Full wwPDB X-ray Structure Validation Report ⓘ

Oct 17, 2023 – 01:46 AM EDT

PDB ID	:	2DH1
Title	:	Crystal structure of peanut lectin lactose-azobenzene-4,4'-dicarboxylic acid-lactose complex
Authors	:	Natchiar, S.K.; Srinivas, O.; Nivedita, M.; Sagarika, D.; Jayaraman, N.; Surolia, A.; Vijayan, M.
Deposited on	:	2006-03-17
Resolution	:	7.65 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

The following versions of software and data (see references ⓘ) were used in the production of this report:

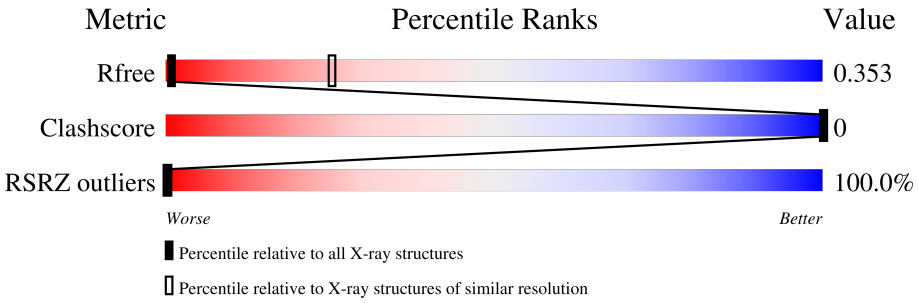
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.13
EDS	:	2.36
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation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

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 7.65 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	1004 (10.00-3.90)
Clashscore	141614	1069 (10.00-3.90)
RSRZ outliers	127900	1004 (9.50-3.80)

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

Mol	Chain	Length	Quality of chain
1	A	236	98% 98%
1	B	236	98% 98%
1	C	236	98% 98%
1	D	236	98% 98%

2 Entry composition (i)

There is only 1 type of molecule in this entry. The entry contains 928 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 Galactose-binding lectin.

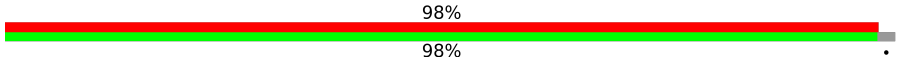
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
1	A	232	Total C 232 232	0	0	232
1	B	232	Total C 232 232	0	0	232
1	C	232	Total C 232 232	0	0	232
1	D	232	Total C 232 232	0	0	232

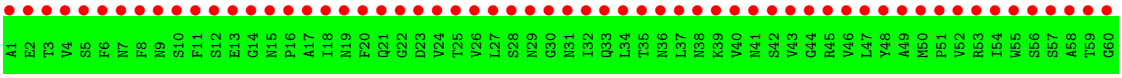
3 Residue-property plots (i)

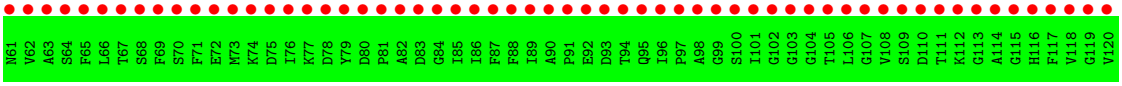
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density.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

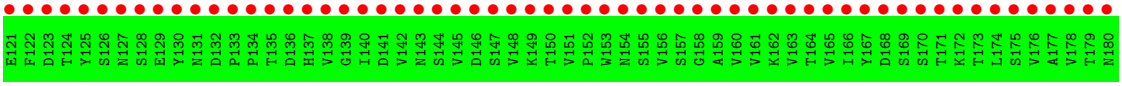
• Molecule 1: Galactose-binding lectin

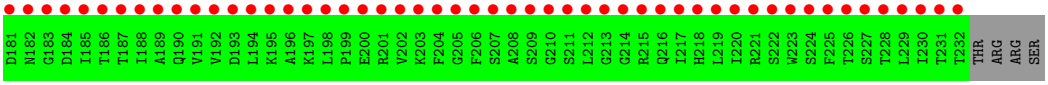
Chain A:





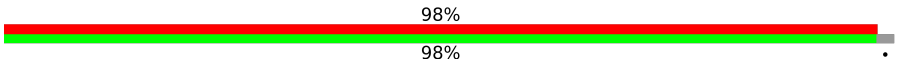


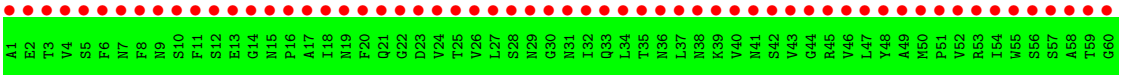


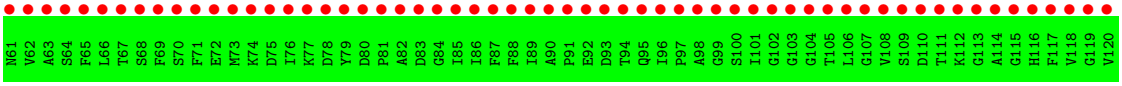


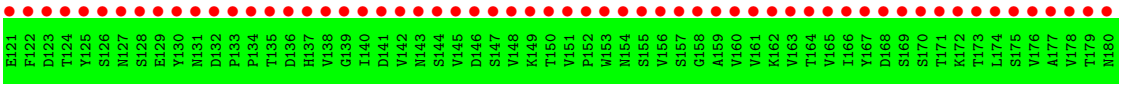
• Molecule 1: Galactose-binding lectin

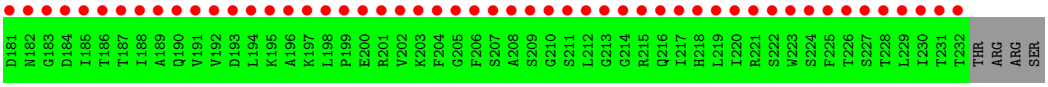
Chain B:





