wwPDB X-ray Structure Validation Summary Report (i)

Jun 22, 2024 – 11:46 PM EDT

PDB ID	:	6S3U
Title	:	Adhesin P140 from Mycoplasma Genitalium
Authors	:	Fita, I.; Aparicio, D.
Deposited on	:	2019-06-26
Resolution	:	3.24 Å(reported)

This is a wwPDB X-ray Structure Validation Summary 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 (i) 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 (i)) were used in the production of this report:

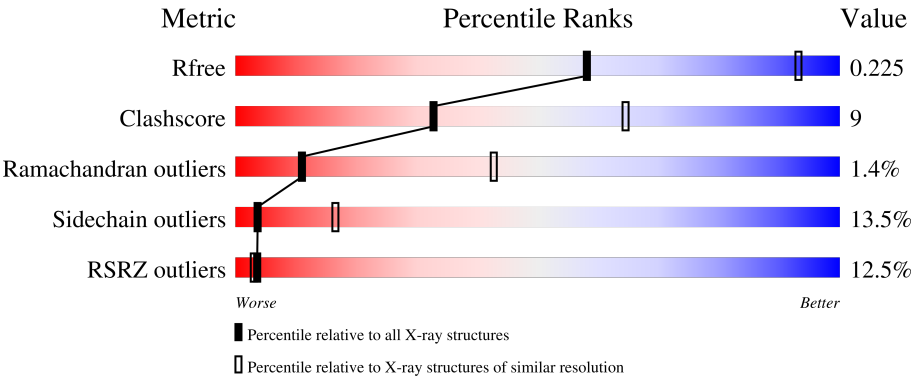
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.20.1
EDS	:	2.37.1
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.37.1

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 3.24 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	1619 (3.28-3.20)
Clashscore	141614	1755 (3.28-3.20)
Ramachandran outliers	138981	1728 (3.28-3.20)
Sidechain outliers	138945	1727 (3.28-3.20)
RSRZ outliers	127900	1567 (3.28-3.20)

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	1304	68% 26%
1	B	1304	68% 26%
1	C	1304	70% 25%
1	D	1304	69% 24%
1	E	1304	34% 69% 24%

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Mol	Chain	Length	Quality of chain
1	F	1304	

2 Entry composition (i)

There is only 1 type of molecule in this entry. The entry contains 59767 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 Adhesin P1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	1278	Total	C	N	O	S	0	0	0
			10016	6351	1692	1960	13			
1	B	1275	Total	C	N	O	S	0	0	0
			9999	6340	1689	1957	13			
1	C	1274	Total	C	N	O	S	0	0	0
			9993	6339	1688	1953	13			
1	D	1271	Total	C	N	O	S	0	0	0
			9976	6328	1685	1950	13			
1	E	1262	Total	C	N	O	S	0	0	0
			9886	6272	1666	1935	13			
1	F	1262	Total	C	N	O	S	0	0	0
			9897	6281	1668	1935	13			

There are 36 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	1352	HIS	-	expression tag	UNP P20796
A	1353	HIS	-	expression tag	UNP P20796
A	1354	HIS	-	expression tag	UNP P20796
A	1355	HIS	-	expression tag	UNP P20796
A	1356	HIS	-	expression tag	UNP P20796
A	1357	HIS	-	expression tag	UNP P20796
B	1352	HIS	-	expression tag	UNP P20796
B	1353	HIS	-	expression tag	UNP P20796
B	1354	HIS	-	expression tag	UNP P20796
B	1355	HIS	-	expression tag	UNP P20796
B	1356	HIS	-	expression tag	UNP P20796
B	1357	HIS	-	expression tag	UNP P20796
C	1352	HIS	-	expression tag	UNP P20796
C	1353	HIS	-	expression tag	UNP P20796
C	1354	HIS	-	expression tag	UNP P20796
C	1355	HIS	-	expression tag	UNP P20796
C	1356	HIS	-	expression tag	UNP P20796

