Tateishi et al., http://www.jcb.org/cgi/content/full/jcb.201303071/DC1

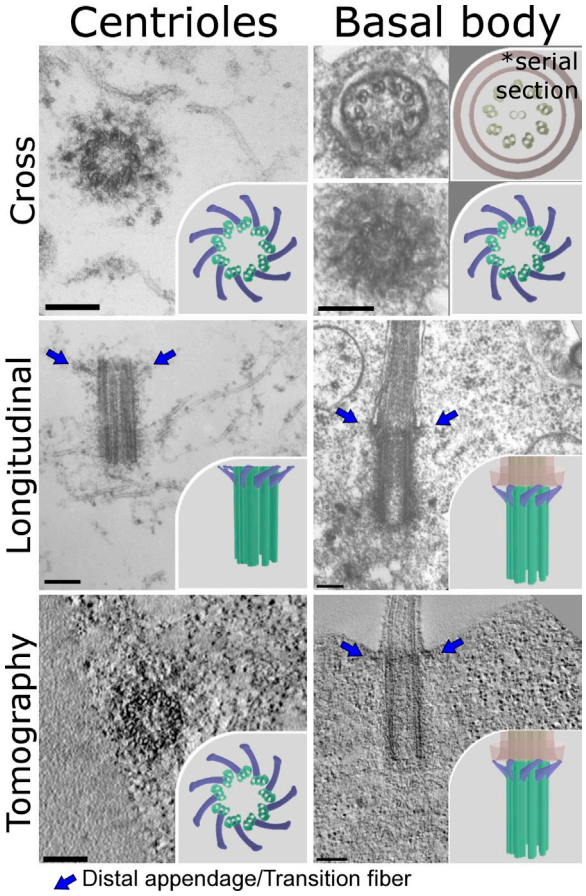


Figure S1. **Electron micrographs of appendages reconstituted on centrioles and basal bodies by the transfected Ca construct.** Note the distal appendages (DAs) on centrioles, and transition fibers (TFs) on basal bodies (blue arrows). Thin-section electron microscopic images of cross sections (Cross) and longitudinal sections (Longitudinal) of centrioles and cilia. Tomography: Ultra-high voltage electron microscopic tomographic images of centrioles and cilia. Bars, 0.2 µm.

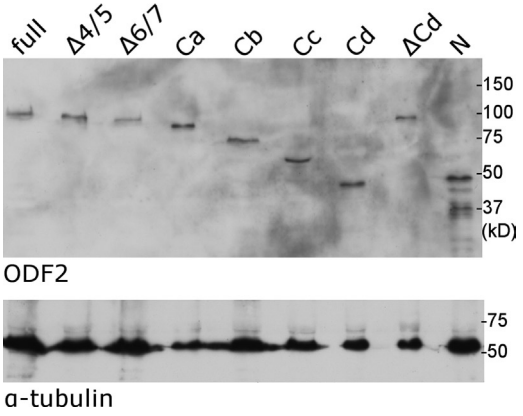


Figure S2. **Western blotting analysis of *Odf2*-KO F9 cells in which GFP-tagged *Odf2* deletion constructs were expressed.** Primary antibody: rabbit anti-GFP pAb and mouse anti–α-tubulin mAb.