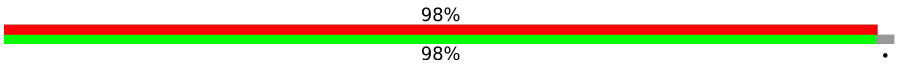


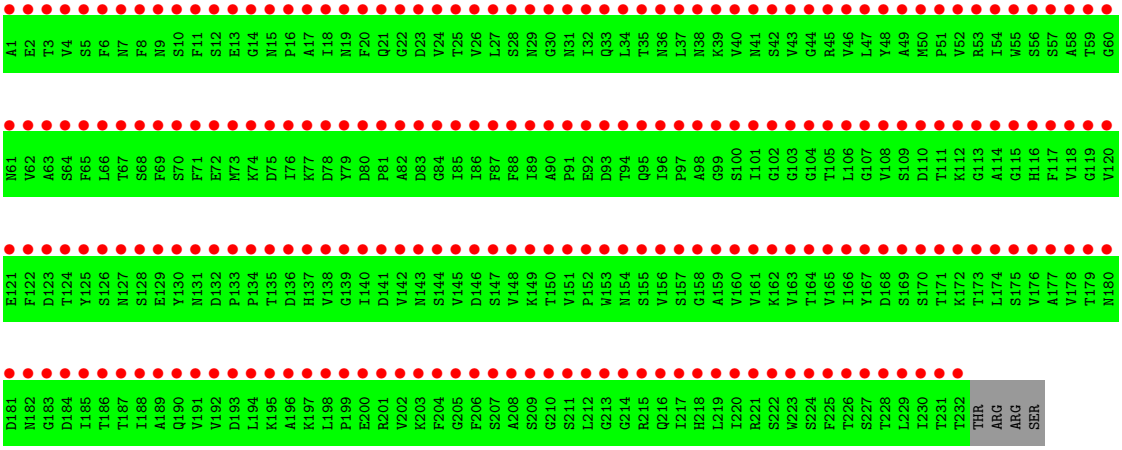




• Molecule 1: Galactose-binding lectin

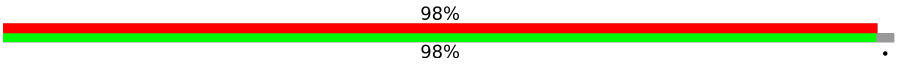
Chain C:

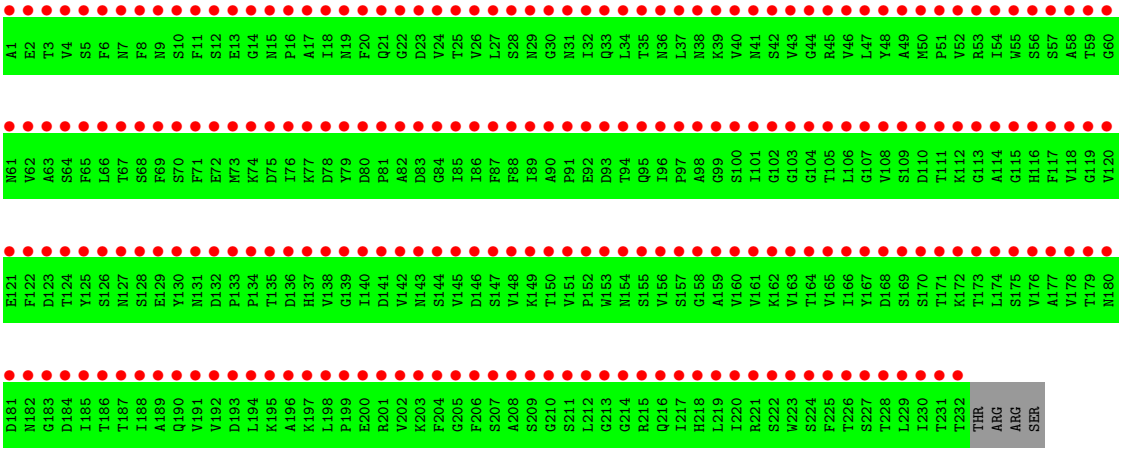




• Molecule 1: Galactose-binding lectin

Chain D:





4 Data and refinement statistics (i)

Property	Value	Source
Space group	I 41	Depositor
Cell constants a, b, c, α, β, γ	92.75Å 92.75Å 473.50Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	20.00 – 7.65 19.99 – 7.65	Depositor EDS
% Data completeness (in resolution range)	99.8 (20.00-7.65) 99.7 (19.99-7.65)	Depositor EDS
R_{merge}	0.10	Depositor
R_{sym}	0.10	Depositor
$< I/\sigma(I) >$ [1]	5.42 (at 7.78Å)	Xtriage
Refinement program	REFMAC 5.2.0005	Depositor
R, R_{free}	0.355 , 0.377 0.368 , 0.353	Depositor DCC
R_{free} test set	104 reflections (4.58%)	wwPDB-VP
Wilson B-factor (Å^2)	390.9	Xtriage
Anisotropy	0.950	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	1.00 , 96.0	EDS
L-test for twinning[2]	$< \|L\| > = 0.49$, $< L^2 > = 0.33$	Xtriage
Estimated twinning fraction	0.458 for -h,k,-l	Xtriage
F_o,F_c correlation	0.82	EDS
Total number of atoms	928	wwPDB-VP
Average B, all atoms (Å^2)	347.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 9.71% 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).