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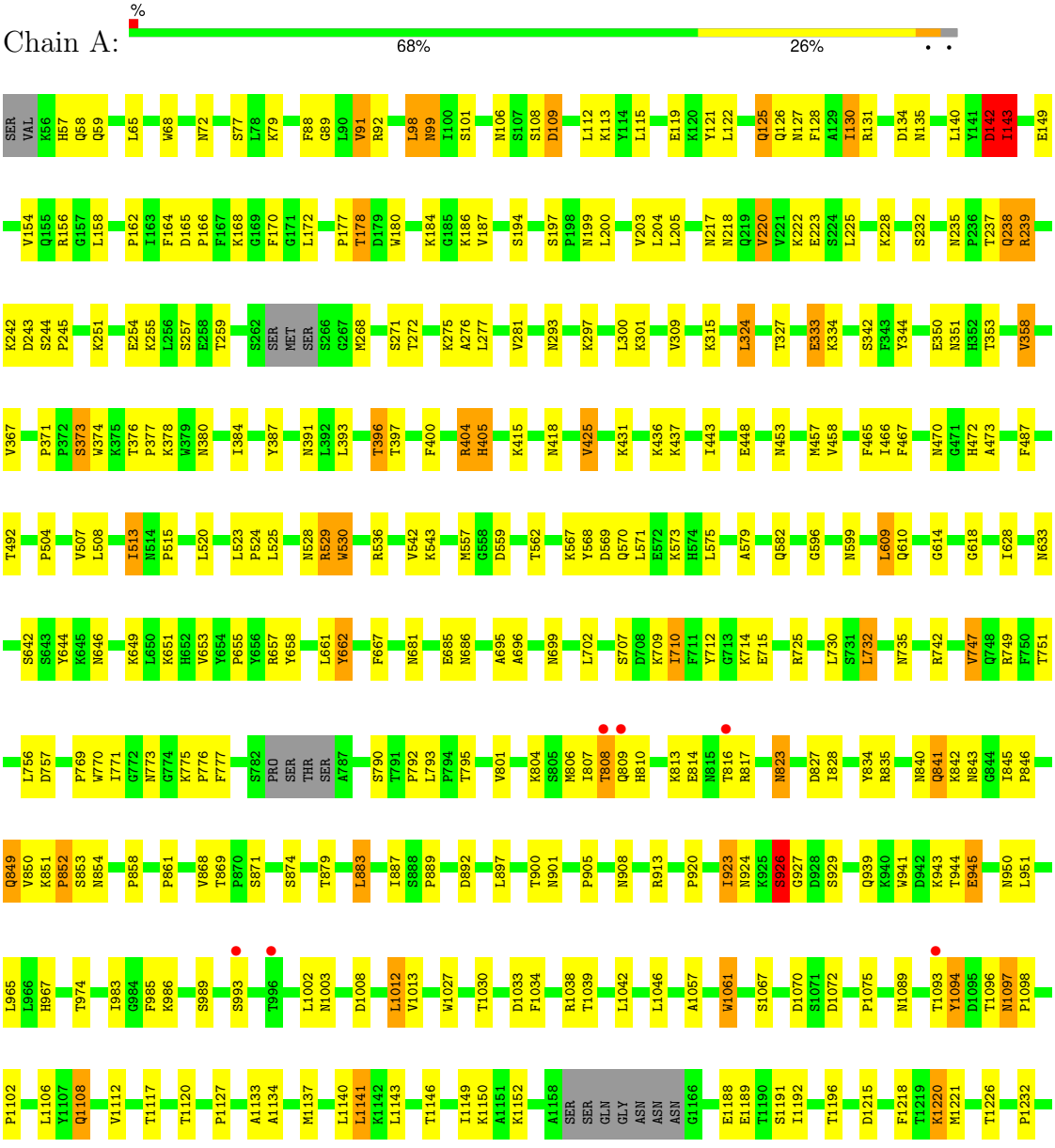
Chain	Residue	Modelled	Actual	Comment	Reference
C	1357	HIS	-	expression tag	UNP P20796
D	1352	HIS	-	expression tag	UNP P20796
D	1353	HIS	-	expression tag	UNP P20796
D	1354	HIS	-	expression tag	UNP P20796
D	1355	HIS	-	expression tag	UNP P20796
D	1356	HIS	-	expression tag	UNP P20796
D	1357	HIS	-	expression tag	UNP P20796
E	1352	HIS	-	expression tag	UNP P20796
E	1353	HIS	-	expression tag	UNP P20796
E	1354	HIS	-	expression tag	UNP P20796
E	1355	HIS	-	expression tag	UNP P20796
E	1356	HIS	-	expression tag	UNP P20796
E	1357	HIS	-	expression tag	UNP P20796
F	1352	HIS	-	expression tag	UNP P20796
F	1353	HIS	-	expression tag	UNP P20796
F	1354	HIS	-	expression tag	UNP P20796
F	1355	HIS	-	expression tag	UNP P20796
F	1356	HIS	-	expression tag	UNP P20796
F	1357	HIS	-	expression tag	UNP P20796

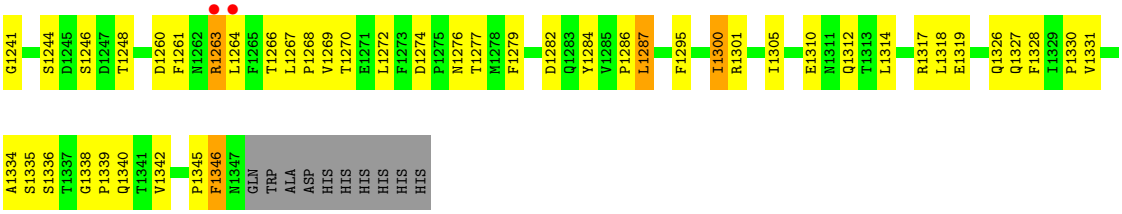
3 Residue-property plots (i)

