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Supplementary Information for

The Role of Translationally Controlled Tumor Protein (TCTP) in Proliferation of *Drosophila* Intestinal Stem Cells

Young V. Kwon[a,b,1,2], Bingqing Zhao[b,c,d,1], Chiwei Xu[b], Jiae Lee[a], Chiao-Lin Chen[b], Arunachalam Vinayagam[b], Bruce A. Edgar[c,e], and Norbert Perrimon[b,f,2]

[a]Department of Biochemistry, University of Washington, School of Medicine, Seattle, WA 98195
[b]Department of Genetics, Blavatnik Institute, Harvard Medical School, Boston, MA 02115
[c]German Cancer Research Center (DKFZ) - Center for Molecular Biology Heidelberg (ZMBH) Alliance, 69120 Heidelberg, Germany
[d]European Molecular Biology Laboratory (EMBL), Genome Biology Unit, D-69117 Heidelberg, Germany
[e]Huntsman Cancer Institute, University of Utah, UT 84112
[f]Howard Hughes Medical Institute, Harvard Medical School, Boston, MA 02115

[2] To whom correspondence should be addressed
Email: ykwon7@uw.edu and perrimon@genetics.med.harvard.edu

This PDF file includes:

Legend for Supplementary Dataset S1
Figs. S1 to S4

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Dataset S1: Mass spectrometry results

