

Deficiency of Yes-Associated Protein Induces Cataract in Mice

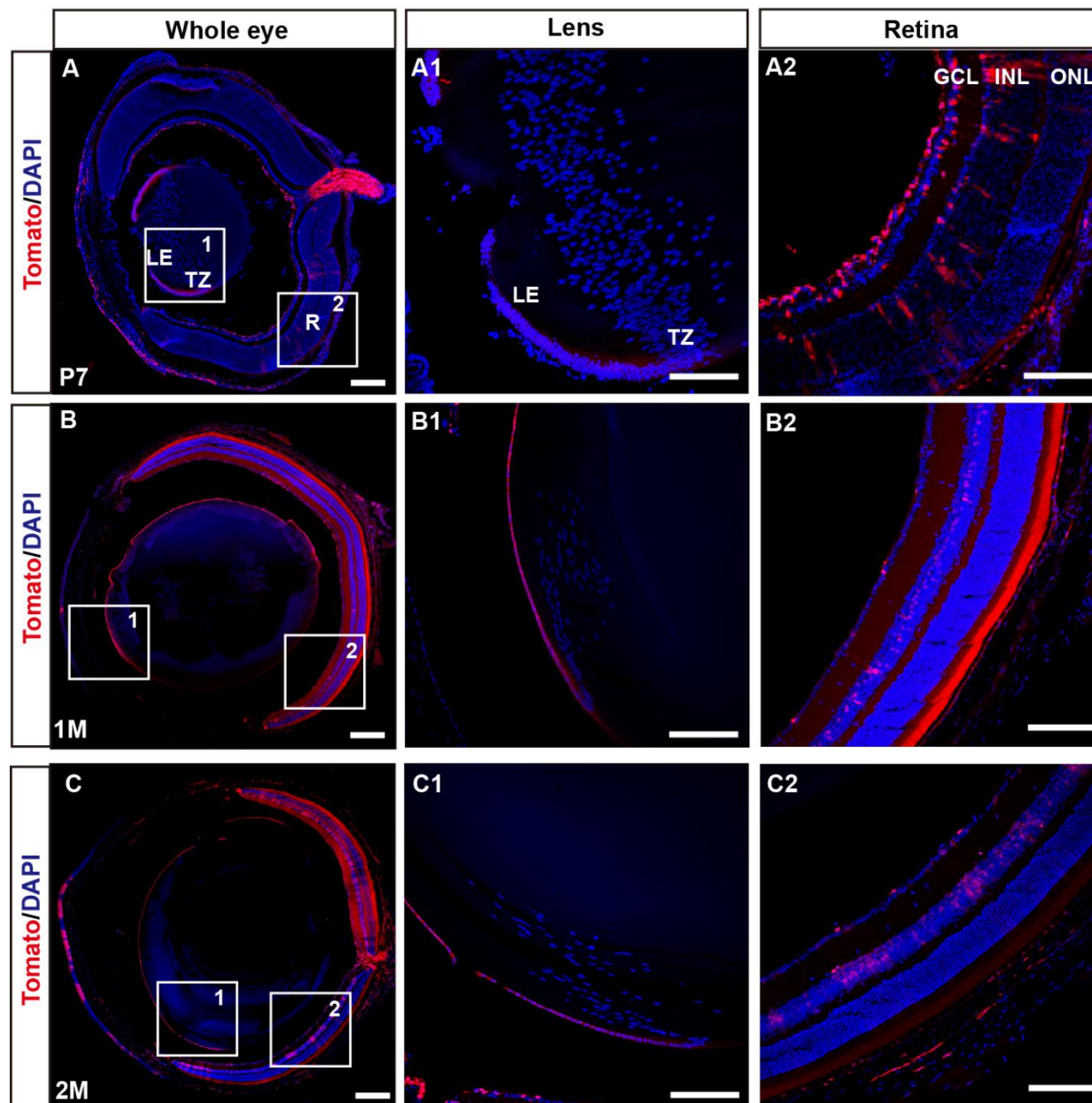
Qing He^{1,2,3#}, Yuhao Gao^{1,2,3#}, Lujun Zhou^{2,3}, Tongxing Wang², Zengqiang Yuan^{2*}

¹State Key Laboratory of Brain and Cognitive Sciences, Institute of Biophysics, Chinese Academy of Sciences, Beijing 100101, China

²The Brain Science Center, Beijing Institute of Basic Medical Sciences, Beijing 100850, China