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: Adhesin P1

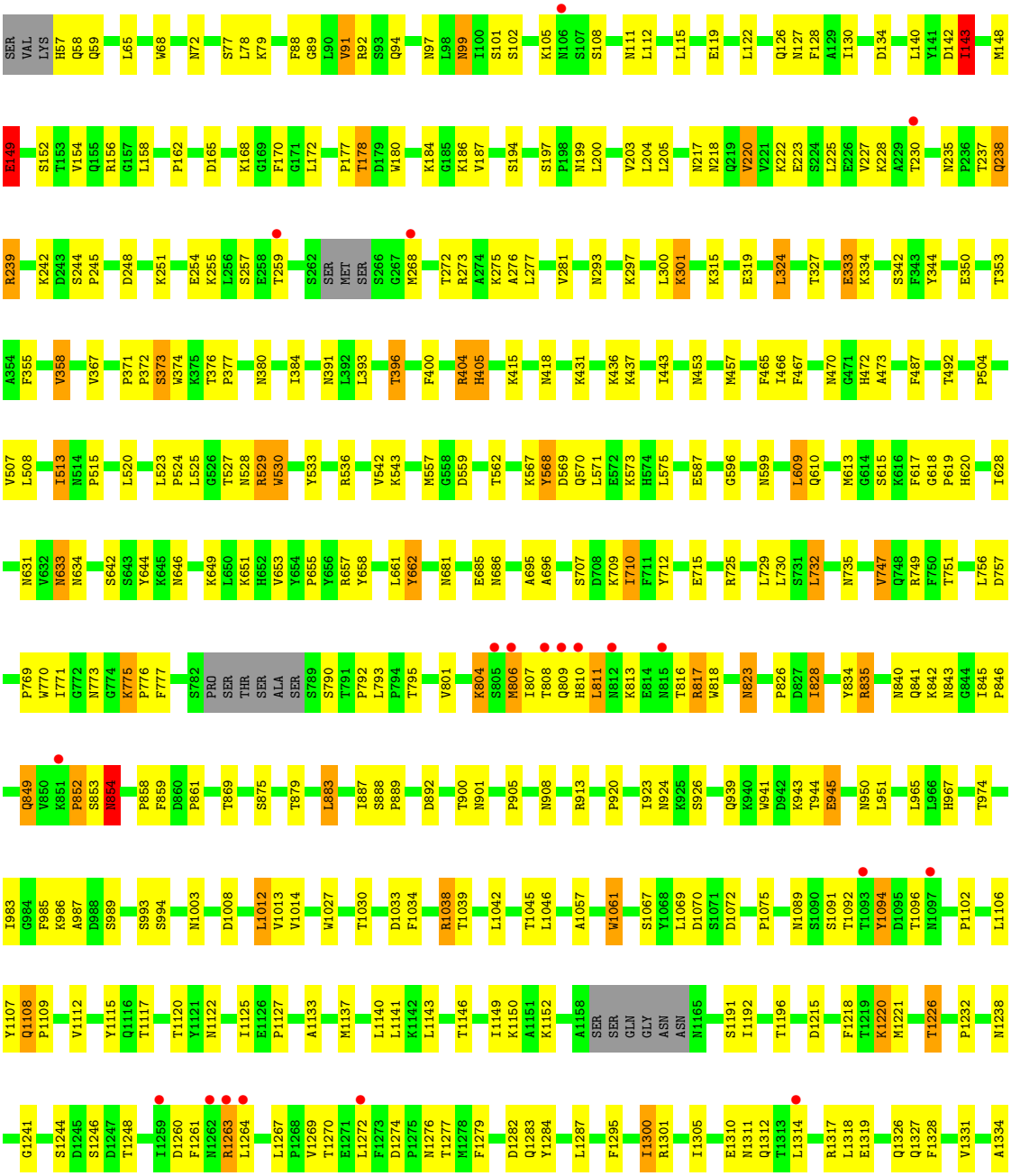
Chain A:





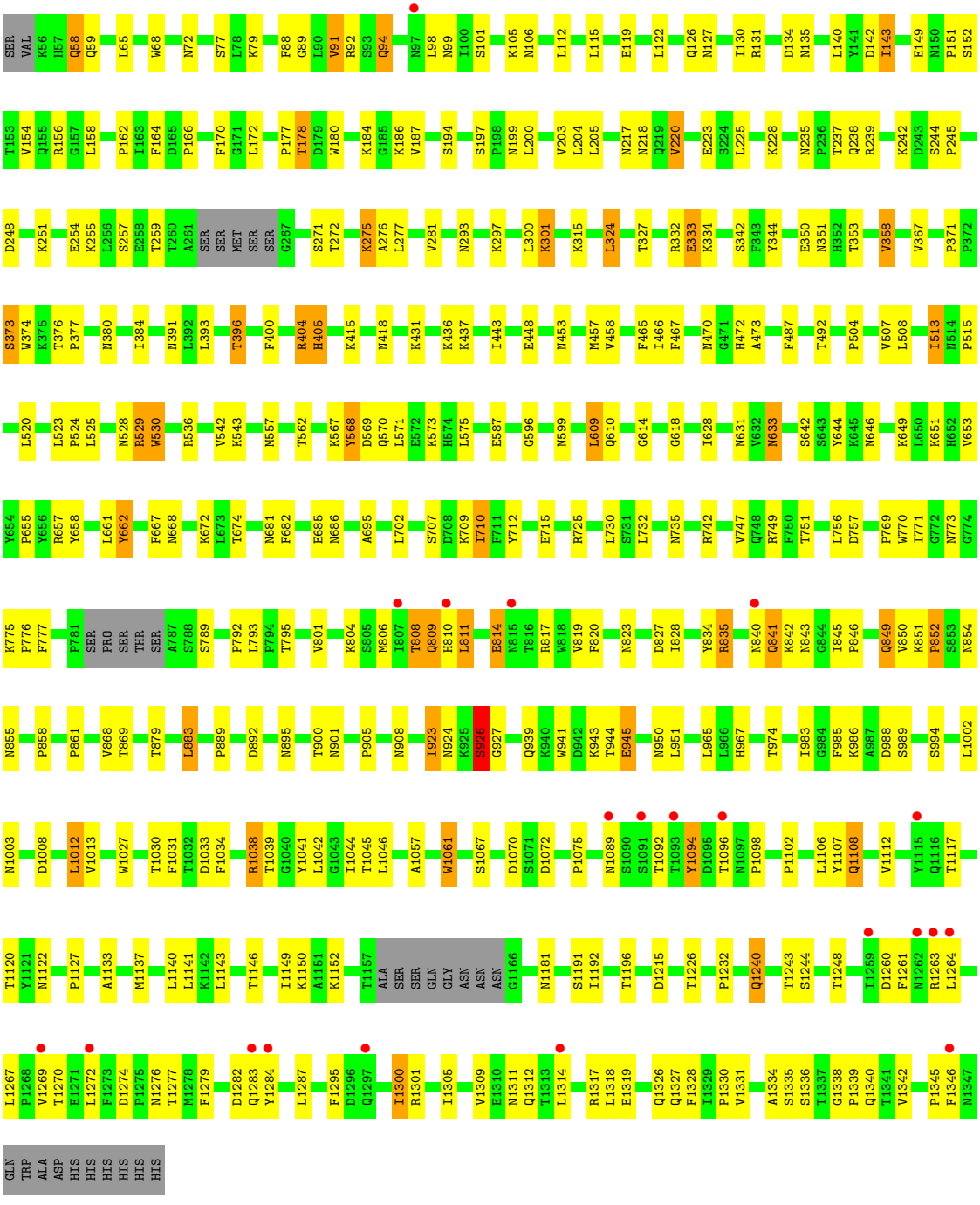
• Molecule 1: Adhesin P1

Chain B:



