

## FIGURE LEGENDS FOR SUPPLEMENTAL MATERIAL

**Figure S1.-** Plasmids used in these experiments. Maps of the plasmids used to express YFP (A), CID-YFP (B), HFD<sub>CID</sub>-YFP (C), N<sub>CID</sub>-YFP (D), N<sub>CID</sub>HFD<sub>H3</sub>-YFP (E) and N<sub>H3</sub>HFD<sub>CID</sub>-YFP (F) are presented. Relevant elements of the constructs are indicated. Some relevant restriction sites are also indicated. Additional details are available upon request.

**Figure S2.-** Treatment with Triton X-100 does not solubilises CID-YFP. (A) Cells expressing CID-YFP were treated with Triton X-100 before visualization. As with untreated cells (see Figure 1A), CID-YFP localizes throughout chromatin (a), only at centromeres (c) and both, at centromeres and throughout chromatin (b). (B) Cells expressing N<sub>CID</sub>-YFP were either treated with Triton X-100 (b) or not (a) before visualization. Bars correspond to 5 $\mu$ m, except in row b of panel B where it corresponds to 10 $\mu$ m.

**Figure S3.-** Centromeric localization of CID-YFP does not correlate with cell division. The percentage of cells showing centromeric localization of CID-YFP (●) is presented as a function of increasing time after transfection and it is compared to the relative growth of the culture after transfection (O). Results are the average of three independent experiments.

**Movie 1.-** *In vivo* time-lapse analysis of a nucleus showing clearance of mislocalized CID during interphase.

**Movie 2.-** *In vivo* time-lapse analysis of a cell showing mislocalized CID that undergoes aberrant mitosis giving rise to a daughter cell which receives no DNA at all.

**Movie 3.-** *In vivo* time-lapse analysis of a cell showing a mixed pattern of CID localization, at centromeres and throughout chromatin, that undergoes normal mitosis.