There are no protein, RNA or DNA chains available to summarize Z scores of covalent bonds and angles.

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

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	232	0	0	0	0
1	B	232	0	0	0	0
1	C	232	0	0	0	0
1	D	232	0	0	0	0
All	All	928	0	0	0	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 0.

There are no clashes within the asymmetric unit.

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone

There are no protein backbone outliers to report in this entry.

5.3.2 Protein sidechains

There are no protein residues with a non-rotameric sidechain to report in this entry.

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no monosaccharides in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
1	A	232/236 (98%)	44.82	232 (100%)	0	0	316, 343, 362, 369	0
1	B	232/236 (98%)	43.99	232 (100%)	0	0	314, 343, 360, 368	0
1	C	232/236 (98%)	43.14	232 (100%)	0	0	321, 354, 371, 375	0
1	D	232/236 (98%)	43.93	232 (100%)	0	0	322, 352, 373, 381	0
All	All	928/944 (98%)	43.97	928 (100%)	0	0	314, 349, 368, 381	0

All (928) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	31	ASN	171.4
1	C	109	SER	168.7
1	B	175	SER	141.8
1	B	30	GLY	122.6
1	C	136	ASP	120.4
1	C	107	GLY	114.6
1	A	42	SER	109.8
1	A	71	PHE	109.2
1	B	189	ALA	109.0
1	D	109	SER	106.7
1	B	109	SER	103.5
1	C	105	THR	101.6
1	C	209	SER	101.2
1	C	110	ASP	99.6
1	B	42	SER	97.4
1	B	27	LEU	96.1
1	C	208	ALA	96.0
1	A	23	ASP	95.6
1	C	203	LYS	94.2
1	D	152	PRO	94.1
1	D	202	VAL	93.6

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	C	115	GLY	93.4
1	C	201	ARG	93.4
1	D	110	ASP	92.3
1	C	97	PRO	91.1
1	C	202	VAL	90.7
1	B	40	VAL	90.0
1	D	175	SER	89.6
1	B	10	SER	89.0
1	A	33	GLN	88.4
1	D	201	ARG	88.1
1	C	175	SER	88.1
1	D	136	ASP	88.0
1	D	203	LYS	86.9
1	B	23	ASP	86.6
1	A	136	ASP	86.2
1	A	155	SER	86.2
1	D	75	ASP	83.4
1	A	34	LEU	82.9
1	C	224	SER	82.7
1	C	99	GLY	82.1
1	C	207	SER	81.9
1	A	41	ASN	81.7
1	D	35	THR	81.1
1	D	207	SER	79.8
1	A	175	SER	79.4
1	A	26	VAL	78.8
1	D	92	GLU	78.1
1	A	203	LYS	77.9
1	D	224	SER	77.3
1	C	106	LEU	76.3
1	B	182	ASN	76.3
1	A	220	ILE	76.2
1	C	7	ASN	76.0
1	B	22	GLY	75.7
1	A	167	TYR	75.4
1	D	105	THR	74.6
1	D	23	ASP	74.6
1	B	39	LYS	74.5
1	B	154	ASN	74.2
1	C	114	ALA	73.6
1	D	51	PRO	73.4
1	D	99	GLY	73.1

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	A	31	ASN	72.9
1	D	68	SER	72.8
1	A	92	GLU	72.8
1	B	49	ALA	72.7
1	A	72	GLU	72.4
1	A	10	SER	72.1
1	A	159	ALA	71.8
1	A	13	GLU	71.7
1	B	41	ASN	71.5
1	C	35	THR	71.2
1	D	222	SER	71.0
1	B	141	ASP	70.9
1	D	131	ASN	69.7
1	D	115	GLY	69.5
1	A	165	VAL	69.2
1	A	141	ASP	68.9
1	D	42	SER	68.8
1	A	49	ALA	68.6
1	B	203	LYS	68.3
1	D	19	ASN	68.2
1	D	41	ASN	68.1
1	A	202	VAL	68.0
1	D	229	LEU	67.8
1	A	93	ASP	67.2
1	B	53	ARG	67.1
1	B	2	GLU	66.8
1	C	147	SER	66.7
1	B	152	PRO	66.7
1	B	202	VAL	66.5
1	D	74	LYS	66.5
1	A	156	VAL	66.2
1	A	80	ASP	66.2
1	D	44	GLY	66.1
1	D	97	PRO	66.0
1	D	204	PHE	66.0
1	A	29	ASN	65.9
1	A	183	GLY	65.8
1	A	70	SER	65.7
1	A	173	THR	65.5
1	B	57	SER	65.4
1	C	123	ASP	65.4
1	C	128	SER	65.4

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	C	165	VAL	65.4
1	D	107	GLY	65.3
1	A	87	PHE	65.2
1	B	219	LEU	64.8
1	D	98	ALA	64.7
1	B	92	GLU	64.7
1	B	26	VAL	64.5
1	D	164	THR	64.5
1	A	19	ASN	64.3
1	C	86	ILE	64.3
1	A	86	ILE	64.1
1	D	165	VAL	64.0
1	A	207	SER	63.8
1	B	34	LEU	63.5
1	B	201	ARG	62.9
1	C	121	GLU	62.8
1	A	61	ASN	62.8
1	C	22	GLY	62.8
1	C	98	ALA	62.7
1	A	154	ASN	62.7
1	D	221	ARG	62.7
1	D	69	PHE	62.6
1	A	180	ASN	62.4
1	C	174	LEU	62.1
1	A	174	LEU	62.1
1	D	208	ALA	62.0
1	A	40	VAL	62.0
1	A	39	LYS	61.8
1	A	210	GLY	61.6
1	D	162	LYS	61.5
1	A	30	GLY	61.4
1	B	99	GLY	61.2
1	B	32	ILE	60.9
1	C	83	ASP	60.8
1	B	55	TRP	60.7
1	B	176	VAL	60.7
1	B	155	SER	60.7
1	C	43	VAL	60.7
1	D	193	ASP	60.6
1	D	67	THR	60.6
1	A	211	SER	60.5
1	B	36	ASN	60.3

