	1:A:683:GLN:NE2	2.26	0.51
1:A:573:ARG:N	2:A:74:HOH:O	2.44	0.50
1:B:576:GLU:CG	1:B:577:ASN:N	2.73	0.50
1:A:673:THR:O	1:A:673:THR:HG22	2.10	0.50
1:A:543:ARG:HB2	1:A:546:ASN:HD22	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:643:GLY:O	1:A:644:LEU:CB	2.58	0.50
1:B:573:ARG:O	1:B:574:GLY:O	2.28	0.50
1:A:606:ILE:HD11	1:A:647:TYR:CG	2.46	0.50
1:A:666:ARG:HD2	1:A:683:GLN:HE22	1.76	0.50
1:B:737:LEU:HD21	1:B:776:CYS:HA	1.94	0.50
1:A:656:LYS:HB3	1:A:667:ASP:O	2.12	0.49
1:A:701:MET:C	1:A:704:ILE:HG22	2.32	0.49
1:A:733:THR:O	1:A:737:LEU:HG	2.11	0.49
1:A:749:ILE:C	1:A:750:LEU:HD13	2.33	0.49
1:A:737:LEU:O	1:A:741:LEU:HB2	2.12	0.49
1:A:773:TYR:C	1:A:775:PHE:N	2.60	0.49
1:A:700:GLY:O	1:A:704:ILE:HB	2.12	0.49
1:B:644:LEU:HD23	1:B:653:GLU:HB2	1.93	0.49
1:A:604:HIS:O	1:A:605:THR:HG22	2.12	0.49
1:B:573:ARG:HG2	1:B:574:GLY:H	1.77	0.49
1:B:634:LYS:HE3	2:B:105:HOH:O	2.13	0.49
1:A:739:THR:CG2	1:A:743:ARG:HE	2.26	0.49
1:A:555:ARG:HH12	1:A:634:LYS:C	2.17	0.49
1:A:603:LEU:H	1:A:606:ILE:HG22	1.77	0.48
1:A:663:TYR:HB2	1:A:685:HIS:O	2.13	0.48
1:A:661:GLU:OE2	1:A:700:GLY:HA2	2.14	0.48
1:A:751:ASP:C	1:A:753:PHE:H	2.16	0.48
1:A:666:ARG:HB2	1:A:683:GLN:HB3	1.95	0.48
1:B:550:ASN:HB3	1:B:580:TYR:CD2	2.48	0.48
1:B:559:ILE:HD12	1:B:726:ALA:HB1	1.93	0.48
1:A:654:LEU:CA	1:A:656:LYS:HZ3	2.18	0.48
1:B:743:ARG:CD	1:B:749:ILE:O	2.62	0.48
1:A:569:ILE:HD11	1:A:581:VAL:CG2	2.40	0.48
1:A:625:THR:OG1	1:A:634:LYS:HG2	2.14	0.48
1:B:754:GLN:O	1:B:758:SER:OG	2.31	0.48
1:B:575:GLU:HG2	1:B:575:GLU:H	1.21	0.48
1:A:776:CYS:O	1:A:780:VAL:HB	2.14	0.48
1:B:647:TYR:HD2	1:B:650:ILE:HD11	1.78	0.48
1:A:679:ARG:HG3	1:A:681:ILE:HG12	1.96	0.48
1:B:691:GLU:O	1:B:692:VAL:CG2	2.61	0.47
1:B:695:PRO:HG2	1:B:775:PHE:CZ	2.48	0.47
1:A:619:CYS:SG	1:A:679:ARG:CD	3.02	0.47
1:B:569:ILE:HD13	1:B:581:VAL:CG1	2.43	0.47
1:B:630:ARG:HD2	1:B:691:GLU:HG2	1.96	0.47
1:B:765:HIS:HB3	1:B:768:GLN:HG3	1.97	0.47
1:A:572:LYS:HE3	1:A:607:GLU:OE1	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:676:ASN:HA	2:A:42:HOH:O	2.15	0.47
1:A:654:LEU:CA	1:A:656:LYS:HZ2	2.26	0.47
1:B:567:VAL:HG21	1:B:596:ILE:CG2	2.41	0.47
1:A:630:ARG:HE	1:A:630:ARG:H	1.62	0.47
1:A:637:GLN:OE1	1:A:641:SER:OG	2.33	0.47
1:B:586:ILE:O	1:B:593:ASP:HA	2.14	0.47
1:A:741:LEU:C	1:A:744:VAL:HG12	2.34	0.47
1:A:765:HIS:HB3	1:A:768:GLN:CG	2.40	0.47
1:B:646:SER:OG	1:B:651:THR:HG23	2.15	0.47
1:B:784:ILE:CG1	1:B:785:ASP:N	2.76	0.47
1:A:617:LYS:O	1:A:718:HIS:HB3	2.14	0.47
1:B:732:GLY:HA3	1:B:766:MET:HG3	1.97	0.47
1:A:771:GLU:HA	1:A:774:GLU:CD	2.35	0.46
1:B:760:ARG:HH11	1:B:760:ARG:HG2	1.79	0.46
1:A:766:MET:O	1:A:767:VAL:HB	2.15	0.46
1:B:694:ILE:CG2	1:B:695:PRO:HD2	2.45	0.46
1:A:656:LYS:HB3	1:A:667:ASP:C	2.36	0.46
1:B:715:SER:O	1:B:718:HIS:CE1	2.68	0.46