SUPPLEMENTARY FIGURES & LEGENDS

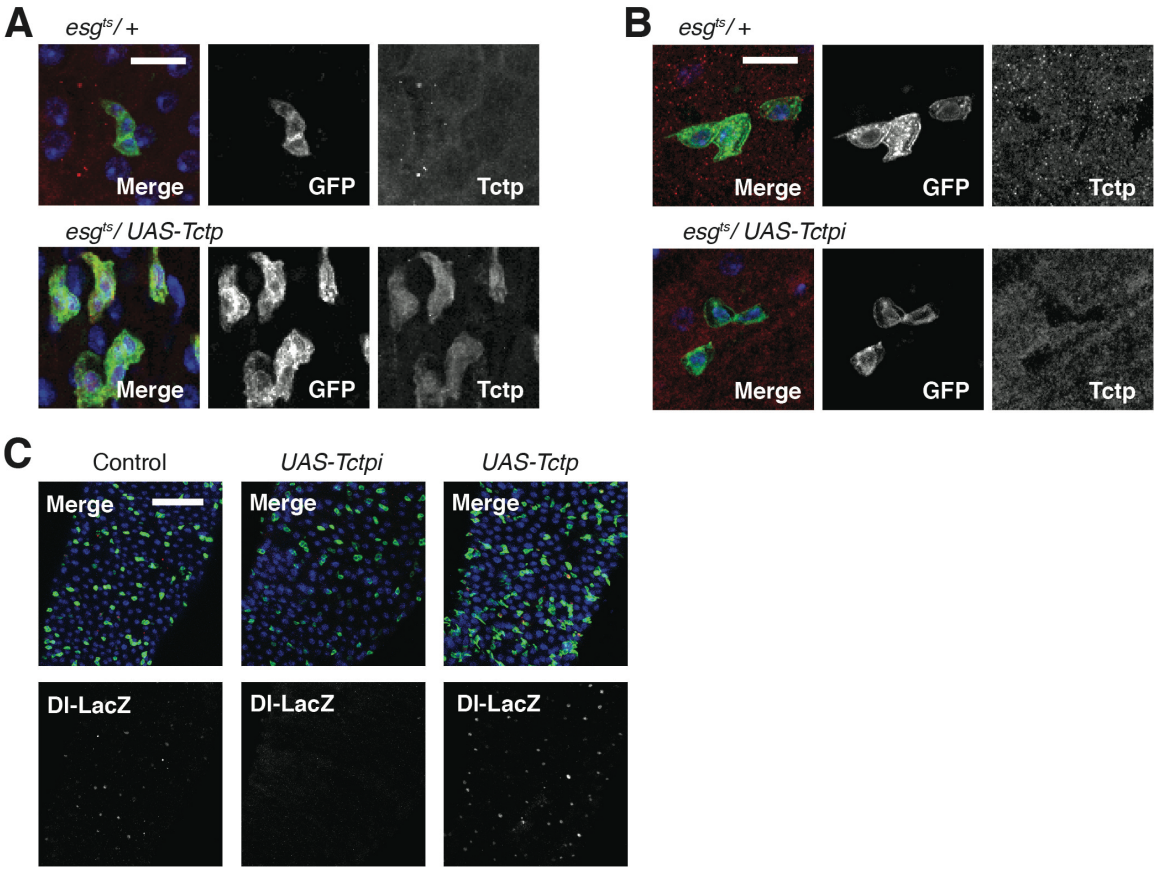

Figure S1. The role of Tctp in maintenance of ISCs and EBs in the *Drosophila* midgut. A-B. Tctp immunostainings in midgut. *UAS-Tctp* (7) and *UAS-Tctpi* (7) were expressed with esg^{ts}. The genotype of control is esg^{ts}/+. Scale bar indicates 15 μm**. C.** Midgut images. *UAS-Tctp* and *UAS-Tctpi* was expressed with esg^{ts}. *Dl-nls-LacZ* line was used to visualize ISCs. After incubating flies at 29°C for X days, midguts were dissected and stained with anti-β-Galactosidase antibody. Scale bar indicates 50 μm.

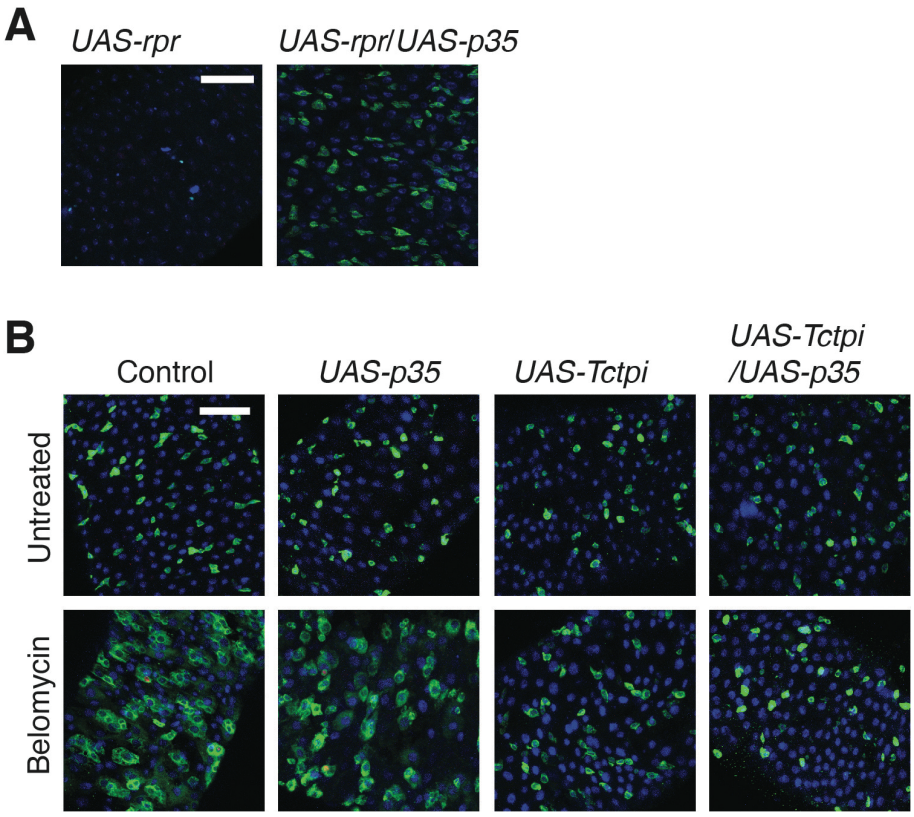

Figure S2. Overexpression of p35 does not rescue the cell loss phenotype induced by Tctp depletion in ISCs and EBs. A. Effect of rpr and p35 expression on ISCs. Expression of rpr with *esg*^{ts} reduced ISCs presumably due to induction of cell death. This reduction in cell number by expression of rpr was rescued by p35 expression. **B.** Images of midguts. Transgenes were expressed with *esg*^{ts} for a total of 7 days, and bleomycin was fed while expressing transgenes for 2 days before analysis. Scale bar indicates 50 μm.