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	B	153	TRP	60.0
1	A	68	SER	60.0
1	C	204	PHE	59.9
1	A	12	SER	59.9
1	D	215	ARG	59.8
1	A	153	TRP	59.3
1	A	160	VAL	59.3
1	B	9	ASN	59.2
1	A	121	GLU	59.2
1	B	70	SER	58.7
1	D	230	ILE	58.7
1	D	39	LYS	58.7
1	C	88	PHE	58.7
1	D	211	SER	58.5
1	B	210	GLY	58.5
1	A	219	LEU	58.2
1	D	231	THR	58.2
1	C	68	SER	58.2
1	C	16	PRO	58.2
1	D	102	GLY	58.1
1	C	6	PHE	58.1
1	D	223	TRP	57.9
1	A	5	SER	57.7
1	D	228	THR	57.7
1	B	181	ASP	57.6
1	A	208	ALA	57.4
1	A	137	HIS	57.3
1	C	51	PRO	57.2
1	D	147	SER	57.1
1	B	33	GLN	57.0
1	B	3	THR	56.9
1	D	163	VAL	56.9
1	A	166	ILE	56.9
1	D	180	ASN	56.8
1	C	44	GLY	56.7
1	D	154	ASN	56.7
1	A	35	THR	56.6
1	A	38	ASN	56.6
1	A	15	ASN	56.6
1	A	226	THR	56.5
1	D	52	VAL	56.4
1	B	38	ASN	56.4

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	D	34	LEU	56.3
1	A	97	PRO	56.2
1	A	164	THR	56.1
1	B	71	PHE	56.1
1	A	195	LYS	56.1
1	C	70	SER	56.0
1	C	144	SER	56.0
1	A	163	VAL	56.0
1	A	9	ASN	55.9
1	A	21	GLN	55.8
1	B	81	PRO	55.7
1	D	176	VAL	55.6
1	C	100	SER	55.5
1	B	174	LEU	55.3
1	B	44	GLY	55.2
1	D	153	TRP	55.2
1	B	52	VAL	55.2
1	D	137	HIS	54.9
1	D	93	ASP	54.9
1	D	81	PRO	54.6
1	B	29	ASN	54.6
1	C	81	PRO	54.6
1	B	97	PRO	54.6
1	D	45	ARG	54.5
1	A	53	ARG	54.5
1	C	30	GLY	54.4
1	C	173	THR	54.3
1	A	8	PHE	54.2
1	D	33	GLN	54.2
1	C	75	ASP	54.2
1	B	15	ASN	54.1
1	A	206	PHE	53.9
1	C	141	ASP	53.8
1	D	70	SER	53.8
1	B	209	SER	53.8
1	A	193	ASP	53.8
1	A	150	THR	53.7
1	B	80	ASP	53.6
1	C	153	TRP	53.5
1	A	36	ASN	53.5
1	B	183	GLY	53.4
1	D	121	GLU	53.3

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	D	205	GLY	53.1
1	C	5	SER	53.0
1	D	166	ILE	53.0
1	A	214	GLY	52.9
1	C	85	ILE	52.9
1	C	89	ILE	52.7
1	D	17	ALA	52.5
1	B	220	ILE	52.4
1	B	167	TYR	52.4
1	B	157	SER	52.3
1	A	78	ASP	52.2
1	A	27	LEU	52.0
1	B	146	ASP	51.9
1	C	122	PHE	51.9
1	B	159	ALA	51.9
1	D	22	GLY	51.9
1	D	7	ASN	51.8
1	B	83	ASP	51.7
1	B	72	GLU	51.4
1	B	229	LEU	51.3
1	C	82	ALA	51.3
1	A	222	SER	51.3
1	A	224	SER	51.3
1	B	221	ARG	51.2
1	B	91	PRO	51.2
1	A	168	ASP	51.1
1	D	10	SER	51.1
1	C	228	THR	51.0
1	B	156	VAL	50.9
1	D	16	PRO	50.9
1	D	113	GLY	50.8
1	B	8	PHE	50.7
1	A	32	ILE	50.7
1	B	173	THR	50.7
1	A	48	TYR	50.6
1	D	227	SER	50.6
1	A	91	PRO	50.6
1	A	73	MET	50.5
1	B	130	TYR	50.4
1	D	216	GLN	50.4
1	B	87	PHE	50.3
1	B	140	ILE	50.3

