



Supplementary information, Figure S5 The Jak/Stat signaling is activated in the CCR upon DSS treatment. (A-A') Previous studies have suggested that there are two populations of *Drosophila* gastric stem cells, which reside at different regions of midgut. The namely GaSCs reported by Singh SR et al. reside at the cardia ¹, and the GSSCs reported by Strand and Micchelli reside in the CCR ². The Jak/Stat signaling activation reporter 10×Stat-GFP ³ was expressed in diploid cells along midgut

including the CCR (indicated by arrowheads). (B-B'') D1 (in red) is not expressed in $10\times\text{Stat-GFP}^+$ (in green) cells at the cardia. (C-C'') D1 (red) is expressed in a subpopulation of $10\times\text{stat-GFP}^+$ (in green) cells in the CCR. (D-D') The expression of $10\times\text{Stat-GFP}$ reporter was significantly upregulated along the midgut including the CCR (indicated by arrowheads) after DSS treatment for 7 days. 2B10 staining was in red. (E-E'') The enlarged view of the CCR in (D). Note that upon DSS treatment, the $10\times\text{stat-GFP}$ reporter was also expressed in the surrounding muscle cells.

References:

- 1 Singh SR, Zeng X, Zheng Z, Hou SX. The adult *Drosophila* gastric and stomach organs are maintained by a multipotent stem cell pool at the foregut/midgut junction in the cardia (proventriculus). *Cell Cycle* 2011; 10:1109.1120.
- 2 Strand M, Micchelli CA. Quiescent gastric stem cells maintain the adult *Drosophila* stomach. *Proc Natl Acad Sci U S A* 2011; 108:17696.17701.
- 3 Bach EA, Ekas LA, Ayala. Camargo A et al. GFP reporters detect the activation of the *Drosophila* JAK/STAT pathway in vivo. *Gene Expr Patterns* 2007; 7:323.331.