

Supporting Information

Choudhary et al. 10.1073/pnas.1308203110

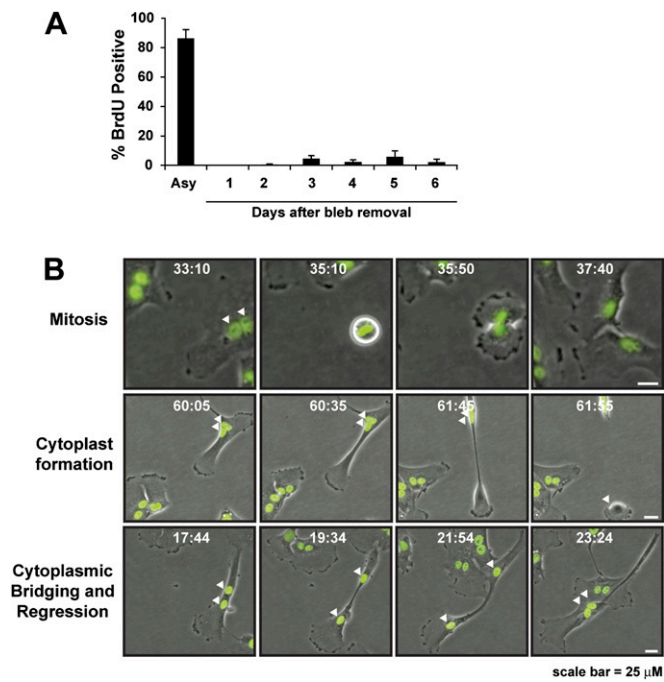
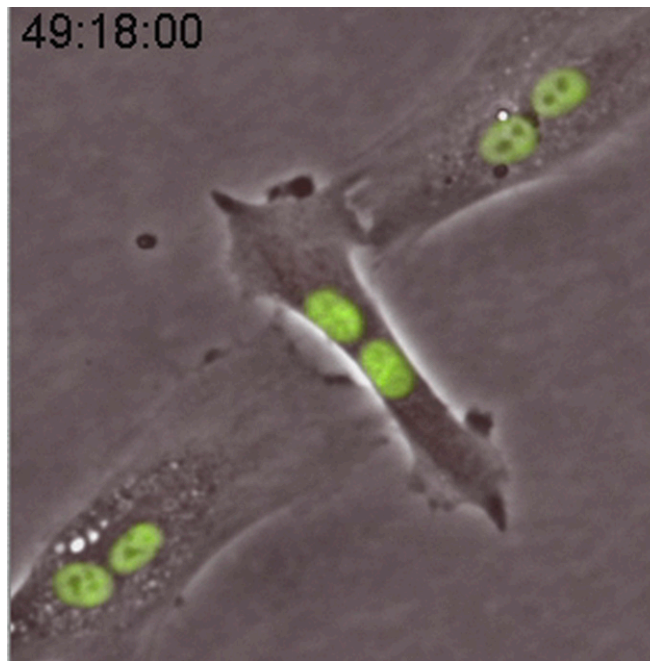


Fig. S1. Events after failed cytokinesis. (A) BrdU analysis of cells after synchronization procedure. BrdU incorporation remains low several days after removal of blebbistatin (bleb). Each day represents a 24-h treatment followed by fixation and analysis. Asynchronous cells (Asy) were used as a positive control. (B) A variety of events were observed by time-lapse videomicroscopy for binucleate cells after failed cytokinesis. Still images of merged phase contrast and fluorescent H2B-GFP are shown for RPE1 cells after prior failed cytokinesis. Time in hours:minutes from the Fig. 1A treatment is shown for each frame.



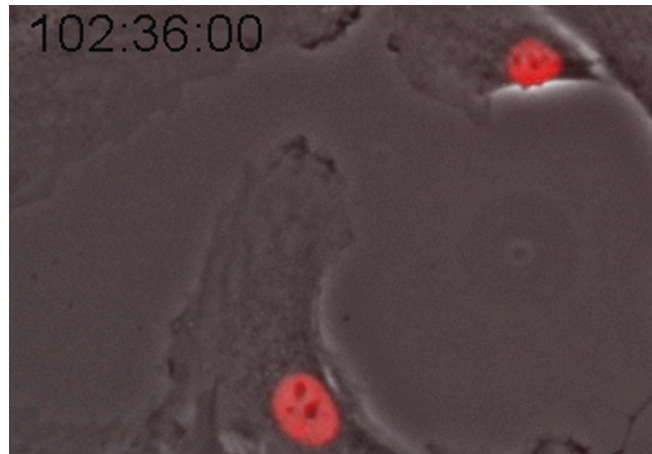
Movie S1. Cytofission in RPE1 cell. Corresponds to Fig. 3, *Top*. Merge of H2BGFP and phase contrast. Time in h:min:s from blebbistatin treatment is shown.