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	B	12	SER	50.2
1	A	228	THR	50.1
1	A	201	ARG	50.0
1	B	21	GLN	50.0
1	D	104	GLY	50.0
1	A	7	ASN	49.9
1	D	86	ILE	49.9
1	B	208	ALA	49.8
1	C	69	PHE	49.8
1	B	151	VAL	49.8
1	D	128	SER	49.8
1	B	105	THR	49.7
1	C	164	THR	49.6
1	B	61	ASN	49.4
1	C	176	VAL	49.3
1	D	30	GLY	49.3
1	D	80	ASP	49.3
1	C	205	GLY	49.3
1	A	76	ILE	49.1
1	D	103	GLY	49.0
1	B	222	SER	49.0
1	B	28	SER	48.9
1	C	227	SER	48.9
1	C	216	GLN	48.8
1	D	49	ALA	48.8
1	C	192	VAL	48.7
1	C	108	VAL	48.7
1	A	110	ASP	48.7
1	C	74	LYS	48.6
1	C	223	TRP	48.6
1	A	147	SER	48.6
1	A	77	LYS	48.6
1	D	209	SER	48.5
1	C	17	ALA	48.3
1	A	157	SER	48.3
1	B	14	GLY	48.2
1	B	193	ASP	48.1
1	C	116	HIS	48.0
1	B	108	VAL	48.0
1	A	3	THR	47.9
1	B	56	SER	47.9
1	B	190	GLN	47.8

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	C	10	SER	47.7
1	C	180	ASN	47.7
1	D	87	PHE	47.7
1	D	196	ALA	47.6
1	C	94	THR	47.6
1	A	184	ASP	47.5
1	A	227	SER	47.5
1	A	209	SER	47.4
1	A	69	PHE	47.4
1	A	109	SER	47.4
1	C	21	GLN	47.4
1	C	222	SER	47.4
1	B	77	LYS	47.3
1	C	102	GLY	47.3
1	A	221	ARG	47.3
1	C	193	ASP	47.3
1	D	192	VAL	47.2
1	B	164	THR	47.1
1	D	127	ASN	47.1
1	C	172	LYS	47.0
1	C	96	ILE	47.0
1	B	24	VAL	46.9
1	D	100	SER	46.8
1	C	23	ASP	46.8
1	A	100	SER	46.8
1	B	142	VAL	46.7
1	C	19	ASN	46.7
1	C	210	GLY	46.6
1	D	226	THR	46.6
1	C	49	ALA	46.6
1	C	200	GLU	46.6
1	B	206	PHE	46.6
1	B	100	SER	46.5
1	B	110	ASP	46.5
1	B	50	MET	46.5
1	B	143	ASN	46.4
1	A	20	PHE	46.3
1	D	83	ASP	46.3
1	C	137	HIS	46.2
1	B	25	THR	46.2
1	C	42	SER	46.2
1	D	214	GLY	46.1

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	A	218	HIS	46.0
1	C	143	ASN	45.8
1	C	167	TYR	45.7
1	B	16	PRO	45.7
1	A	83	ASP	45.7
1	C	131	ASN	45.6
1	D	124	THR	45.6
1	A	89	ILE	45.4
1	C	15	ASN	45.4
1	A	14	GLY	45.4
1	B	163	VAL	45.3
1	B	158	GLY	45.2
1	B	18	ILE	45.1
1	D	50	MET	45.1
1	B	48	TYR	45.1
1	B	35	THR	45.1
1	D	43	VAL	45.1
1	C	48	TYR	45.0
1	A	44	GLY	45.0
1	A	146	ASP	45.0
1	A	43	VAL	44.9
1	D	116	HIS	44.9
1	A	176	VAL	44.8
1	B	93	ASP	44.7
1	D	150	THR	44.7
1	C	191	VAL	44.7
1	B	86	ILE	44.6
1	B	98	ALA	44.6
1	D	88	PHE	44.6
1	C	12	SER	44.6
1	A	169	SER	44.5
1	A	223	TRP	44.5
1	A	6	PHE	44.5
1	C	169	SER	44.4
1	A	230	ILE	44.3
1	B	194	LEU	44.1
1	D	24	VAL	44.1
1	A	85	ILE	44.1
1	C	91	PRO	44.0
1	D	148	VAL	44.0
1	D	183	GLY	43.9
1	C	206	PHE	43.9

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	D	190	GLN	43.8
1	A	24	VAL	43.8
1	C	170	SER	43.8
1	D	91	PRO	43.7
1	C	220	ILE	43.7
1	C	142	VAL	43.5
1	C	67	THR	43.5
1	C	183	GLY	43.5
1	A	62	VAL	43.4
1	C	92	GLU	43.3
1	D	12	SER	43.3
1	A	18	ILE	43.3
1	A	151	VAL	43.1
1	D	210	GLY	43.1
1	D	15	ASN	42.9
1	C	84	GLY	42.8
1	C	41	ASN	42.8
1	A	143	ASN	42.8
1	B	214	GLY	42.8
1	C	104	GLY	42.8
1	B	218	HIS	42.7
1	D	64	SER	42.7
1	A	50	MET	42.7
1	D	206	PHE	42.6
1	D	82	ALA	42.6
1	A	88	PHE	42.6
1	B	168	ASP	42.5
1	B	200	GLU	42.4
1	B	13	GLU	42.4
1	A	172	LYS	42.3
1	D	182	ASN	42.3
1	B	207	SER	42.3
1	A	117	PHE	42.1
1	C	120	VAL	42.0
1	A	75	ASP	42.0
1	D	9	ASN	41.9
1	D	181	ASP	41.9
1	D	14	GLY	41.9
1	A	158	GLY	41.9
1	B	169	SER	41.8
1	D	173	THR	41.8
1	C	226	THR	41.6

