

## Description of Additional Supplementary Files

### Supplementary Data 1

*Corresponding to Fig. 3e and Supplementary Figs. 3e-f.*

Protein group files for LC-MS/MS proteomics on flow-sorted mitotic chromosomes and pre-sorted mitotic lysate pellets (LP) for *Pbk*<sup>+/+</sup> (WT, Tab 1) and *Pbk*<sup>-/-</sup> (KO, Tab 2) mouse preB cells.

### Supplementary Data 2

*Corresponding to Fig. 4c and Supplementary Fig. 4a.*

Protein group files for LC-MS/MS proteomics analysis of *Pbk*<sup>+/+</sup> and *Pbk*<sup>-/-</sup> mouse preB mitotic lysate inputs

(Tab 1) and following immunoprecipitation with anti-phospho-linker antibody (Tab 2).

### Supplementary Movies 1-4 | Live-cell imaging of Ikaros-mNeonGreen through mitosis.

*Corresponding to Figs. 1b-c and Supplementary Fig. 1c.*

Time-lapse live-cell imaging of Ikaros-mNeonGreen (middle panel, green) localisation through mitosis at 3 min intervals in KI mouse preB cell clones pre-incubated with SiR-DNA (left panel, magenta). Movie 1=clone 1.1; Movie 2=clone 1.2; Movie 3=clone 2.1; Movie 4=clone 2.2; scale bars=5  $\mu$ m.