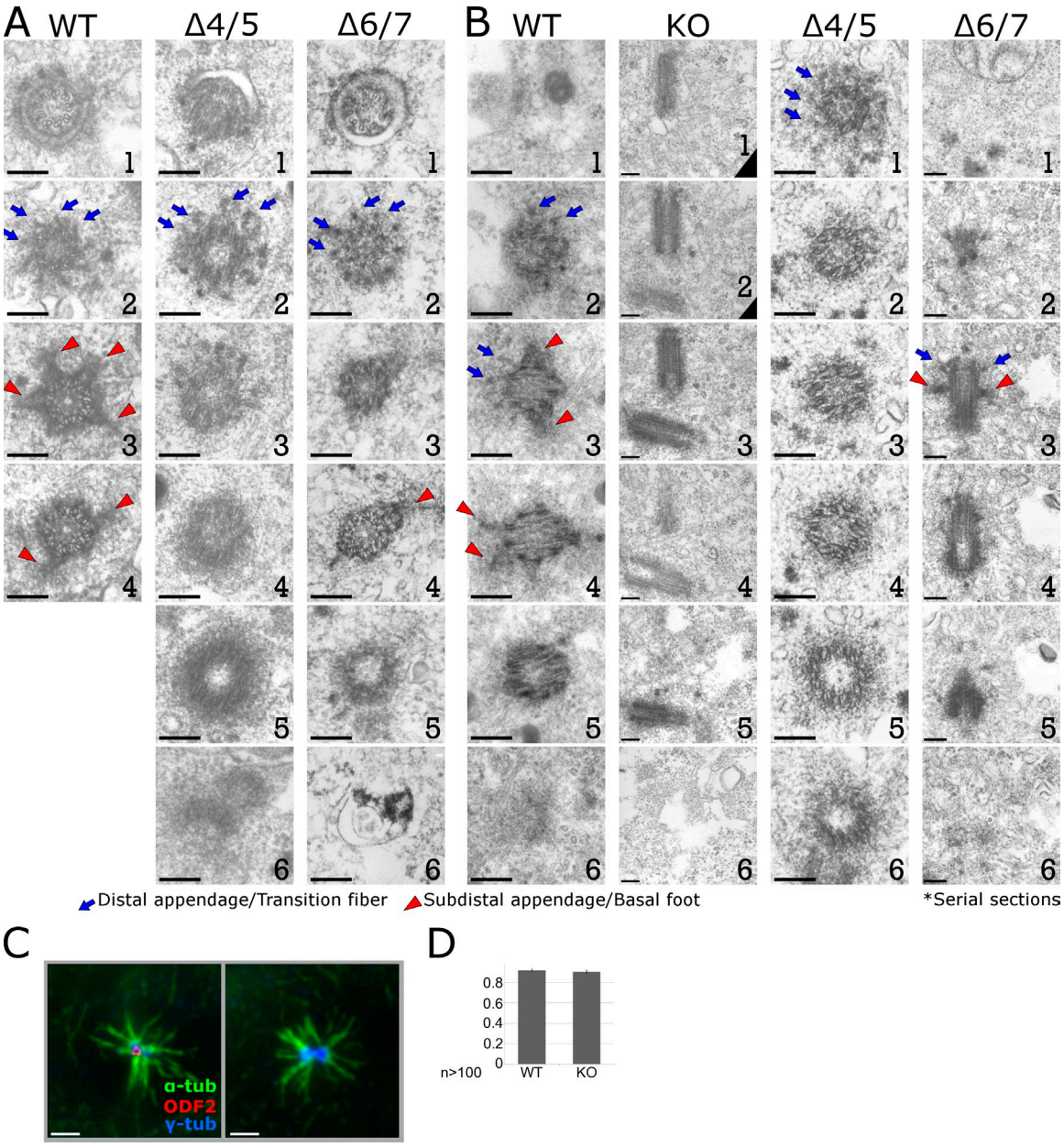
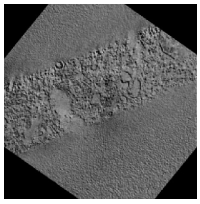
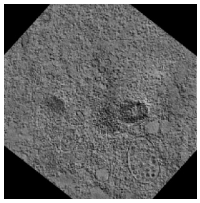