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	C	127	ASN	41.6
1	C	184	ASP	41.6
1	B	144	SER	41.5
1	B	196	ALA	41.5
1	C	214	GLY	41.5
1	C	129	GLU	41.5
1	C	58	ALA	41.5
1	A	122	PHE	41.5
1	B	227	SER	41.4
1	C	179	THR	41.4
1	B	147	SER	41.4
1	C	139	GLY	41.4
1	B	131	ASN	41.2
1	B	85	ILE	41.2
1	D	89	ILE	41.2
1	C	190	GLN	41.0
1	C	36	ASN	41.0
1	B	103	GLY	40.9
1	A	152	PRO	40.9
1	C	124	THR	40.9
1	C	9	ASN	40.9
1	B	228	THR	40.8
1	B	62	VAL	40.8
1	C	125	TYR	40.8
1	B	79	TYR	40.7
1	B	19	ASN	40.6
1	B	11	PHE	40.6
1	D	48	TYR	40.5
1	B	7	ASN	40.5
1	B	172	LYS	40.5
1	D	140	ILE	40.4
1	C	47	LEU	40.4
1	A	17	ALA	40.3
1	D	171	THR	40.2
1	D	28	SER	40.2
1	C	196	ALA	40.1
1	D	187	THR	40.1
1	A	16	PRO	40.1
1	A	99	GLY	40.1
1	A	111	THR	40.1
1	D	36	ASN	40.1
1	B	60	GLY	40.0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	B	160	VAL	40.0
1	D	37	LEU	39.9
1	D	76	ILE	39.8
1	D	90	ALA	39.8
1	C	221	ARG	39.7
1	B	69	PHE	39.7
1	C	163	VAL	39.7
1	D	200	GLU	39.7
1	D	47	LEU	39.7
1	C	166	ILE	39.7
1	A	215	ARG	39.6
1	C	168	ASP	39.6
1	C	215	ARG	39.6
1	D	25	THR	39.5
1	C	90	ALA	39.5
1	A	229	LEU	39.4
1	D	106	LEU	39.4
1	D	31	ASN	39.4
1	C	87	PHE	39.4
1	D	13	GLU	39.3
1	B	73	MET	39.3
1	A	196	ALA	39.3
1	D	96	ILE	39.2
1	B	223	TRP	39.2
1	C	189	ALA	39.2
1	B	102	GLY	39.2
1	D	21	GLN	39.1
1	D	101	ILE	39.1
1	A	189	ALA	39.1
1	A	84	GLY	39.1
1	B	51	PRO	39.0
1	D	144	SER	39.0
1	B	136	ASP	39.0
1	D	169	SER	38.9
1	C	59	THR	38.9
1	B	204	PHE	38.9
1	A	103	GLY	38.8
1	C	71	PHE	38.8
1	D	172	LYS	38.8
1	B	211	SER	38.7
1	C	126	SER	38.7
1	B	121	GLU	38.6

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	C	25	THR	38.6
1	C	45	ARG	38.5
1	B	184	ASP	38.5
1	A	133	PRO	38.5
1	A	132	ASP	38.5
1	A	67	THR	38.4
1	D	66	LEU	38.3
1	A	197	LYS	38.3
1	B	224	SER	38.3
1	D	149	LYS	38.3
1	C	111	THR	38.2
1	D	177	ALA	38.2
1	C	113	GLY	38.2
1	B	180	ASN	38.2
1	C	39	LYS	37.9
1	B	43	VAL	37.8
1	B	165	VAL	37.8
1	D	178	VAL	37.7
1	C	53	ARG	37.7
1	B	226	THR	37.6
1	B	192	VAL	37.6
1	C	171	THR	37.6
1	B	171	THR	37.5
1	B	111	THR	37.5
1	D	72	GLU	37.4
1	A	135	THR	37.3
1	A	52	VAL	37.3
1	A	105	THR	37.3
1	C	117	PHE	37.3
1	D	11	PHE	37.2
1	D	27	LEU	37.2
1	A	142	VAL	37.1
1	B	78	ASP	37.1
1	A	90	ALA	37.1
1	B	116	HIS	37.0
1	A	74	LYS	37.0
1	D	191	VAL	37.0
1	D	58	ALA	37.0
1	D	168	ASP	36.8
1	D	65	PHE	36.8
1	A	120	VAL	36.7
1	C	154	ASN	36.7

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	A	55	TRP	36.7
1	A	98	ALA	36.5
1	B	215	ARG	36.4
1	D	212	LEU	36.4
1	A	139	GLY	36.4
1	D	174	LEU	36.2
1	D	94	THR	36.2
1	A	140	ILE	36.2
1	B	101	ILE	36.2
1	D	56	SER	36.2
1	D	161	VAL	36.2
1	A	56	SER	36.1
1	D	225	PHE	35.9
1	C	80	ASP	35.9
1	D	218	HIS	35.9
1	A	225	PHE	35.8
1	D	5	SER	35.8
1	C	162	LYS	35.8
1	A	60	GLY	35.7
1	D	220	ILE	35.7
1	D	57	SER	35.6
1	C	101	ILE	35.5
1	C	93	ASP	35.5
1	B	37	LEU	35.4
1	B	84	GLY	35.4
1	A	188	ILE	35.4
1	A	181	ASP	35.4
1	B	88	PHE	35.3
1	B	67	THR	35.3
1	C	119	GLY	35.3
1	A	28	SER	35.2
1	A	45	ARG	35.2
1	D	126	SER	35.2
1	D	189	ALA	35.2
1	A	161	VAL	35.1
1	D	122	PHE	34.9
1	A	82	ALA	34.9
1	D	3	THR	34.8
1	A	64	SER	34.8
1	A	118	VAL	34.8
1	D	108	VAL	34.8
1	A	190	GLN	34.6

