## Supplemental material



Lucas et al., http://www.jcb.org/cgi/content/full/jcb.201210073/DC1

Figure S1. Quantification of disintegration defects in wts mutant clusters. (A)  $cpb^{M143}$  mutant border cell clusters can disintegrate. (B)  $wts^{X1}$  mutant cluster showing disintegration. (C)  $hpo^{42\cdot47}$  mutant cluster showing disintegration. (D) Quantification of the percentage of dissociated/disintegrated border cell clusters in the following genotypes: control (n > 100) and  $wts^{X1}$  (n = 93) mutant clusters. Anterior is to the left in all panels.



Video 1. **Polarization of F-actin visualized with Utrophin-GFP in border cells.** Border cells expressing UAS-utrophin-GFP driven by c306.G4. Images were acquired by time-lapse confocal microscopy using a laser-scanning confocal microscope (LSM780 invert; Carl Zeiss). Frames were taken every 3 min over a period of 5 h.



Video 2. **Tumbling migration of wts<sup>X1</sup> or mats-IR clusters versus a control.** MARCM clones expressing GFP-labeled wts<sup>x1</sup> border cells as well as some follicle cells. Control border cells expressing blank *FRT-GFP. Mats-IR* border cells and corresponding control border cells labeled with *UAS-mcherry-jupiter* and driven by *c306.G4.* Images were acquired by time-lapse confocal microscope using a laser-scanning confocal microscope (LSM780 invert; Carl Zeiss). Frames were taken every 3 min over a period of 5 h.



Video 3. **Disintegration of wts<sup>x1</sup> or mats-IR clusters versus a control.** MARCM clones expressing GFP-labeled wts<sup>x1</sup> border cells as well as some follicle cells. Control border cells expressing blank *FRT-GFP*. *Mats-IR* border cells and corresponding control border cells labeled with UAS-mcherry-jupiter and driven by *c306.G4*. Images were acquired by time-lapse confocal microscope using a laser-scanning confocal microscope (LSM780 invert; Carl Zeiss). Frames were taken every 3 min over a period of 5 h.



Video 4. **Failure of detachment of wts<sup>x1</sup> or mats-IR clusters versus a control.** MARCM clones expressing GFP-labeled wts<sup>x1</sup> border cells as well as some follicle cells. Control border cells expressing blank *FRT-GFP*. *Mats-IR* border cells and corresponding control border cells labeled with UAS-mcherry-jupiter and driven by *c306.G4*. Images were acquired by time-lapse confocal microscopy using a laser-scanning confocal microscope (LSM780 invert; Carl Zeiss). Frames were taken every 3 min over a period of 5 h.



Video 5. **Tumbling migration of a UAS-ena cluster versus a control.** Afout.G4 clones expressing GFP-labeled UAS-ena border cells as well as follicle cells. Control border cells labeled with UAS-mcherry-jupiter and driven by c306.G4. Images were acquired by time-lapse confocal microscopy using a laser-scanning confocal microscope (LSM780 invert; Carl Zeiss). Frames were taken every 3 min over a period of 5 h.



Video 6. **Disintegration of a** *cpb*<sup>M143</sup> **cluster versus a control**. MARCM clones expressing GFP-labeled *cpb*<sup>M143</sup> border cells as well as some follicle cells. Control border cells expressing blank *FRT-GFP*. Images were acquired by time-lapse confocal microscopy using a laser-scanning confocal microscope (LSM780 invert; Carl Zeiss). Frames were taken every 3 min over a period of 5 h.



Video 7. **Rescue of wts<sup>x1</sup> mutant migration by expression of Cpb.** MARCM clones expressing GFP-labeled blank *FRT-GFP* (control), wts<sup>x1</sup>, or UAS-cpb;wts<sup>x1</sup> border cells as well as some follicle cells. Images were acquired by time-lapse confocal microscopy using a laser-scanning confocal microscope (LSM780 invert; Carl Zeiss). Frames were taken every 3 min over a period of 5 h.