1:A:682:ARG:HB2	1:A:711:GLN:HE22	1.81	0.46
1:A:722:VAL:HG12	1:A:731:THR:HG23	1.98	0.46
1:B:649:ASP:O	1:B:672:ASN:HA	2.14	0.46
1:B:634:LYS:HE3	1:B:725:SER:HB2	1.96	0.46
1:A:751:ASP:O	1:A:753:PHE:N	2.49	0.46
1:A:783:TYR:O	1:A:786:ALA:O	2.34	0.46
1:B:714:GLN:HB3	2:B:104:HOH:O	2.14	0.46
1:A:552:LYS:HD2	1:A:552:LYS:C	2.36	0.46
1:B:760:ARG:NH1	1:B:760:ARG:HG2	2.31	0.46
1:A:572:LYS:O	1:A:574:GLY:O	2.34	0.46
1:A:689:TRP:HD1	1:A:690:PRO:O	1.98	0.46
1:A:741:LEU:O	1:A:744:VAL:HG12	2.16	0.46
1:A:666:ARG:HB2	1:A:683:GLN:HE21	1.81	0.45
1:A:669:LEU:CD1	1:A:677:LYS:HE2	2.47	0.45
1:A:785:ASP:O	1:A:786:ALA:CB	2.64	0.45
1:B:673:THR:O	1:B:676:ASN:HB3	2.15	0.45
1:A:629:GLU:CD	1:A:691:GLU:OE1	2.55	0.45
1:A:773:TYR:C	1:A:776:CYS:H	2.19	0.45
1:B:575:GLU:C	1:B:576:GLU:HG2	2.36	0.45
1:A:572:LYS:O	1:A:574:GLY:N	2.48	0.45
1:A:603:LEU:CD1	1:A:603:LEU:O	2.64	0.45
1:A:656:LYS:HB2	1:A:667:ASP:N	2.28	0.45
1:A:656:LYS:O	1:A:666:ARG:HA	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:764:PRO:O	1:B:765:HIS:HB2	2.17	0.45
1:A:556:VAL:HG21	1:A:726:ALA:HB1	1.98	0.45
1:B:578:THR:O	1:B:578:THR:HG23	2.17	0.45
1:B:602:LEU:O	1:B:603:LEU:C	2.55	0.45
1:B:753:PHE:HD2	1:B:754:GLN:NE2	2.14	0.45
1:A:733:THR:HG23	1:A:776:CYS:SG	2.57	0.45
1:A:678:SER:O	1:A:679:ARG:C	2.55	0.45
1:B:588:GLY:HA2	1:B:595:TYR:HE1	1.82	0.44
1:B:656:LYS:HB2	1:B:656:LYS:HE3	1.79	0.44
1:B:589:TYR:OH	1:B:747:GLU:HG3	2.18	0.44
1:A:763:ARG:O	1:A:766:MET:HG2	2.17	0.44
1:B:656:LYS:HE3	1:B:667:ASP:HB2	1.99	0.44
1:B:559:ILE:HD12	1:B:726:ALA:CB	2.48	0.44
1:A:569:ILE:HG22	1:A:570:PRO:CD	2.48	0.44
1:A:630:ARG:HB2	1:A:631:GLY:H	1.33	0.44
1:A:704:ILE:CG2	1:A:705:ILE:N	2.80	0.44
1:B:569:ILE:HD13	1:B:581:VAL:HG13	2.00	0.44
1:B:550:ASN:HD21	1:B:577:ASN:ND2	2.14	0.44
1:B:599:GLN:HB3	1:B:726:ALA:O	2.18	0.44
1:B:753:PHE:CD2	1:B:754:GLN:NE2	2.86	0.44
1:A:558:GLN:HE21	1:A:559:ILE:HD11	1.82	0.44
1:B:609:PHE:O	1:B:613:ILE:HG13	2.18	0.44
1:A:604:HIS:HB3	2:A:45:HOH:O	2.18	0.44
1:A:699:LYS:CD	1:A:700:GLY:H	2.31	0.44
1:B:575:GLU:O	1:B:576:GLU:HB3	2.18	0.44
1:B:740:VAL:O	1:B:744:VAL:HG23	2.18	0.44
1:A:753:PHE:CG	1:A:754:GLN:N	2.85	0.43
1:B:582:ASN:HB3	1:B:599:GLN:HG2	2.01	0.43
1:B:555:ARG:HH21	1:B:635:CYS:HA	1.82	0.43
1:A:654:LEU:HA	1:A:656:LYS:CE	2.46	0.43
1:A:773:TYR:O	1:A:774:GLU:C	2.56	0.43
1:B:676:ASN:O	1:B:677:LYS:O	2.37	0.43
1:A:629:GLU:O	1:A:634:LYS:HE3	2.18	0.43
1:A:704:ILE:HG23	1:A:705:ILE:N	2.33	0.43
1:A:770:LEU:HB3	2:A:94:HOH:O	2.17	0.43
1:B:630:ARG:CD	1:B:691:GLU:HG2	2.48	0.43
1:A:547:LEU:HB2	1:A:550:ASN:ND2	2.31	0.43
1:A:639:TRP:HA	1:A:640:PRO:HD3	1.79	0.43
1:A:643:GLY:O	1:A:644:LEU:HB2	2.17	0.43
1:A:765:HIS:N	1:A:765:HIS:CD2	2.85	0.43
1:B:640:PRO:HG2	1:B:652:VAL:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:669:LEU:HA	1:B:669:LEU:HD12	1.91	0.43
