Tpx2 controls spindle integrity, genome stability and tumor development

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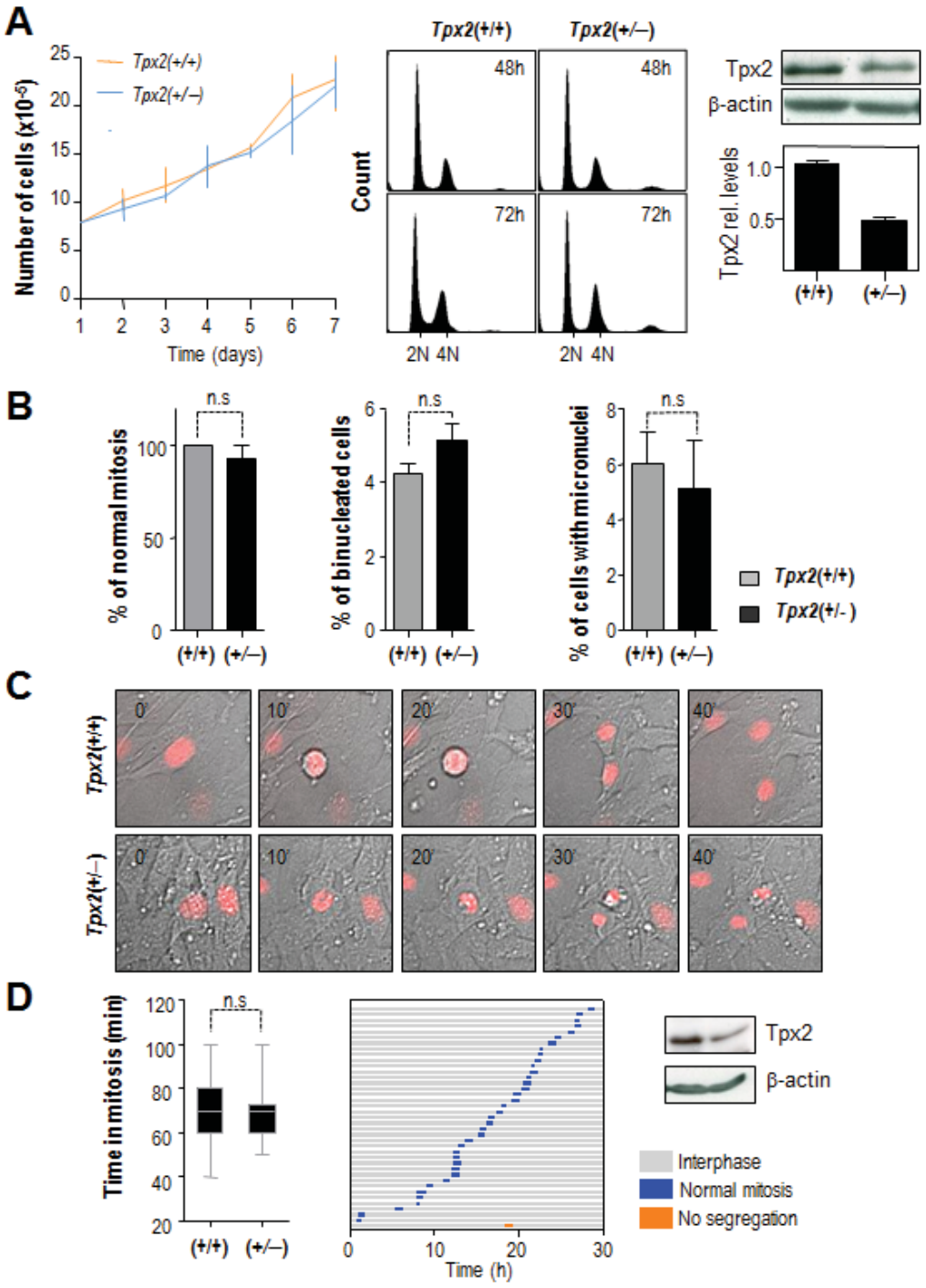
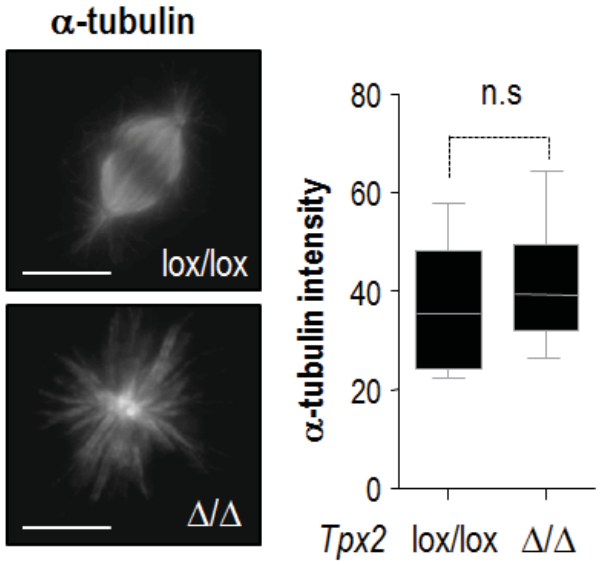
Supplementary Information

