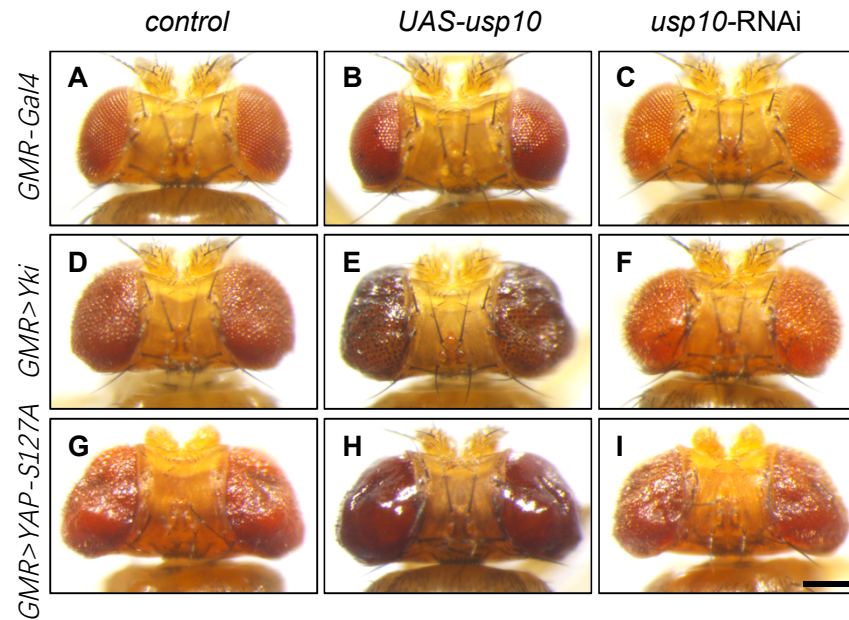


Supplementary Figure 1. *usp10*-shRNA reduces Yki protein level and target genes expression. The following sequences were used to generate *usp10*-shRNA line: Forward primer: 5'-CTAGCAGTGATTTGCAACAATCGTAATAATAGTTATATTCAAGCATATTATTACGATTGTTGCAAATCGCG-3'; Reverse primer: 5'-AATTCGCGATTTGCAACAATCGTAATAATATGCTTGAATATAACTATTATTACGATTGTTGCAAATCACTG-3'.

Shown are wing imaginal discs from third instar larvae with posterior to left and notum up. the scale bars are 50 μ m. (A-A'') Representing wing imaginal disc of control (*Hh-Gal4, UAS-GFP/+*) was dissected and immunostained to show the expression patterns of Yki (white in A and red A'') and GFP (green in A'-A''). GFP indicates the expression pattern of *Hh-Gal4*. (B-B'') Representing wing imaginal disc of *usp10* knockdown (*Hh-Gal4, UAS-GFP/UAS-usp10-shRNA*) was dissected and immunostained to show the expression patterns of Yki (white in B and red in B'') and GFP (green in B'-B''). (C-C'' and D-D'') Representing wing imaginal discs of control (*Hh-Gal4, UAS-GFP/+*) (C-C'') and *usp10* knockdown (*Hh-Gal4, UAS-GFP/UAS-usp10-shRNA*) (D-D'') were dissected and immunostained to shown the expression patterns of DIAP1 (white in C and D, red in C'' and D'') and GFP (green in C'-C'' and D'-D''). (E-E'' and F-F'') Representing wing imaginal discs of control (*ex-LacZ/+; Hh-Gal4, UAS-GFP/+*) (E-E'') and *usp10* knockdown (*ex-LacZ/+; Hh-Gal4, UAS-GFP/UAS-usp10-shRNA*) (F-F'') were dissected and immunostained to shown the expression patterns of Ex-LacZ (white in E and F, red in E'' and F'') and GFP (green in E'-E'' and F'-F'').



Supplementary Figure 2. Usp10 regulates Yki activity *in vivo*. (A-I) Shown are images for top view of adult male fly eyes, the scale bars are 200 μ m. The genotypes are listed: *GMR-Gal4/+* (A), *GMR-Gal4/+*, *UAS-usp10/+* (B), *GMR-Gal4/+*, *UAS-usp10-RNAi/+* (C), *GMR-Gal4*, *UAS-Yki/+* (D), *GMR-Gal4*, *UAS-Yki/+*; *UAS-usp10/+* (E), *GMR-Gal4*, *UAS-Yki/+*; *UAS-usp10-RNAi/+* (F), *GMR-Gal4*, *UAS-YAP-S127A/+* (G), *GMR-Gal4*, *UAS-YAP-S127A/+*; *UAS-usp10/+* (H), *GMR-Gal4*, *UAS-YAP-S127A/+*; *UAS-usp10-RNAi/+* (I).