



Supplementary Figure S1 Cross-sectional EM results.

(A) Cross-sectional EM images of untreated WT flagella. Axonemes with two singlet microtubules from the CP complex were observed along with axonemes with only one of the CP microtubules, presumably the C1 microtubule. (B) EM images of cross-section of WT sample after demembranation, ADP/ATP treatment and twice NaCl treatment. The majority of the axoneme structure had only one of the CP microtubules, which likely correspond to the C1 microtubule. Inset in the left panel shows the magnified view in the right panel. (C) Cross-sectional EM images of untreated *pf16* flagella. The majority of the axonemes had only one of the CP microtubules, which is presumably the C2 microtubule. (D) EM images of cross-section of *pf16* sample after demembranation, ADP/ATP treatment and NaCl treatments. Most of the axonemes had no clear microtubule structures from the CP but the residual materials were observed inside the axonemes. Note that there are more split DMTs and the CP microtubules after ADP/ATP treatment. (E) Quantification of the numbers of microtubules of the CP observed in the axonemes. The numbers of axonemes used for the quantification were as follows: untreated WT, n=668; treated WT, n=1,322; untreated *pf16*, n=323; treated *pf16*, n=878.