Supplementary Figures 1-3

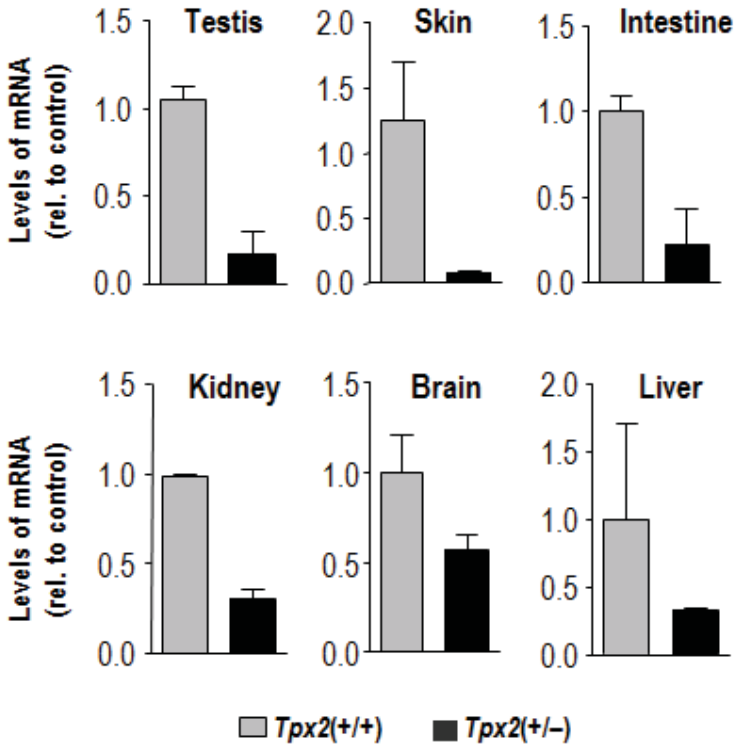


Supplementary Figure 1. Normal proliferation of *Tpx2*$^{+/-}$ MEFs. **A**, Growth curve of *Tpx2*$^{+/-}$ or wild-type immortal MEFs. Data were normalized against the number of cells seeded at day 1 and the experiment was performed by triplicate. Fluorescence-Activated Cell Sorting was use to analyze the cell cycle profile of cells stained with propidium

iodide. Cells were fixed 48 and 72 hours after seeding for the single cells analysis by immunofluorescence. The levels of expression of Tpx2 were determined by western blot and are normalized versus the expression of β-actin. **B,** Lack of mitotic aberrations in *Tpx2*$^{+/-}$ MEFs. The ratio of normal mitosis, binucleated cells or cells containing micronuclei is represented. No significant differences were found in any of the cases. **C,** *Tpx2*$^{+/-}$ MEFs displayed normal mitotic progression. Live cell imagining was performed to follow mitotic progression in *Tpx2*$^{+/-}$ expressing H2B fused to mRFP. Images were taken every 10 minutes. **D,** Length of mitosis (left histogram) in *Tpx2*$^{+/+}$ and *Tpx2*$^{+/-}$ cells (p=0.9250). On the right panel, bars represent the fate of individual *Tpx2*$^{+/-}$ cells as observed during 30 h by videomicroscopy. 97.5% of *Tpx2*$^{+/-}$ cells exhibited normal chromosome segregation and this percentage is similar for wild-type cells (not shown).



Supplementary Figure 2. Quantification of α-tubulin intensity in mitotic spindles from *Tpx2*$^{lox/lox}$ and *Tpx2*$^{\Delta/\Delta}$ embryos. Representative pictures are shown. No significant differences were found (p=0.6057) after the analysis of 8 different cells from each genotype.



Supplementary Figure 3. Levels of *Tpx2* mRNA expression, as scored by qRT-PCR, in three different proliferative tissues (testis, skin and intestine) and three non-proliferative tissues (kidney, brain and liver) in $Tpx2^{+/+}$ and $Tpx2^{+/-}$ mice.