1:B:686:PHE:CZ	1:B:688:GLY:HA3	2.53	0.43
1:B:712:GLN:NE2	1:B:718:HIS:N	2.65	0.43
1:A:581:VAL:HG22	1:A:608:ASP:HB3	2.01	0.43
1:A:629:GLU:OE1	1:A:629:GLU:HA	1.96	0.43
1:A:682:ARG:HE	1:A:711:GLN:NE2	2.17	0.43
1:A:629:GLU:CB	1:A:634:LYS:CE	2.97	0.43
1:A:623:MET:HE1	1:A:683:GLN:OE1	2.18	0.43
1:B:750:LEU:CD1	1:B:750:LEU:H	2.32	0.43
1:B:750:LEU:CD1	1:B:750:LEU:N	2.80	0.43
1:A:558:GLN:HG3	1:A:559:ILE:HG13	2.00	0.43
1:A:575:GLU:C	1:A:576:GLU:HG2	2.39	0.43
1:A:552:LYS:NZ	2:A:91:HOH:O	2.48	0.42
1:B:577:ASN:C	1:B:577:ASN:ND2	2.71	0.42
1:A:664:THR:HG23	1:A:664:THR:O	2.19	0.42
1:B:625:THR:HG21	1:B:724:CYS:O	2.18	0.42
1:A:558:GLN:HG3	1:A:559:ILE:N	2.33	0.42
1:A:753:PHE:O	1:A:757:LYS:HB2	2.18	0.42
1:B:550:ASN:HD21	1:B:577:ASN:HD21	1.66	0.42
1:A:656:LYS:CB	1:A:666:ARG:C	2.87	0.42
1:A:589:TYR:OH	1:A:747:GLU:HG3	2.19	0.42
1:B:694:ILE:HD11	1:B:771:GLU:HB3	2.00	0.42
1:B:739:THR:HG21	2:B:60:HOH:O	2.19	0.42
1:A:655:LYS:HE3	1:A:669:LEU:HB2	2.02	0.42
1:A:739:THR:HG22	1:A:743:ARG:HE	1.83	0.42
1:A:722:VAL:CG1	1:A:731:THR:HG23	2.50	0.42
1:B:592:LYS:HE3	1:B:592:LYS:HB3	1.91	0.42
1:A:559:ILE:HD13	1:A:726:ALA:HB1	2.02	0.42
1:A:689:TRP:HZ2	1:A:694:ILE:HD11	1.85	0.41
1:A:760:ARG:HA	1:A:760:ARG:HD3	1.81	0.41
1:A:773:TYR:HA	1:A:776:CYS:SG	2.60	0.41
1:A:633:GLU:O	1:A:635:CYS:CA	2.60	0.41
1:A:636:ALA:HB1	1:A:637:GLN:H	1.18	0.41
1:A:569:ILE:HG22	1:A:570:PRO:N	2.36	0.41
1:A:629:GLU:OE1	1:A:691:GLU:OE1	2.38	0.41
1:A:694:ILE:HG12	1:A:772:GLN:HA	2.02	0.41
1:A:555:ARG:HD3	1:A:725:SER:O	2.21	0.41
1:B:769:THR:OG1	1:B:772:GLN:HG3	2.21	0.41
1:B:629:GLU:CD	1:B:691:GLU:HB2	2.39	0.41
1:B:570:PRO:CD	1:B:615:GLU:CG	2.89	0.41
1:B:588:GLY:HA2	1:B:595:TYR:CE1	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:558:GLN:NE2	1:B:765:HIS:CE1	2.88	0.41
1:B:705:ILE:O	1:B:709:GLN:CG	2.68	0.41
1:A:617:LYS:HA	1:A:679:ARG:NH1	2.36	0.41
1:A:600:GLY:CA	1:A:635:CYS:SG	3.08	0.41
1:B:602:LEU:HD13	1:B:604:HIS:HE1	1.86	0.41
1:A:683:GLN:HB3	1:A:683:GLN:HE21	1.67	0.40
1:A:694:ILE:HA	1:A:695:PRO:HD2	1.82	0.40
1:B:581:VAL:HG23	1:B:581:VAL:O	2.20	0.40
1:A:741:LEU:O	1:A:744:VAL:CG1	2.70	0.40
1:B:629:GLU:HB2	1:B:634:LYS:HD3	2.04	0.40
1:B:717:ASN:C	1:B:717:ASN:HD22	2.25	0.40
1:A:664:THR:CG2	1:A:687:HIS:HE1	2.34	0.40
1:A:690:PRO:CD	1:A:695:PRO:HD3	2.44	0.40
1:B:654:LEU:HD13	1:B:654:LEU:C	2.41	0.40
1:A:547:LEU:HD23	1:A:547:LEU:HA	1.79	0.40
1:A:752:VAL:O	1:A:752:VAL:HG12	2.22	0.40
1:B:602:LEU:HD13	1:B:604:HIS:CE1	2.56	0.40
1:B:695:PRO:C	1:B:697:ASP:H	2.24	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	243/253 (96%)	185 (76%)	30 (12%)	28 (12%)	0 0
1	B	242/253 (96%)	200 (83%)	27 (11%)	15 (6%)	1 0
All	All	485/506 (96%)	385 (79%)	57 (12%)	43 (9%)	1 0

