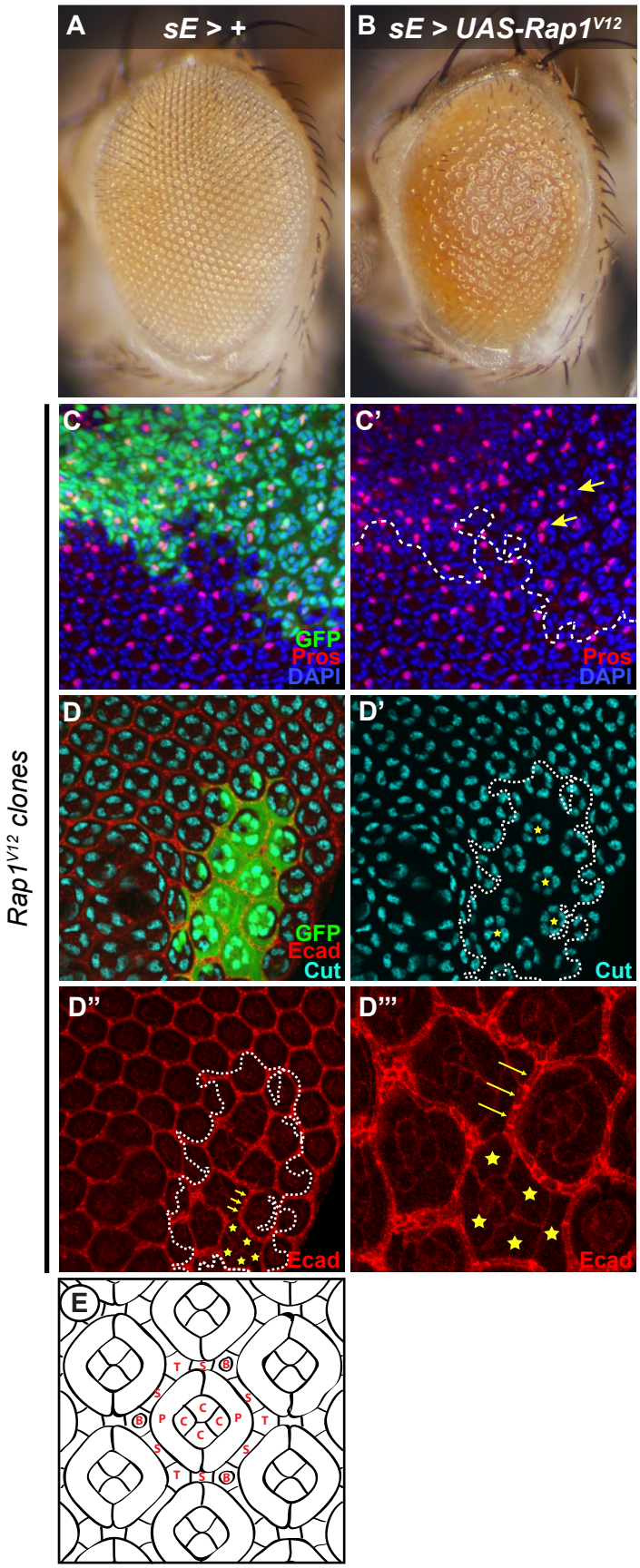

Figure S3 Rap1^{V12} is constitutively active. Adult retina expressing (A) *sE-Gal4* alone or (B) *sE-Gal4* combined with *UAS-Rap1^{V12}*. (C-D''') Random clones (GFP-positive cells) expressing Rap1^{V12} in pupal eye discs (45h after pupal formation) were induced by heat shock using the FLP-out/Gal4 system. Pupal eye discs were then immunostained with (C-C'') anti-Prospero to reveal R7 (Pros-positive) cells (nuclei outlined by DAPI) or (D-D''') anti-Ecad and anti-Cut to reveal cell outlines and cone cells, respectively. Dotted lines (C'-D'') mark the Rap1^{V12}-expressing clonal areas. (C') Arrows point to examples of ommatidia containing extra R7 cells. Rap1^{V12} expression also leads to extra cone cells (examples of five cone cells instead of the normal four cone cells per ommatidium are marked by a star in D'), and extra primary and secondary pigment cells (stars and arrows, respectively, in D''). (D''') Enlarged area encompassing the ommatidia where extra primary and secondary pigment cells are respectively highlighted by stars and arrows in D''. (E) Schematic representation of the apical cell outlines of a 45h pupal eye disc. Typically, at an apical focal plane, cell outlines reveal the two primary (P), six secondary (S), and three tertiary (T) pigment cells as well as the three mechano-sensory bristle (B) cells and the four cone (C) cells composing a normal ommatidium (Wolff and Ready, 1991).