

## Supplemental material

### Video 1:

Time lapse movie of an embryo expressing KLP61F-GFP and injected with rhodamine tubulin and antiKLP61F (see Fig. 1). Images were acquired every 2.5s. Playback rate is 10 frames/sec.

### Video 2:

Time lapse movie of an embryo injected with rhodamine tubulin and antiKLP61F (see Fig. 2). Images were acquired every 2s. Playback rate is 10 frames/sec.

### Video 3:

Time lapse movie of an embryo expressing GFP-CNN (green) and injected with rhodamine tubulin (red) and antiKLP61F (see Fig. 2). Images were acquired every 2 s. Playback rate is 10 frames/sec.

**Fig. S1:** Cortical forces do not contribute significantly to poleward flux or pole-pole separation after nuclear envelope breakdown. **A.** Still images of actin and tubulin in wild type, *sced* and *spg* embryos. Mutant embryos have less actin in the actin cap over the spindle and no furrow forms between spindles. However, pole-pole separation after NEB is not significantly affected (see C). Bar, 5  $\mu\text{m}$  **B.** Kymographs over ipMT bundles in wild type, *sced*, and *spg* embryos. Speckles move away from the equator at approximately the same rate in the mutants as in wild type. **C.** Spindle pole separation as

a function of time for cycle 11 in wild type, *sced*, and *spg* embryos. **D.** Histograms for the rate of speckle movement away from the equator.

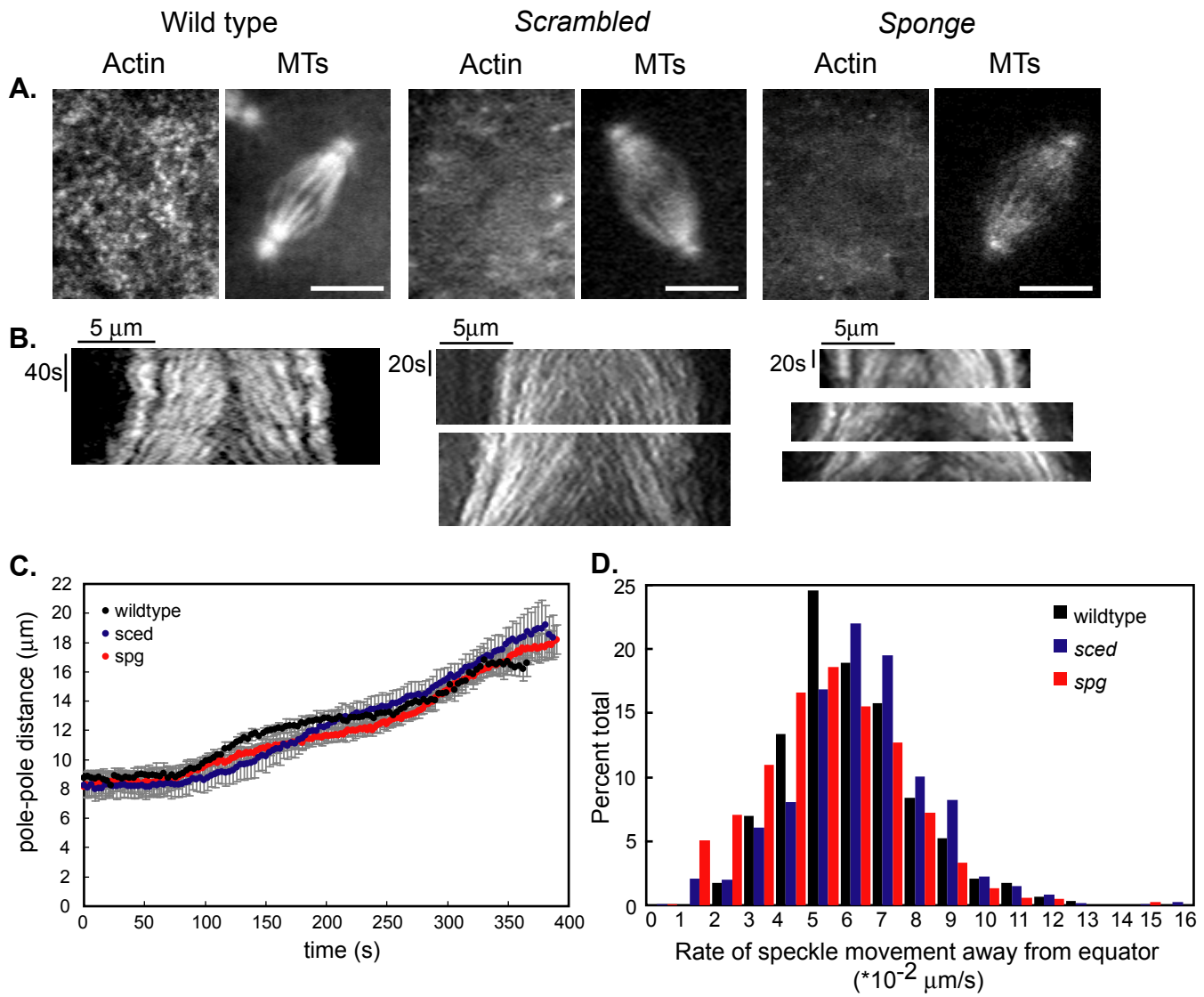


Fig. S1