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	A	144	SER	34.6
1	B	76	ILE	34.6
1	D	170	SER	34.5
1	A	145	VAL	34.4
1	D	79	TYR	34.4
1	B	47	LEU	34.4
1	C	152	PRO	34.4
1	C	150	THR	34.3
1	D	84	GLY	34.3
1	C	63	ALA	34.2
1	A	22	GLY	34.1
1	C	18	ILE	34.0
1	C	225	PHE	34.0
1	C	230	ILE	33.9
1	A	192	VAL	33.9
1	B	145	VAL	33.8
1	D	18	ILE	33.8
1	D	85	ILE	33.8
1	B	161	VAL	33.8
1	D	53	ARG	33.7
1	B	170	SER	33.6
1	C	146	ASP	33.6
1	A	2	GLU	33.6
1	B	64	SER	33.6
1	C	118	VAL	33.5
1	B	187	THR	33.4
1	A	51	PRO	33.4
1	C	37	LEU	33.4
1	B	162	LYS	33.3
1	B	4	VAL	33.3
1	C	65	PHE	33.2
1	C	64	SER	33.2
1	C	31	ASN	33.2
1	C	28	SER	33.2
1	A	119	GLY	33.2
1	C	229	LEU	33.1
1	C	40	VAL	33.1
1	D	186	THR	33.1
1	B	5	SER	33.1
1	C	181	ASP	33.1
1	B	128	SER	33.1
1	B	195	LYS	33.0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	C	34	LEU	33.0
1	A	131	ASN	32.9
1	C	57	SER	32.9
1	C	161	VAL	32.9
1	D	141	ASP	32.8
1	D	8	PHE	32.7
1	B	89	ILE	32.7
1	C	103	GLY	32.7
1	D	146	ASP	32.7
1	D	6	PHE	32.7
1	A	81	PRO	32.7
1	D	179	THR	32.6
1	A	191	VAL	32.6
1	A	187	THR	32.6
1	C	148	VAL	32.3
1	C	76	ILE	32.2
1	B	68	SER	32.2
1	D	139	GLY	32.2
1	D	59	THR	32.2
1	B	17	ALA	32.1
1	A	204	PHE	32.1
1	D	111	THR	32.1
1	B	132	ASP	32.0
1	A	127	ASN	32.0
1	A	102	GLY	31.9
1	D	155	SER	31.9
1	D	184	ASP	31.8
1	D	55	TRP	31.8
1	A	104	GLY	31.8
1	C	182	ASN	31.7
1	D	138	VAL	31.7
1	C	149	LYS	31.7
1	B	1	ALA	31.7
1	C	211	SER	31.5
1	A	124	THR	31.5
1	D	20	PHE	31.5
1	C	56	SER	31.4
1	A	25	THR	31.3
1	A	138	VAL	31.3
1	A	179	THR	31.3
1	C	62	VAL	31.3
1	D	114	ALA	31.2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	C	157	SER	31.2
1	A	101	ILE	31.2
1	D	73	MET	31.2
1	C	11	PHE	31.1
1	A	37	LEU	31.1
1	D	40	VAL	31.0
1	C	50	MET	30.9
1	D	195	LYS	30.9
1	A	162	LYS	30.8
1	B	139	GLY	30.8
1	C	132	ASP	30.7
1	D	157	SER	30.7
1	A	79	TYR	30.7
1	D	125	TYR	30.6
1	A	182	ASN	30.6
1	A	46	VAL	30.5
1	B	127	ASN	30.3
1	A	212	LEU	30.3
1	D	185	ILE	30.3
1	C	133	PRO	30.2
1	A	94	THR	30.2
1	C	8	PHE	30.2
1	B	66	LEU	30.2
1	A	194	LEU	30.1
1	B	82	ALA	30.1
1	B	135	THR	30.1
1	A	58	ALA	29.9
1	C	13	GLU	29.9
1	C	177	ALA	29.9
1	D	167	TYR	29.9
1	D	217	ILE	29.8
1	B	117	PHE	29.8
1	C	188	ILE	29.7
1	B	129	GLU	29.7
1	C	195	LYS	29.7
1	B	188	ILE	29.6
1	C	3	THR	29.6
1	B	112	LYS	29.5
1	D	63	ALA	29.4
1	B	137	HIS	29.4
1	D	117	PHE	29.3
1	D	129	GLU	29.3

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	A	171	THR	29.1
1	D	130	TYR	29.1
1	B	122	PHE	28.9
1	A	59	THR	28.9
1	C	138	VAL	28.9
1	C	135	THR	28.9
1	D	120	VAL	28.9
1	B	177	ALA	28.8
1	A	128	SER	28.6
1	D	2	GLU	28.6
1	A	200	GLU	28.6
1	D	213	GLY	28.5
1	C	20	PHE	28.5
1	D	219	LEU	28.5
1	C	218	HIS	28.5
1	B	123	ASP	28.5
1	A	65	PHE	28.4
1	C	178	VAL	28.4
1	D	151	VAL	28.4
1	A	149	LYS	28.4
1	A	186	THR	28.3
1	B	166	ILE	28.2
1	B	150	THR	28.0
1	B	75	ASP	27.9
1	A	115	GLY	27.8
1	B	106	LEU	27.8
1	A	126	SER	27.7
1	D	132	ASP	27.6
1	D	143	ASN	27.5
1	D	71	PHE	27.5
1	A	11	PHE	27.4
1	B	104	GLY	27.4
1	C	134	PRO	27.3
1	A	47	LEU	27.3
1	C	199	PRO	27.3
1	C	158	GLY	27.2
1	B	45	ARG	27.2
1	A	116	HIS	27.1
1	C	130	TYR	27.1
1	A	95	GLN	27.1
1	B	113	GLY	27.0
1	B	90	ALA	26.9

