## Supplemental Materials Molecular Biology of the Cell

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**Supplemental Figure 1.** Condensin clustering/heterogeneity is retained in *sir2* $\Delta$  and *mcm21* $\Delta$  cells. (A) Percentage of cells showing Smc4-GFP fluorescence as a focus, two foci, or uniform signal in *sir2* $\Delta$  cells compared to WT and simulations of clustering. Heterogeneity did not significantly change in *sir2* $\Delta$  cells in which condensin remained spindle proximal (n = 55,  $\chi^2$  = 0.09; 39 % focus, 30% two foci, 31% uniform). (B) Percentage of cells showing Smc4-GFP fluorescence as a focus, two foci, or uniform signal in *mcm21* $\Delta$  (n = 44) compared to simulations of clustering in an extended condensin cylinder. The condensin cylinder length was increased by 500 nm to match the increased interkinetochore lengths in *mcm21* $\Delta$  cells. The frequency of fluorescent classifications best match simulations of clustering, suggesting there is no change in condensin's ability to cluster in *mcm21* $\Delta$  cells ( $\chi^2$  = 0.46 vs. simulation of 8 condensin per cluster).

