Supplementary Materials Legends

Supplemental Figure 1. Densitometry analysis of C1a projection components in axonemal western blots.

Individual bands from axonemal western blots (as in Figure 2A) were analyzed using ImageJ software. Densities for each protein are first normalized to the amount of PF6 measured in each sample. For visualization purposes, all densities are also normalized to the amount of each protein measured in Full Length PF6 Rescue cells, which are assigned a value of 1.0. In samples from ΔN, ΔM, and ΔN+M, levels of C1a-34 and C1a-18 are reduced relative to the amount of PF6. (** indicates no measurable densities). Additionally, C1a-32 is reduced in samples from ΔN+M axonemes. Plotted densities are the normalized averages from 4 axoneme isolations.

Supplemental Figure 2. Montage of TEM cross-sections from mutants with shortened C1a projections.

Additional images of cross-sections from PF6ΔM and PF6ΔN+M in addition to the representative images used in Figure 3B. These images were also used for quantification presented in Figure 3D.

Supplemental Movies

Supplemental movies relate to the waveform tracings in Figure 4 (Movies S1-S7) and Figure 5 (Movies S8-S10). All videos are recorded at 500 frames per second and played back at 10 frames per second.

Video S1. Waveform of *pf6* cell transformed with full-length PF6.

Video S2. Waveform of *pf6-1* cell.

Video S3. Waveform of *pf6* cell transformed with PF6ΔN (PF6Δ68-752).

Video S4. Waveform of *pf6* cell transformed with PF6ΔM (PF6Δ854-1821).

Video S5. Waveform of *pf6* cell transformed with PF6ΔN+M (PF6Δ68-1760).

Video S6. Waveform of *pf6* cell transformed with PF6ΔCB1 (PF6Δ1721-1862).