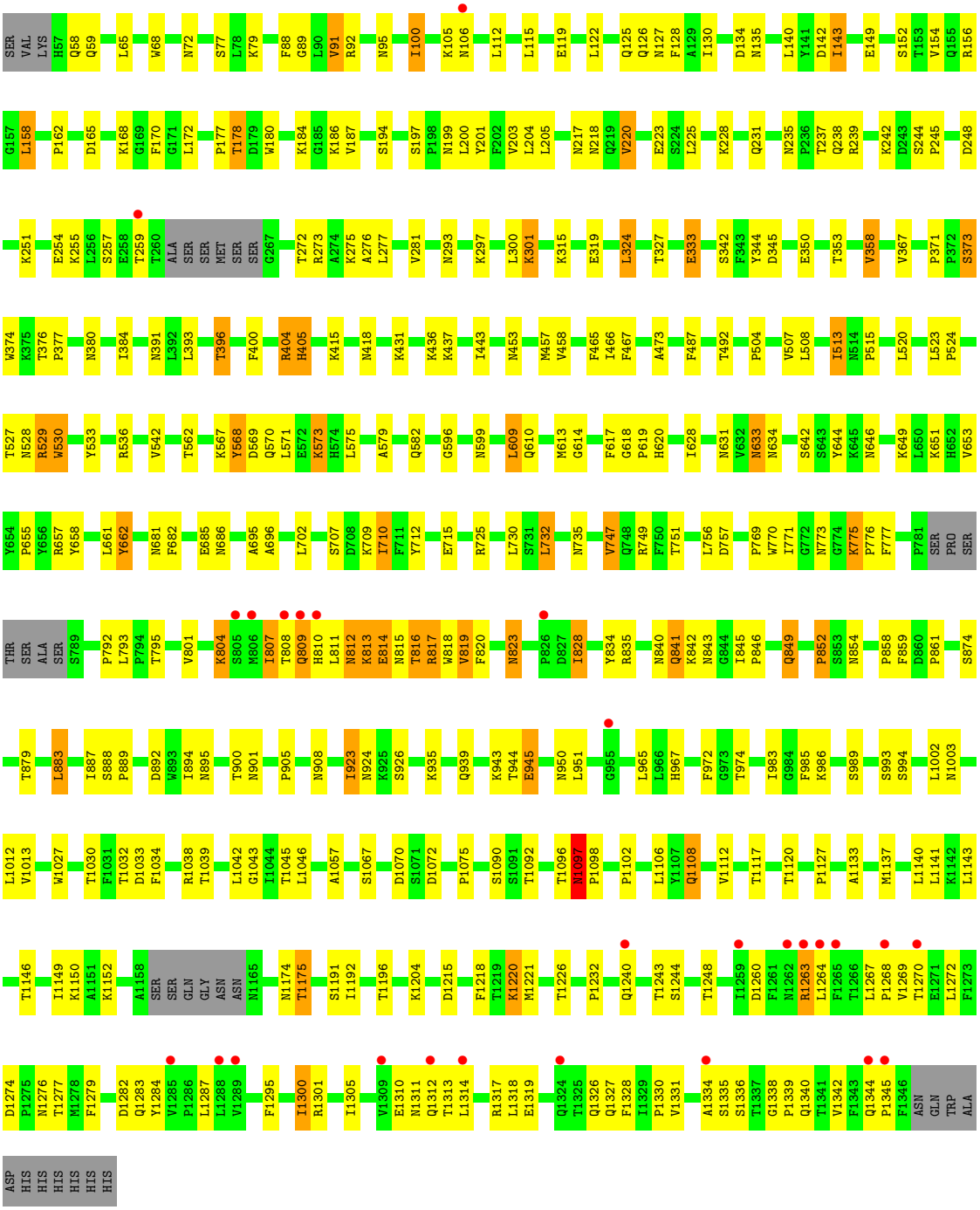
• Molecule 1: Adhesin P1

Chain C:



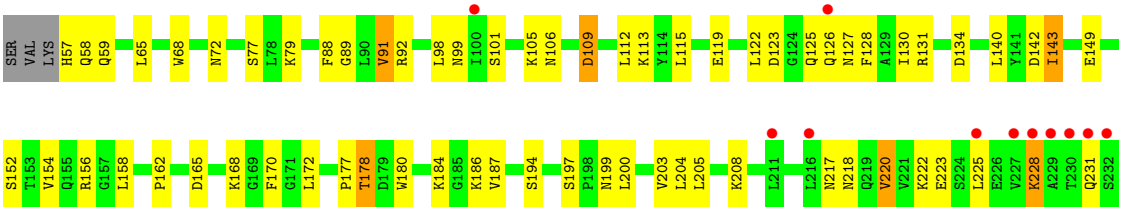
• Molecule 1: Adhesin P1

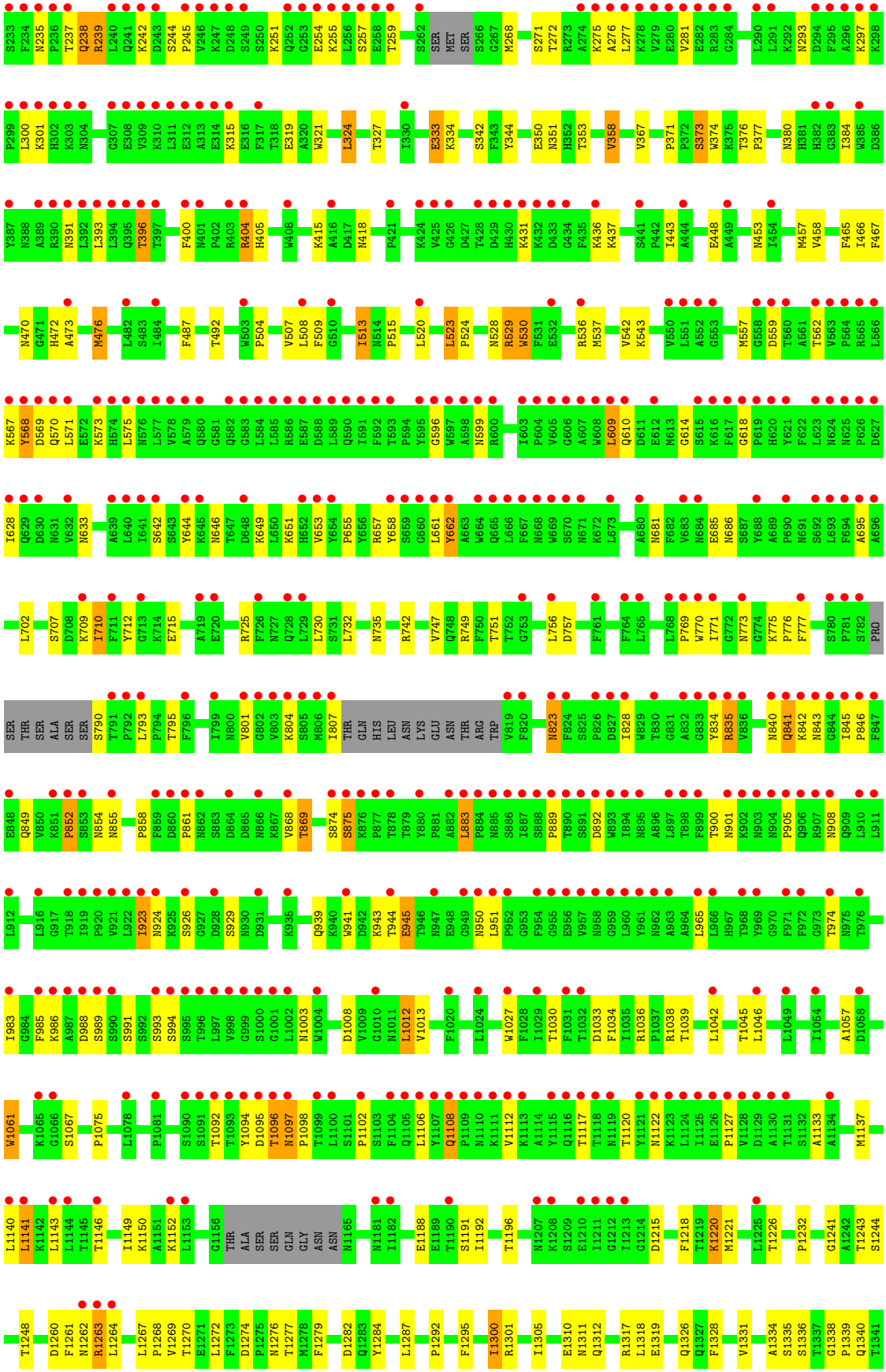
Chain D:



• Molecule 1: Adhesin P1

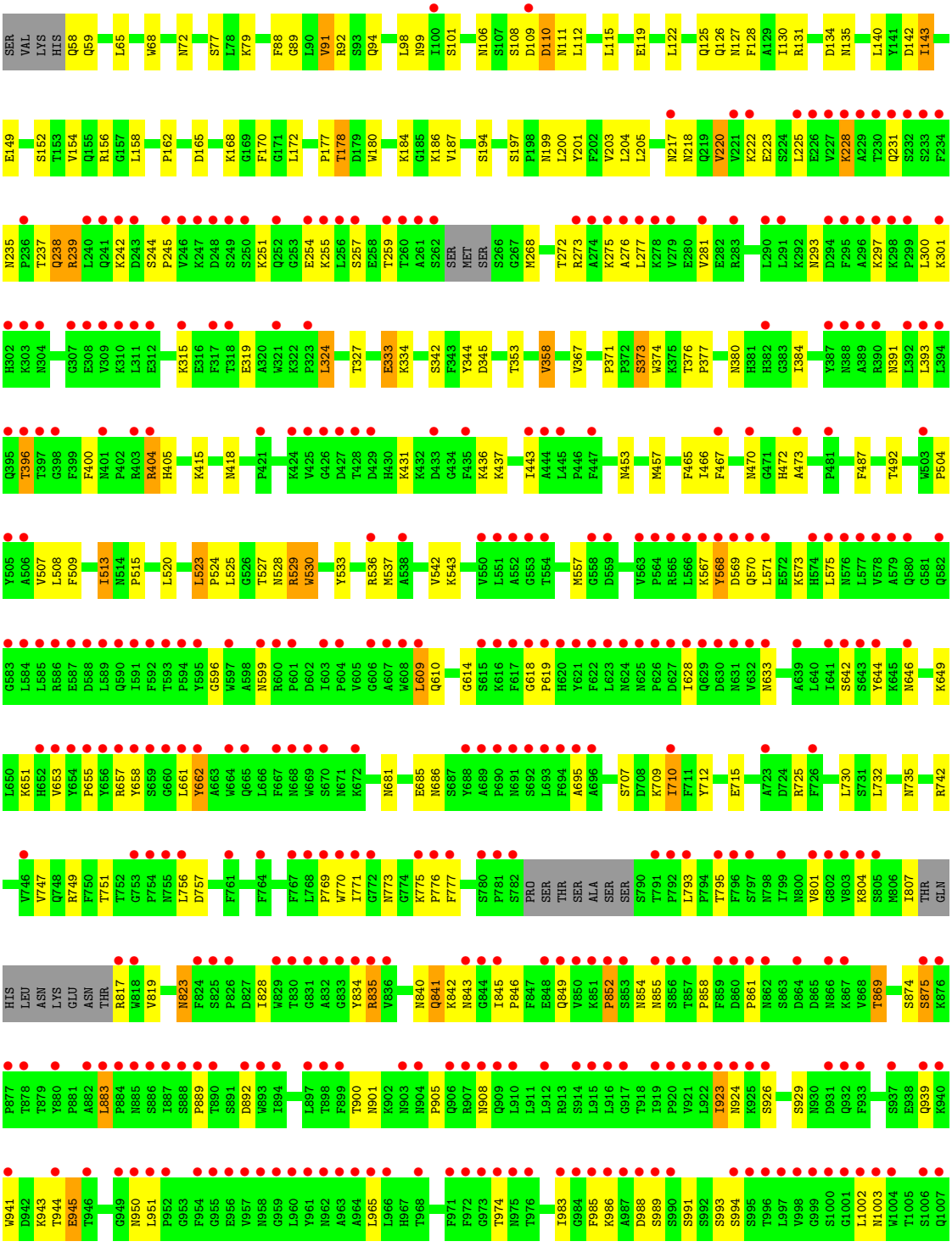
Chain E:

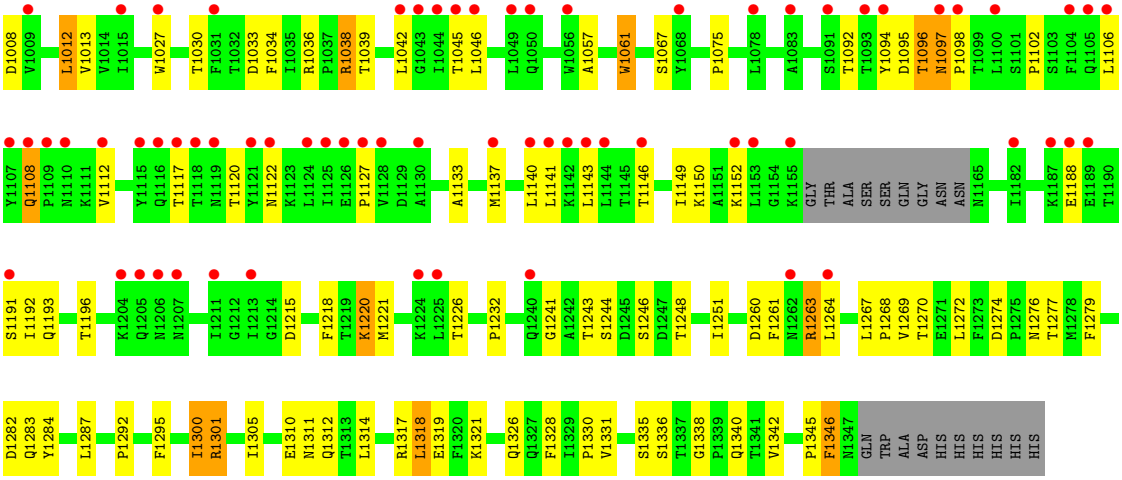



S233 F234 N235 P236 T237 Q238 R239 L240 Q241 K242 D243 S244 P245 V246 K247 D248 S249 S250 K251 Q252 G253 E254 K255 L256 S257 E258 T259 S262 SER MET SER S266 G267 M268 S271 T272 R273 A274 K275 A276 L277 K278 V279 E280 V281 E282 R283 G284 L290 L291 K292 N293 D294 F295 A296 K297 K298
P299 L300 K301 H302 K303 N304 G307 E308 V309 K310 L311 E312 A313 E314 K315 E316 F317 T318 E319 A320 W321 L324 T327 I330 E333 K334 S342 F343 Y344 E350 N351 H352 T353 V358 V367 P371 P372 S373 W374 K376 T376 P377 N380 H381 H382 G383 I384 W386 D386
Y387 N388 A389 R390 N391 L392 L393 L394 Q395 T396 T397 F400 N401 P402 R403 R404 H405 W408 K415 A416 D417 N418 P421 K424 V425 G426 D427 T428 D429 H430 K431 K432 D433 G434 F435 K436 K437 S441 P442 I443 A444 E448 A449 N453 I454 M457 V458 F465 I466 F467
N470 G471 H472 A473 M476 L482 S483 I484 F487 T492 W503 P504 V507 L508 F509 G510 I513 N514 P515 L520 L523 P524 N528 R529 W530 F531 E532 R536 M537 V542 K543 V550 L551 A552 G553 M557 G558 D559 T560 A561 T562 V563 P564 R565 L566
K567 Y568 D569 Q570 L571 E572 K573 H574 L575 N576 L577 V578 A579 Q580 G581 Q582 G583 L584 L585 R586 E587 D588 L589 Q590 I591 F592 T593 P594 Y595 G596 W597 A598 N599 R600 I603 P604 V605 G606 A607 W608 L609 Q610 D611 E612 M613 G614 S615 K616 F617 G618 P619 H620 Y621 F622 L623 N624 N625 P626 D627
I628 Q629 D630 N631 V632 N633 A639 L640 I641 S642 S643 Y644 K645 N646 T647 D648 K649 L650 K651 H652 V653 Y654 P655 Y656 R657 Y658 S659 G660 L661 Y662 A663 W664 Q665 L666 F667 N668 W669 S670 W671 K672 L673 A680 N681 F682 V683 N684 E685 N686 S687 Y688 A689 P690 N691 S692 L693 F694 A695 A696
L702 S707 D708 K709 I710 F711 Y712 G713 K714 E715 A719 E720 R725 F726 N727 Q728 L729 L730 S731 L732 N735 R742 V747 Q748 R749 F750 T751 T752 G753 L756 D757 F761 F764 L765 L768 P769 W770 I771 G772 N773 G774 K775 P776 F777 S780 P781 S782 PRO
SER THR SER ALA SER SER S790 T791 P792 L793 P794 T795 F796 I799 N800 V801 G802 V803 K804 S805 M806 I807 THR GLN HIS LEU ASN LYS GLU ASN THR ARG TRP V819 F820 N823 F824 S825 P826 D827 I828 W829 T830 G831 A832 G833 Y834 R835 V836 N840 Q841 K842 N843 G844 I845 P846 F847
E848 Q849 V850 K851 P852 S853 N854 N855 P858 F859 D860 P861 N862 S863 D864 D865 N866 K867 V868 T869 S874 S875 K876 P877 T878 T879 Y880 P881 A882 L883 P884 N885 S886 I887 S888 P889 T890 S891 D892 W893 I894 N895 A896 L897 T898 F899 T900 N901 K902 N903 N904 P905 Q906 R907 N908 Q909 L910 L911