All (43) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	573	ARG
1	A	633	GLU
1	A	634	LYS
1	A	636	ALA
1	A	637	GLN
1	A	644	LEU
1	A	654	LEU
1	A	674	ARG
1	A	679	ARG
1	A	680	GLN
1	A	695	PRO
1	A	715	SER
1	A	773	TYR
1	B	574	GLY
1	B	576	GLU
1	B	677	LYS
1	B	692	VAL
1	B	787	PHE
1	A	635	CYS
1	A	643	GLY
1	A	655	LYS
1	A	656	LYS
1	A	675	GLU
1	A	696	SER
1	A	698	GLY
1	A	752	VAL
1	B	549	ALA
1	B	578	THR
1	B	635	CYS
1	B	786	ALA
1	A	605	THR
1	A	661	GLU
1	B	643	GLY
1	B	696	SER
1	B	767	VAL
1	B	768	GLN
1	A	713	GLN
1	A	767	VAL
1	A	768	GLN
1	B	729	GLY
1	A	601	PRO
1	A	642	ASP
1	B	582	ASN

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	218/225 (97%)	181 (83%)	37 (17%)	2 1
1	B	219/225 (97%)	201 (92%)	18 (8%)	11 7
All	All	437/450 (97%)	382 (87%)	55 (13%)	4 2

