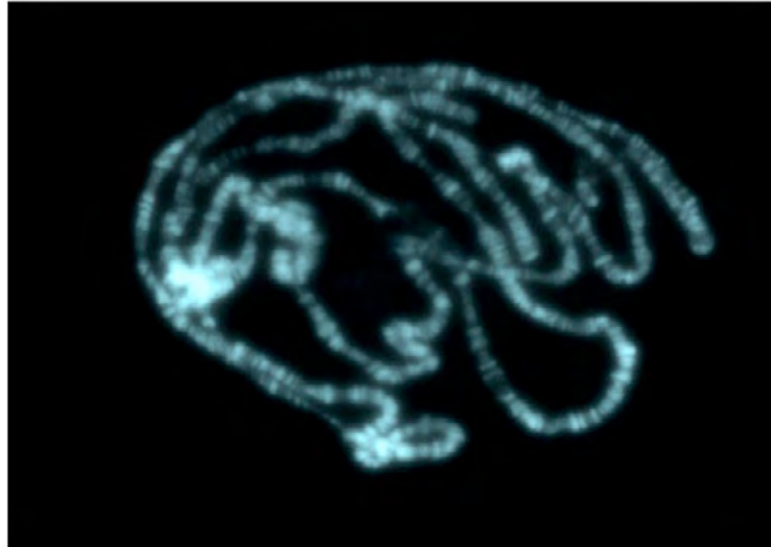


A

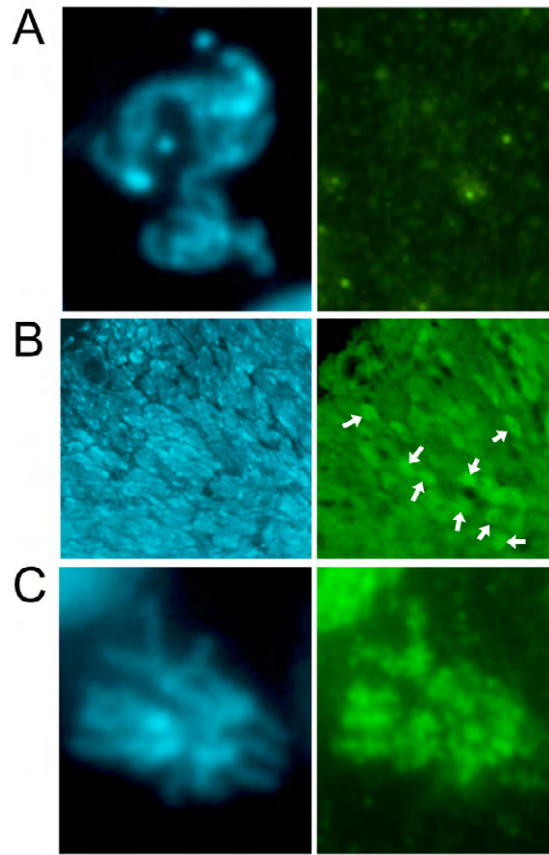
**P**  $w/w; LP1\ UAS-M17/St, Cy, Tb$  X  $w/Y; LP1\ Tub-GAL4/St, Cy, Tb$

**F1**  $Cy+ Tb+$   $Cy Tb$   
164 107

B



**Fig. S1.** Rescue of *Yeti* lethality in *LP1/LP1; UAS-Yeti-M17/tub-GAL4* flies. A) Results of genetic crosses where the expression of *M17* transgene is ubiquitously driven by the *tub-GAL4* driver. B) Fully rescued polytene chromosomes of *LP1/LP1; UAS-Yeti-M17/tub-GAL4* larvae stained with DAPI.



**Fig. S2.** Immunostaining of mitotic chromosomes and tissue from larval brains with confocal microscope. A) Mitotic chromosomes from neuroblasts of larvae expressing *Yeti-GFP* transgene under the *elev-GAL4* driver. B) Mitotic brain squashes showing nuclei stained by anti-GFP C) Mitotic chromosome from neuroblasts of larvae expressing *H2A.V-GFP* under the endogenous *H2A.V* promoter. Chromosomes are sequentially stained with DAPI and with anti-GFP. No significant GFP staining is seen on chromosomes from *elav-GAL4; UAS-Yeti-GFP/UAS-Yeti-GFP* (A, right panel); in the same larvae, GFP staining is present in mitotic nuclei and pointed by arrows (B, right panel). In the control line expressing *H2A.V-GFP*, chromosomes are clearly stained with anti-GFP (C, right panel).