

S1. Control cells show MT repolymerization after nocodazole treatment.

Representative COS-7 cell transfected with EMTB-GFP, a MT marker, incubated with nocodazole, washed out, and immediately imaged for 20 minutes at 1 frame/20seconds. EMTB-marked MTs emanate from 2 MTOC asters very quickly and MTs repopulate the entire cell within 10 minutes.

S2. Control cells show MT repolymerization after nocodazole treatment.

Representative COS-7 cell transfected with EMTB-GFP, a MT marker, and empty pmCerulean vector incubated with nocodazole, washed out, and immediately imaged for 20 minutes at 1 frame/20seconds. EMTB-marked MTs emanate from 2 MTOC asters very quickly and MTs repopulate the entire cell within 10 minutes.

S3. NT-CENP-F transfection blocks MT repolymerization after nocodazole treatment.

Representative COS-7 cell co-transfected with NT-CENP-F (not shown) and EMTB-GFP, a MT marker, incubated with nocodazole, washed out, and immediately imaged for 20 minutes at 1 frame/20seconds. The EMTB-GFP pool remains cytoplasmic throughout the 20 minute period in the cell expressing NT-CENP-F. After imaging, other WT cells in the dish were checked and showed full MTOC recovery (not shown).

S4. Inhibited MT nucleation is not a permanent condition, but significant.

(A-C) COS-7 cells transfected with (A) NT-CENP-F-GFP and labeled for (B) tubulin show full MT repolymerization in 2 hours after nocodazole washout. (D, E) CENP-F^{-/-} MEFs show weak MT repolymerization 6 hours after nocodazole washout.

S5. Some centrosomal proteins are not redistributed by expression of NT-CENP-F.

COS-7 cells expressing NT-CENP-F do not show co-localization of the CENP-F truncation puncta with endogenous γ -tubulin, pericentrin, or centrin1. (A) NT-CENP-F-GFP, (B) γ -tubulin, (C) merge. (D) NT-CENP-F-GFP, (E) pericentrin, (F) merge. (G) NT-CENP-F-GFP, (H) centrin1, (I) merge. (J-R) WT and CENP-F^{-/-} MEFs were labeled for Hook2 and ninein (red) and γ -tubulin (green). (M, O, P, R) Both Hook2 and ninein retain centrosomal localization in CENP-F^{-/-} MEFs.

Scale bars 10 μ m.