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	B	63	ALA	26.8
1	C	61	ASN	26.8
1	D	123	ASP	26.8
1	B	230	ILE	26.7
1	C	60	GLY	26.6
1	A	107	GLY	26.5
1	A	1	ALA	26.5
1	A	198	LEU	26.3
1	B	126	SER	26.2
1	C	212	LEU	26.2
1	C	54	ILE	26.2
1	A	123	ASP	26.2
1	B	199	PRO	26.1
1	B	186	THR	26.1
1	C	217	ILE	26.1
1	D	142	VAL	26.0
1	C	187	THR	26.0
1	C	38	ASN	26.0
1	C	33	GLN	26.0
1	B	231	THR	25.9
1	C	2	GLU	25.9
1	B	179	THR	25.8
1	B	46	VAL	25.7
1	D	119	GLY	25.7
1	C	95	GLN	25.7
1	C	185	ILE	25.7
1	A	113	GLY	25.7
1	B	58	ALA	25.6
1	D	158	GLY	25.6
1	B	20	PHE	25.5
1	B	65	PHE	25.5
1	B	6	PHE	25.5
1	B	225	PHE	25.4
1	B	115	GLY	25.4
1	C	24	VAL	25.3
1	A	108	VAL	25.3
1	D	199	PRO	25.1
1	C	55	TRP	25.1
1	A	205	GLY	25.0
1	D	188	ILE	25.0
1	A	170	SER	24.9
1	B	133	PRO	24.9

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	B	191	VAL	24.8
1	D	135	THR	24.8
1	A	199	PRO	24.8
1	B	205	GLY	24.7
1	A	57	SER	24.6
1	B	120	VAL	24.5
1	A	112	LYS	24.5
1	D	197	LYS	24.5
1	B	197	LYS	24.4
1	B	107	GLY	24.4
1	B	94	THR	24.4
1	C	29	ASN	24.3
1	D	232	THR	24.3
1	C	27	LEU	24.3
1	A	66	LEU	24.0
1	C	145	VAL	24.0
1	B	114	ALA	23.8
1	B	74	LYS	23.8
1	D	145	VAL	23.7
1	C	78	ASP	23.6
1	A	148	VAL	23.4
1	C	155	SER	23.3
1	A	63	ALA	23.1
1	B	118	VAL	23.1
1	D	29	ASN	23.0
1	D	38	ASN	22.9
1	A	185	ILE	22.6
1	C	79	TYR	22.5
1	C	14	GLY	22.5
1	B	138	VAL	22.4
1	C	52	VAL	22.3
1	C	140	ILE	22.2
1	D	133	PRO	22.1
1	C	186	THR	22.1
1	D	134	PRO	21.9
1	C	73	MET	21.9
1	D	54	ILE	21.8
1	A	4	VAL	21.6
1	C	26	VAL	21.6
1	B	198	LEU	21.6
1	A	96	ILE	21.5
1	A	106	LEU	21.2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	B	124	THR	21.1
1	A	231	THR	21.0
1	B	213	GLY	20.8
1	A	213	GLY	20.7
1	A	216	GLN	20.6
1	C	46	VAL	20.6
1	C	72	GLU	20.4
1	B	95	GLN	20.4
1	B	59	THR	20.4
1	D	46	VAL	20.4
1	C	1	ALA	20.4
1	B	96	ILE	20.3
1	C	194	LEU	20.3
1	D	95	GLN	20.1
1	D	118	VAL	19.8
1	B	134	PRO	19.8
1	C	66	LEU	19.6
1	A	129	GLU	19.5
1	B	125	TYR	19.5
1	B	185	ILE	19.4
1	A	125	TYR	19.4
1	A	134	PRO	19.4
1	B	212	LEU	19.4
1	D	32	ILE	19.3
1	C	197	LYS	19.3
1	D	78	ASP	19.2
1	C	156	VAL	19.2
1	A	130	TYR	19.1
1	D	1	ALA	19.1
1	C	159	ALA	19.0
1	B	148	VAL	19.0
1	C	213	GLY	19.0
1	D	60	GLY	19.0
1	B	119	GLY	18.9
1	A	54	ILE	18.8
1	A	178	VAL	18.6
1	D	26	VAL	18.3
1	C	151	VAL	18.2
1	C	219	LEU	17.7
1	A	114	ALA	17.6
1	D	160	VAL	17.6
1	D	194	LEU	17.5

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	D	62	VAL	16.7
1	D	198	LEU	16.3
1	C	231	THR	16.2
1	B	149	LYS	16.0
1	A	177	ALA	15.9
1	B	178	VAL	15.9
1	D	61	ASN	15.8
1	C	198	LEU	15.7
1	D	159	ALA	15.7
1	C	160	VAL	15.6
1	B	54	ILE	15.4
1	D	112	LYS	15.0
1	A	217	ILE	14.9
1	B	217	ILE	14.6
1	C	77	LYS	14.4
1	D	4	VAL	14.2
1	D	156	VAL	13.7
1	B	216	GLN	13.6
1	C	232	THR	12.7
1	C	112	LYS	12.6
1	A	232	THR	12.5
1	C	4	VAL	12.2
1	B	232	THR	11.8
1	C	32	ILE	11.7
1	D	77	LYS	11.2

6.2 Non-standard residues in protein, DNA, RNA chains (i)

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

6.3 Carbohydrates (i)

There are no monosaccharides in this entry.

6.4 Ligands (i)

There are no ligands in this entry.

6.5 Other polymers (i)

There are no such residues in this entry.