

Description of Additional Supplementary Files

Supplementary Movie 1: The distribution of aromatic residues of the Pfam00427 domain in the REP1 region of ApcE (*Synechococcus* 7002).

Supplementary Movie 2: The distribution of aromatic residues of the Pfam00427 domain in CpcG (*Synechococcus* 7002).

Supplementary Movie 3: The distribution of aromatic residues of the Pfam00427 domain in CpcC (*Synechococcus* 7002).