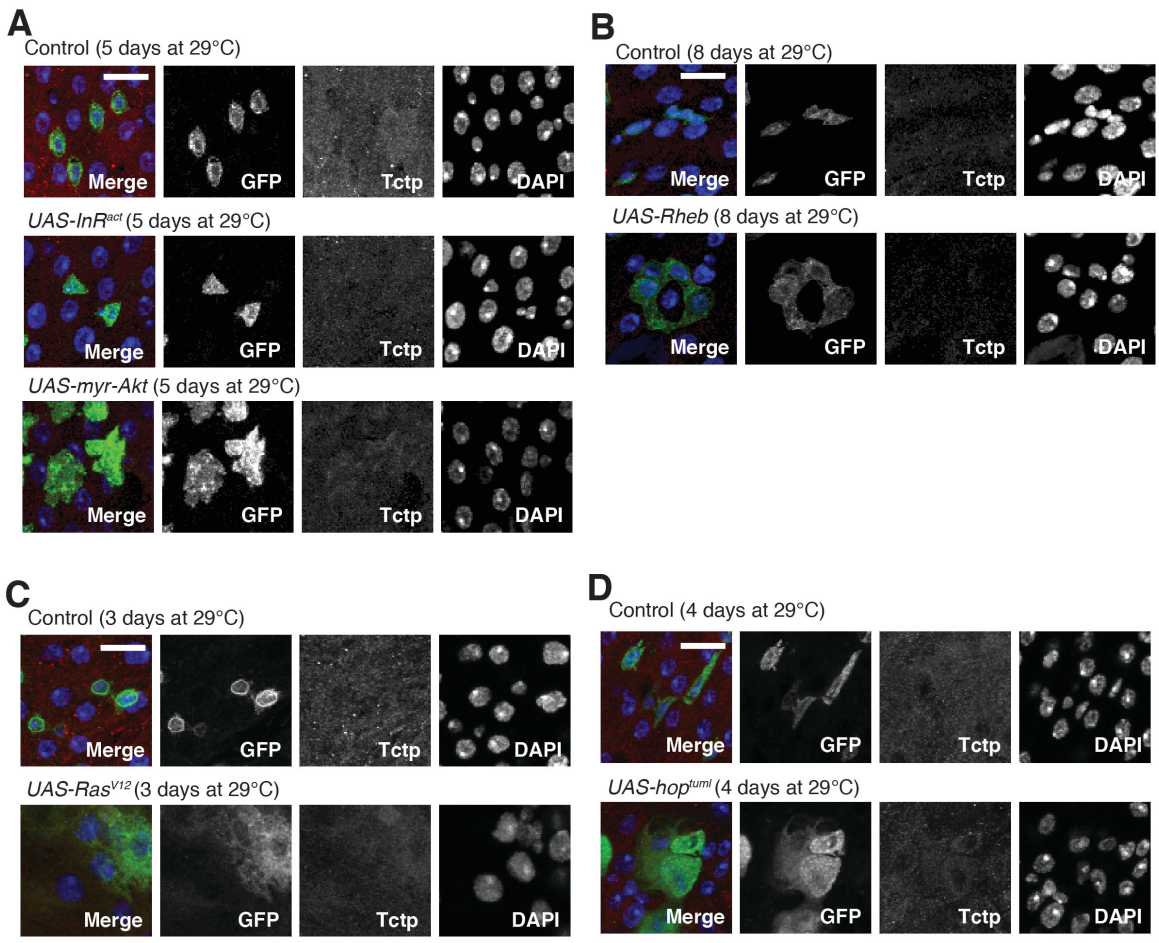

Figure S3. Tctp protein levels are not significantly altered by activation of insulin, mTOR, Ras, and JAK/STAT signaling pathways. A-D. Tctp staining in midguts. Transgenes were induced with *esg*^{ts} by shifting to 29°C. Tctp was stained with anti-Tctp antibody (7). *UAS-InR*^{act} and *UAS-myr-Akt* were induced for 5 days (**A**), *UAS-Rheb* was induced for 8 days (**B**), *UAS-Ras*^{V12} was expressed for 3 days (**C**), and *UAS-Hop*^{Tum} was induced for 4 days (**D**).