All (55) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	551	MET
1	A	552	LYS
1	A	556	VAL
1	A	557	LEU
1	A	563	GLU
1	A	573	ARG
1	A	576	GLU
1	A	584	SER
1	A	590	ARG
1	A	603	LEU
1	A	605	THR
1	A	606	ILE
1	A	629	GLU
1	A	630	ARG
1	A	637	GLN
1	A	654	LEU
1	A	656	LYS
1	A	659	GLU
1	A	661	GLU
1	A	669	LEU
1	A	674	ARG
1	A	676	ASN
1	A	679	ARG
1	A	683	GLN
1	A	694	ILE
1	A	697	ASP
1	A	705	ILE

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Mol	Chain	Res	Type
1	A	709	GLN
1	A	741	LEU
1	A	742	GLU
1	A	750	LEU
1	A	751	ASP
1	A	753	PHE
1	A	772	GLN
1	A	773	TYR
1	A	781	GLN
1	A	785	ASP
1	B	542	MET
1	B	560	ILE
1	B	573	ARG
1	B	575	GLU
1	B	577	ASN
1	B	595	TYR
1	B	632	GLN
1	B	673	THR
1	B	676	ASN
1	B	717	ASN
1	B	738	SER
1	B	739	THR
1	B	750	LEU
1	B	758	SER
1	B	759	LEU
1	B	766	MET
1	B	782	GLU
1	B	784	ILE

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (23) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	546	ASN
1	A	558	GLN
1	A	591	GLN
1	A	637	GLN
1	A	676	ASN
1	A	683	GLN
1	A	687	HIS
1	A	709	GLN
1	A	713	GLN
1	A	723	HIS

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Mol	Chain	Res	Type
1	A	754	GLN
1	A	765	HIS
1	A	768	GLN
1	B	558	GLN
1	B	577	ASN
1	B	591	GLN
1	B	676	ASN
1	B	712	GLN
1	B	713	GLN
1	B	717	ASN
1	B	718	HIS
1	B	754	GLN
1	B	781	GLN

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no 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	245/253 (96%)	0.64	25 (10%) 6 6	21, 42, 68, 79	0
1	B	246/253 (97%)	0.35	9 (3%) 41 41	20, 34, 63, 80	0
All	All	491/506 (97%)	0.49	34 (6%) 16 16	20, 38, 67, 80	0

All (34) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	631	GLY	6.5
1	B	577	ASN	4.8
1	B	542	MET	4.4
1	A	698	GLY	3.6
1	A	694	ILE	3.6
1	A	656	LYS	3.6
1	A	692	VAL	3.5
1	B	572	LYS	3.4
1	B	694	ILE	3.2
1	A	654	LEU	3.1
1	B	715	SER	3.1
1	A	679	ARG	3.0
1	A	603	LEU	2.9
1	B	788	SER	2.8
1	A	643	GLY	2.7
1	B	673	THR	2.6
1	A	696	SER	2.6
1	B	557	LEU	2.5
1	A	636	ALA	2.5
1	A	633	GLU	2.5
1	A	678	SER	2.3
1	B	645	VAL	2.2
1	A	632	GLN	2.2
1	A	770	LEU	2.2

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Mol	Chain	Res	Type	RSRZ
1	A	771	GLU	2.2
1	A	556	VAL	2.1
1	A	604	HIS	2.1
1	A	551	MET	2.1
1	A	690	PRO	2.1
1	A	673	THR	2.1
1	A	743	ARG	2.1
1	A	753	PHE	2.1
1	A	693	GLY	2.0
1	A	767	VAL	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.