

Table S2: Top 5 most conserved residues in F1 and F7 classes of the CheW protein.

F1		F7	
Residue ¹	Identity (%)	Residue ¹	Identity (%)
Gly57	100.0	Gly57	99.8
Pro49 ²	98.7	Arg62	99.8
Val102	97.1	Glu38	99.3
Gly63	94.0	Gly63	99.1
Phe22	93.8	Gly99	99.1

¹Residue numbers are given in reference to the *E. coli* CheW protein.

²Position 49 is alanine in *E. coli* CheW but it is 98.7% conserved as proline in class F1.