L912 L916 G917 T918 I919 P920 V921 L922 I923 N924 K925 S926 G927 D928 S929 N930 D931 K935 Q939 K940 W941 D942 K943 T944 E945 T946 N947 E948 G949 N950 L951 P952 G953 F954 G955 E956 V957 N958 G959 L960 Y961 N962 A963 A964 L965 L966 H967 T968 Y969 G970 F971 F972 G973 T974 N975 T976
I983 G984 F985 K986 A987 D988 S989 S990 S991 S992 S993 S994 S995 T996 L997 V998 G999 S1000 G1001 L1002 N1003 W1004 D1008 V1009 G1010 N1011 L1012 V1013 F1020 L1024 W1027 F1028 I1029 T1030 F1031 T1032 D1033 F1034 I1035 R1036 P1037 R1038 T1039 L1042 T1045 L1046 L1049 I1054 A1057 D1058
W1061 K1065 G1066 S1067 P1075 L1078 P1081 S1090 S1091 T1092 T1093 Y1094 D1095 T1096 N1097 P1098 T1099 L1100 S1101 P1102 S1103 F1104 Q1105 L1106 Y1107 Q1108 P1109 N1110 K1111 V1112 K1113 A1114 Y1115 Q1116 T1117 T1118 N1119 T1120 Y1121 N1122 K1123 L1124 I1125 E1126 P1127 V1128 D1129 A1130 T1131 S1132 A1133 A1134 M1137
L1140 L1141 K1142 L1143 L1144 T1145 T1146 I1149 K1150 A1151 K1152 L1153 G1156 THR ALA SER SER GLN GLY ASN ASN N1165 N1181 I1182 E1188 E1189 T1190 S1191 I1192 T1196 N1207 K1208 S1209 E1210 I1211 G1212 I1213 G1214 D1215 F1218 T1219 K1220 M1221 L1225 T1226 P1232 G1241 A1242 T1243 S1244
T1248 D1260 F1261 N1262 R1263 L1264 L1267 P1268 V1269 T1270 E1271 L1272 F1273 D1274 P1275 N1276 T1277 M1278 F1279 D1282 Q1283 Y1284 L1287 P1292 F1295 I1300 R1301 I1305 E1310 N1311 Q1312 R1317 L1318 E1319 Q1326 Q1327 F1328 V1331 A1334 S1335 S1336 T1337 G1338 P1339 Q1340 T1341

• Molecule 1: Adhesin P1

Chain F:




D1008 V1009 L1012 V1013 V1014 I1015 W1027 T1030 F1031 T1032 D1033 F1034 I1035 R1036 P1037 R1038 T1039 L1042 G1043 I1044 T1045 L1046 L1049 Q1050 W1056 A1057 W1061 S1067 Y1068 P1075 L1078 A1083 S1091 T1092 T1093 Y1094 D1095 T1096 N1097 P1098 T1099 L1100 S1101 P1102 S1103 F1104 Q1105 L1106
Y1107 Q1108 P1109 N1110 K1111 V1112 Y1115 Q1116 T1117 T1118 N1119 T1120 Y1121 N1122 K1123 L1124 I1125 E1126 P1127 V1128 D1129 A1130 A1133 M1137 L1140 L1141 K1142 L1143 L1144 T1145 T1146 I1149 K1150 A1151 K1152 L1153 G1154 K1155 GLY THR ALA SER SER GLN GLY ASN ASN N1165 I1182 K1187 E1188 E1189 T1190
S1191 I1192 Q1193 T1196 K1204 Q1205 N1206 N1207 T1211 G1212 I1213 G1214 D1215 F1218 T1219 K1220 M1221 K1224 L1225 T1226 P1232 Q1240 G1241 A1242 T1243 S1244 D1245 S1246 D1247 T1248 I1251 D1260 F1261 N1262 R1263 L1264 L1267 P1268 V1269 T1270 E1271 L1272 F1273 D1274 P1275 N1276 T1277 M1278 F1279
D1282 Q1283 Y1284 L1287 P1292 F1295 I1300 R1301 I1305 E1310 N1311 Q1312 T1313 L1314 R1317 L1318 E1319 F1320 K1321 Q1326 Q1327 F1328 I1329 P1330 V1331 S1335 S1336 T1337 G1338 P1339 Q1340 T1341 V1342 P1345 F1346 N1347 GLN TRP ALA ASP HIS HIS HIS HIS HIS