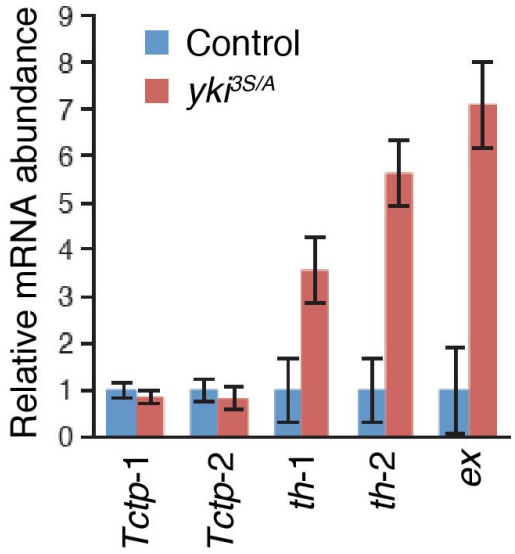

Figure S4. TCTP mRNA levels are unaltered by Yki$^{3S/A}$ expression. RNA samples were prepared from midguts with or without Yki$^{3S/A}$ expression for 4 days. *Tctp*, *thread* (*th*), and *expanded* (*ex*) mRNA levels were measured by RT-qPCR. The primer sequences used for qPCR are the followings: *Tctp*-1, 5'-TGATCTACGAGGTGTACGGAAA-3', 5'-TCGGTGGTTAAGCACAACATC-3'; *Tctp*-2, 5'-ACCCTCTACCTGAAGGACTACA-3', 5'-GCCGTTGATTTCGCGGTATT-3'; *th*-1, 5'-GCTGGACTGGCTGGATAAAC-3', 5'-GCCGCAGAAAAAGCATTTAACT-3'; *th*-2, 5'-GCGTGGAAATCGGTTGCTG-3', 5'-GATGCGATCTAATGCTTCGGC-3'; *ex*, 5'-TGTGCTCATAGATGGCGAGTA-3', 5'-CGCGAAAGTGTAGCTCCAGG-3'.

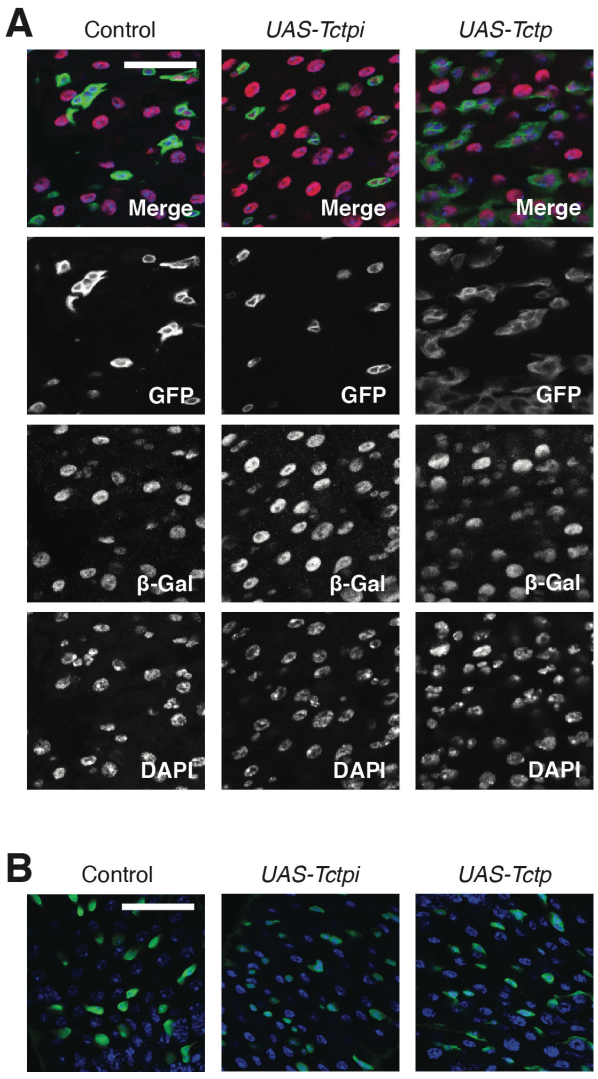

Figure S5. Tctp does not significantly alter Hpo signaling and JAK/STAT signaling.

A. Diap1-LacZ staining. Transgenes were induced with *esg*^{ts} for 5 days at 29°C. Hpo signaling was assessed by staining with anti-β-Galactosidase antibody. Scale bar indicates 50 μm. **B.** STAT-GFP reporter assay. GFP is expressed under the control of 5 repeats of a genomic fragment of *Socs36E* promotor region, which contains two Stat92E binding sites. Scale bar indicates 50 μm.