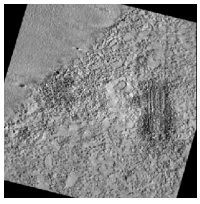
Figure S3. **(A) Serial cross sections of basal bodies with TF+BF+ and TF+BF− appendages.** WT: (TF+BF+) basal body in WT F9 cells. Δ4/5: (TF+BF−) basal body in Δ4/5 construct–expressing *Odf2*-KO F9 cells. Δ6/7: (TF+BF+) basal body in Δ6/7 construct–expressing *Odf2*-KO F9 cells. Bars, 0.2 µm. TFs, blue arrows; BF, red arrowheads. The cross section electron micrographs in the top two rows are the same images as in the top two rows of Fig. 1 D. (B) Serial cross and longitudinal sections of centrioles with DA+SA+, DA−SA−, and DA+SA− appendage patterns. WT: (DA+SA+) centriole in WT F9 cells. KO: (DA−SA−) centriole in *Odf2*-KO F9 cells. Δ4/5: (DA+SA−) centriole in Δ4/5 construct–expressing *Odf2*-KO F9 cells. Δ6/7: (DA+SA+) centriole in Δ6/7 construct–expressing *Odf2*-KO F9 cells. DAs, blue arrows; SAs, red arrowheads. (C) MTOC activity on the centrioles of (DA+SA+) and (DA−SA−) types. WT: (DA+SA+) centriole in WT F9 cells. KO: (DA−SA−) centriole in *Odf2*-KO F9 cells. Bars, 1 µm. (D) Quantification of the nucleation of MTs in WT and *Odf2*-KO F9 cells, determined by the proportion of centrioles associated with asters formed by microtubules. The nucleation activity was high in both cases (n > 100 in more than three independent experiments).



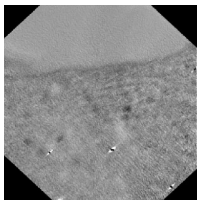
Video 1. **UHVEM tomographic images of the ciliary basal body of an *Odf2*-WT F9 cell and its schematic drawing.** Note the TF (blue) and BF (red) structures in the drawing.



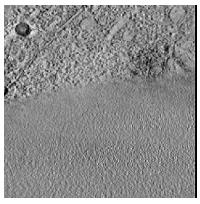
Video 2. **UHVEM tomographic images of the ciliary basal body of an *Odf2*-KO F9 cell expressing the Δ4/5 construct and its schematic drawing.** Note the TF structures (blue) in the drawing.



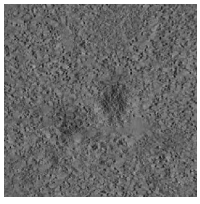
Video 3. **UHVEM tomographic images of the ciliary basal body of an *Odf2*-KO F9 cell expressing the Δ6/7 construct and its schematic drawing.** Note the TF (blue) and BF (red) structures in the drawing.



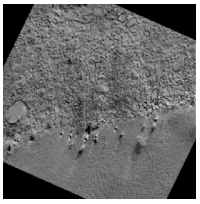
Video 4. **UHVEM tomographic images of the ciliary basal body of an *Odf2*-KO F9 cell expressing the Ca construct and its schematic drawing.** Note the TF structures (blue) in the drawing.



Video 5. **UHVEM tomographic images of a centriole in an *Odf2*-WT F9 cell and its schematic drawing.** Note the DA (blue) and SA (red) structures in the drawing.

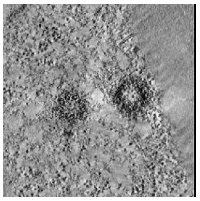


Video 6. **UHVEM tomographic images of a centriole in an *Odf2*-KO cell and its schematic drawing.** Note the lack of both the SA (blue) and DA (red) structures in the drawing.



Video 7. **UHVEM tomographic images of a centriole in an *Odf2*-KO F9 cell expressing the Δ4/5-construct and its schematic drawing.** Note the DA structures (blue) in the drawing.

Video 8. **UHVEM tomographic images of a centriole in an *Odf2*-KO F9 cell expressing the Δ6/7-construct and its schematic drawing.** Note the DA (blue) and SA (red) structures in the drawing.



Video 9. **UHVEM tomographic images of a centriole in an *Odf2*-KO F9 cell expressing the Ca construct and its schematic drawing.** Note the DA structures (blue) in the drawing.