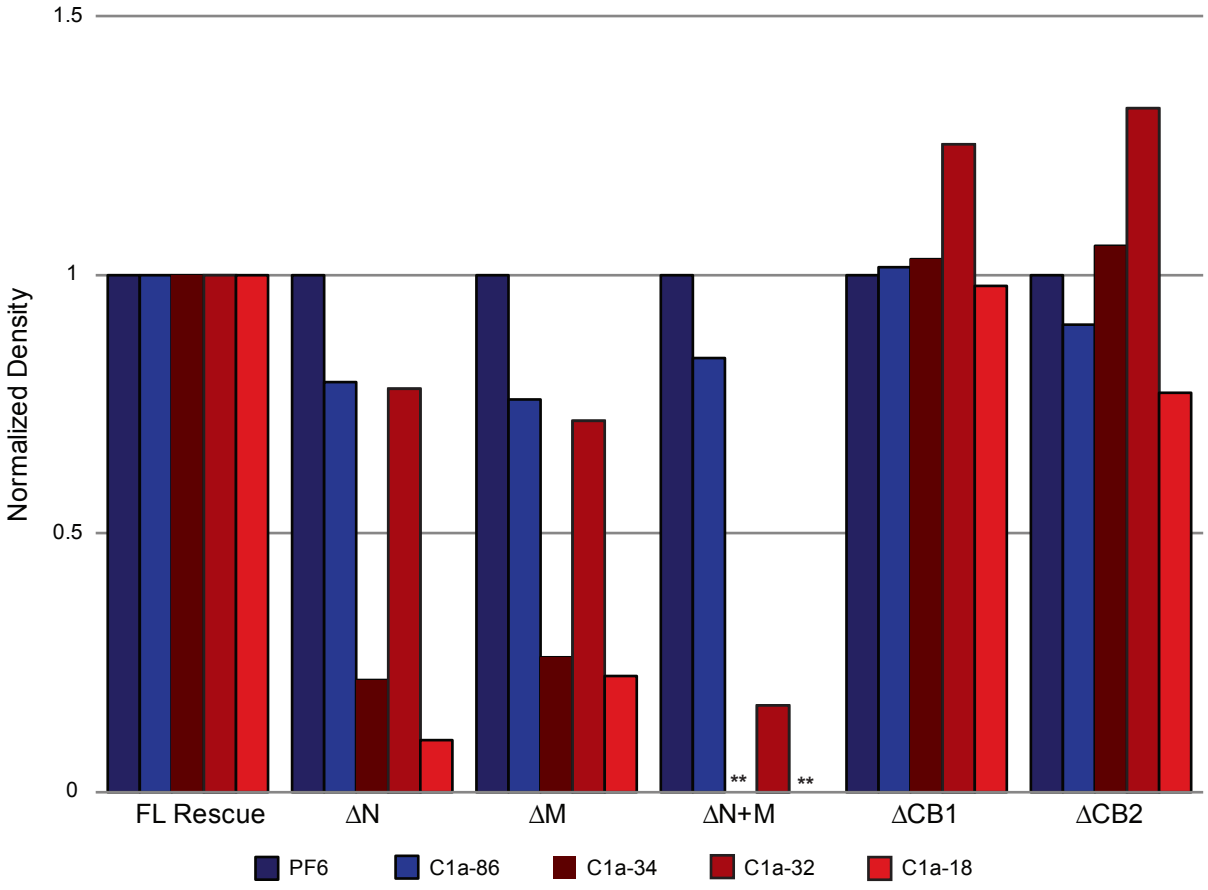
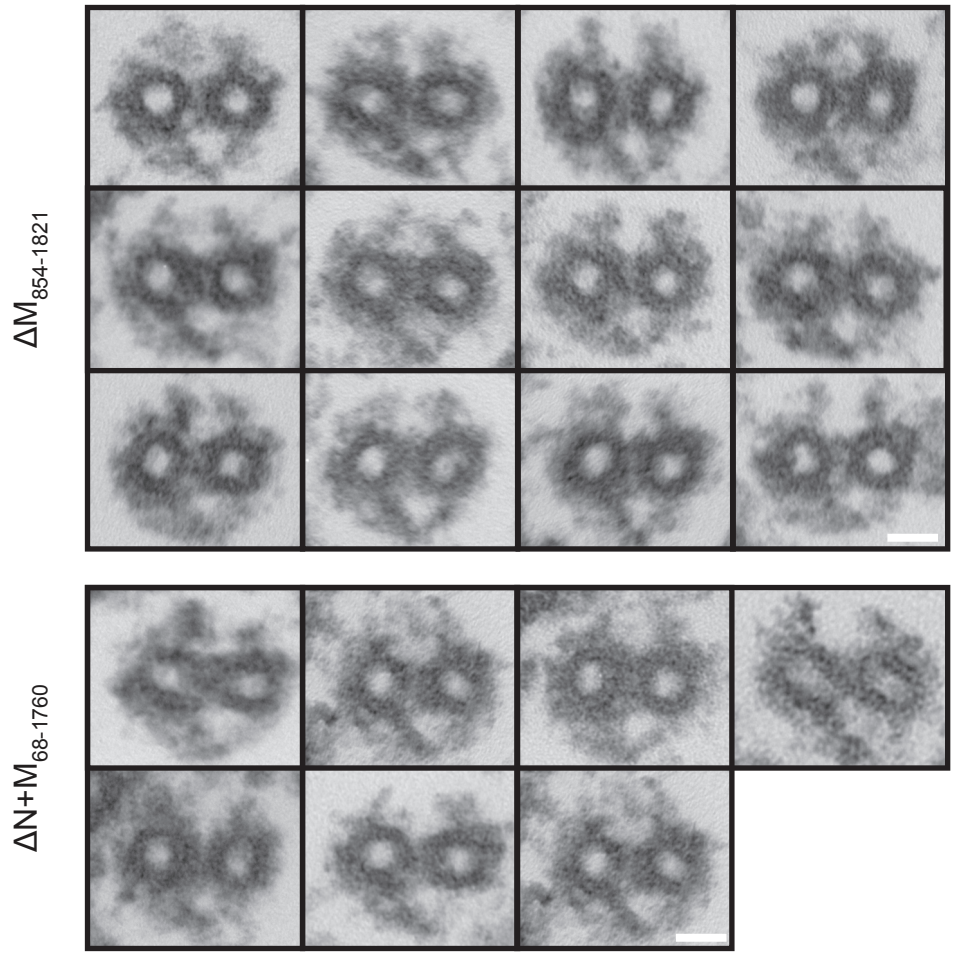
Video S7. Waveform of *pf6* cell transformed with PF6ΔCB2 (PF6Δ1861-2229).

Video S8. Waveform of *pf6pf28* cell transformed with full-length PF6.

Video S9. Waveform of *pf6pf28* cell transformed with PF6ΔN (PF6Δ68-752).

Video S10. Waveform of *pf6pf28* cell transformed with PF6ΔM (PF6Δ854-1821).

Supplemental Figure 1



Supplemental Figure 2