[Movie S1](#)



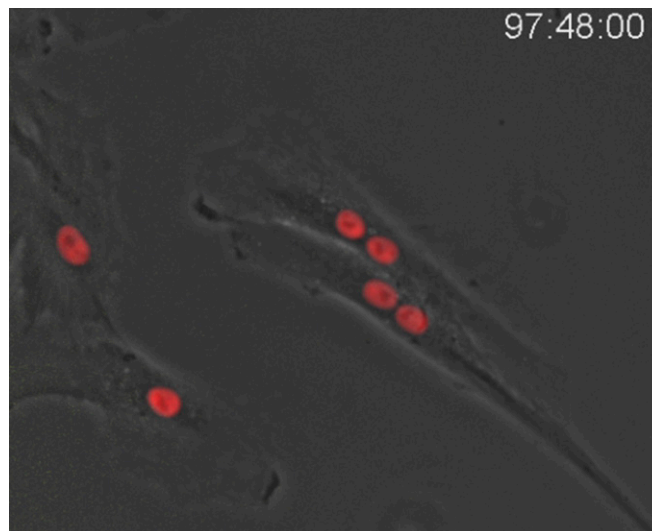
Movie S2. Cytofission in RPE1 cell. Corresponds to Fig. 3, *Middle*. Merge of H2BGFP and phase contrast. Time in h:min:s from blebbistatin treatment is shown.

[Movie S2](#)



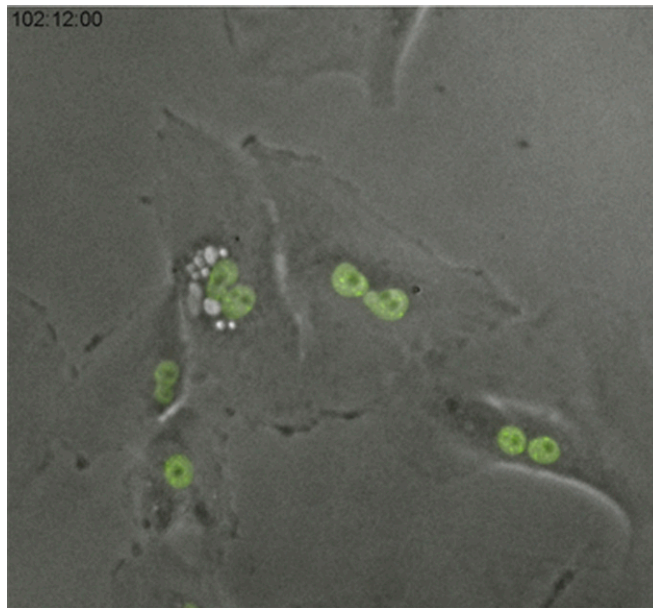
Movie S8. Control mitosis-cytokinesis in RPE1 cell demonstrating localization of GFP-Plk1. Merge of GFP-Plk1 (green), H2B-mCherry (red), and phase contrast images. Corresponds to Fig. 5C, cytokinesis cell 1. Note additional GFP-positive cytokinesis at upper right.

[Movie S8](#)



Movie S9. Cytofission in RPE1 cell demonstrating no localization of GFP-Plk1. Merge of GFP-Plk1 (green), H2B-mCherry (red), and phase contrast images. Corresponds to Fig. 5C, cytofission. GFP acquisition and threshold parameters were identical to [Movie S7](#). Time in h:min:s at upper right.

[Movie S9](#)



Movie S10. Cytofission in RPE1 cell in the presence of nocodazole 0.4 $\mu\text{g}/\text{mL}$ Merge of H2B-GFP and phase contrast. Corresponds to Fig. S3. Time is shown in h:min:s.

[Movie S10](#)