4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α, β, γ	459.19Å 116.66Å 285.64Å 90.00° 124.20° 90.00°	Depositor
Resolution (Å)	37.36 – 3.24 236.25 – 3.24	Depositor EDS
% Data completeness (in resolution range)	61.7 (37.36-3.24) 61.8 (236.25-3.24)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.62 (at 3.26Å)	Xtriage
Refinement program	BUSTER 2.10.3	Depositor
R, R_{free}	0.184 , 0.205 0.202 , 0.225	Depositor DCC
R_{free} test set	6155 reflections (4.99%)	wwPDB-VP
Wilson B-factor (Å^2)	59.0	Xtriage
Anisotropy	0.038	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.33 , 96.3	EDS
L-test for twinning[2]	$< \|L\| > = 0.43$, $< L^2 > = 0.26$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.87	EDS
Total number of atoms	59767	wwPDB-VP
Average B, all atoms (Å^2)	91.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.81% 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	0.52	0/10269	0.78	6/13978 (0.0%)
1	B	0.49	0/10252	0.76	3/13956 (0.0%)
1	C	0.50	0/10246	0.76	1/13947 (0.0%)
1	D	0.50	0/10229	0.76	3/13925 (0.0%)
1	E	0.45	0/10135	0.73	2/13795 (0.0%)
1	F	0.45	0/10147	0.73	2/13812 (0.0%)
All	All	0.49	0/61278	0.75	17/83413 (0.0%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand.A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	1
1	C	0	1
All	All	0	2

There are no bond length outliers.

The worst 5 of 17 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	E	476	MET	CB-CG-SD	7.17	133.92	112.40
1	E	861	PRO	N-CA-C	-6.71	94.65	112.10
1	F	861	PRO	N-CA-C	-6.65	94.81	112.10
1	A	109	ASP	C-N-CA	6.20	137.21	121.70
1	A	806	MET	C-N-CA	6.17	137.12	121.70

There are no chirality outliers.

All (2) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	926	SER	Mainchain
1	C	926	SER	Mainchain

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	10016	0	9726	182	0
1	B	9999	0	9707	183	0
1	C	9993	0	9706	182	0
1	D	9976	0	9687	205	0
1	E	9886	0	9597	156	0
1	F	9897	0	9610	163	0
All	All	59767	0	58033	1029	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 9.

The worst 5 of 1029 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:D:100:ILE:CG1	1:D:100:ILE:CD1	1.76	1.57
1:D:812:ASN:ND2	1:D:815:ASN:HD22	1.28	1.31
1:F:1279:PHE:CE2	1:F:1301:ARG:HD2	1.78	1.18
1:A:1266:THR:HG21	1:C:1264:LEU:HD11	1.19	1.15
1:A:1264:LEU:HG	1:C:1283:GLN:HB2	1.30	1.09

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone

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	1270/1304 (97%)	1128 (89%)	122 (10%)	20 (2%)	9 40
1	B	1267/1304 (97%)	1136 (90%)	114 (9%)	17 (1%)	12 44
1	C	1266/1304 (97%)	1128 (89%)	123 (10%)	15 (1%)	13 46
1	D	1263/1304 (97%)	1127 (89%)	117 (9%)	19 (2%)	10 41
1	E	1252/1304 (96%)	1118 (89%)	117 (9%)	17 (1%)	11 43
1	F	1252/1304 (96%)	1114 (89%)	119 (10%)	19 (2%)	10 41
All	All	7570/7824 (97%)	6751 (89%)	712 (9%)	107 (1%)	11 43

5 of 107 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	108	SER
1	A	1094	TYR
1	A	1097	ASN
1	A	1241	GLY
1	B	811	LEU

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	1121/1146 (98%)	964 (86%)	157 (14%)	3 15
1	B	1120/1146 (98%)	965 (86%)	155 (14%)	3 15
1	C	1118/1146 (98%)	973 (87%)	145 (13%)	4 18
1	D	1117/1146 (98%)	969 (87%)	148 (13%)	4 17
1	E	1107/1146 (97%)	958 (86%)	149 (14%)	4 16
1	F	1108/1146 (97%)	958 (86%)	150 (14%)	4 16
All	All	6691/6876 (97%)	5787 (86%)	904 (14%)	4 16

5 of 904 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	D	127	ASN
1	F	1263	ARG
1	D	1108	GLN
1	F	1192	ILE
1	F	353	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 174 such sidechains are listed below:

Mol	Chain	Res	Type
1	D	947	ASN
1	E	939	GLN
1	D	1327	GLN
1	E	610	GLN
1	F	217	ASN

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

There are no ligands in this entry.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

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	1278/1304 (98%)	0.15	8 (0%) 89 85	13, 49, 106, 165	0
1	B	1275/1304 (97%)	0.28	20 (1%) 72 63	24, 60, 127, 238	0
1	C	1274/1304 (97%)	0.24	21 (1%) 72 63	11, 50, 128, 234	0
1	D	1271/1304 (97%)	0.32	27 (2%) 63 53	18, 58, 132, 228	0
1	E	1262/1304 (96%)	1.91	445 (35%) 0 0	25, 156, 238, 252	0
1	F	1262/1304 (96%)	1.75	431 (34%) 0 0	21, 149, 229, 244	0
All	All	7622/7824 (97%)	0.77	952 (12%) 3 3	11, 68, 224, 252	0

The worst 5 of 952 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	E	920	PRO	20.2
1	F	836	VAL	14.6
1	F	920	PRO	14.3
1	E	1125	ILE	14.1
1	F	961	TYR	13.9

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

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

6.3 Carbohydrates

There are no monosaccharides in this entry.

6.4 Ligands

There are no ligands in this entry.

6.5 Other polymers (i)

There are no such residues in this entry.