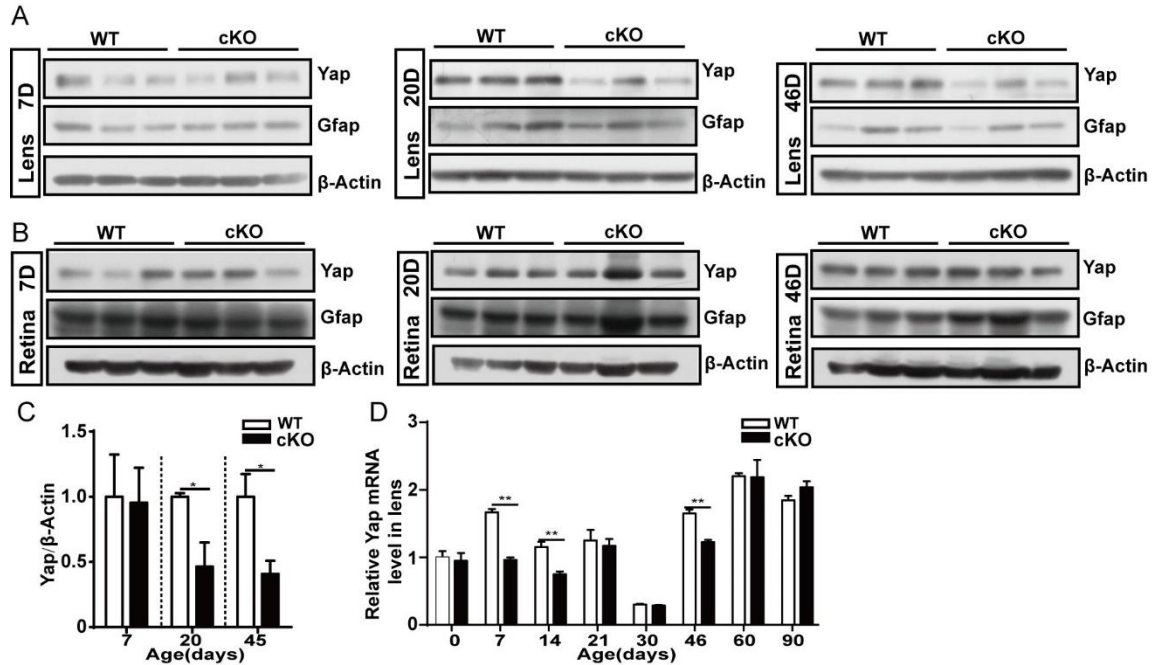
³College of Life Sciences, University of Chinese Academy of Sciences, Beijing 100049, China

SUPPLEMENTARY DATA

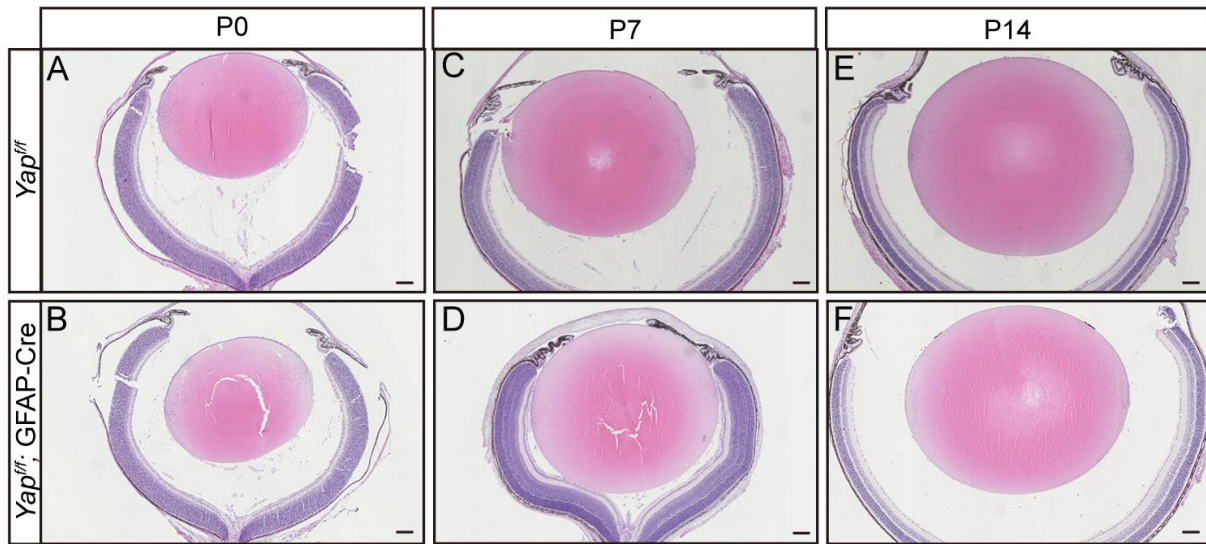


Supplemental Figure 1. Cre recombinase expression in the eyes of *Tomato^{+/+}*; *GFAP-cre* mice at different stages. (A-C) Cre recombinase (red) was expressed in the lens epithelium and INL, GCL of retina on the eye frozen sections of *Tomato^{+/+}*; *GFAP-cre* mice at P7, 1M and 2M. Nuclei were DAPI counterstained (blue). LE, lens epithelium; TZ, transitional zone; ONL, outer nuclear layer; INL, inner nuclear layer; GCL, ganglion cell layer. Scale bars: 100 μ m.

SUPPLEMENTARY DATA

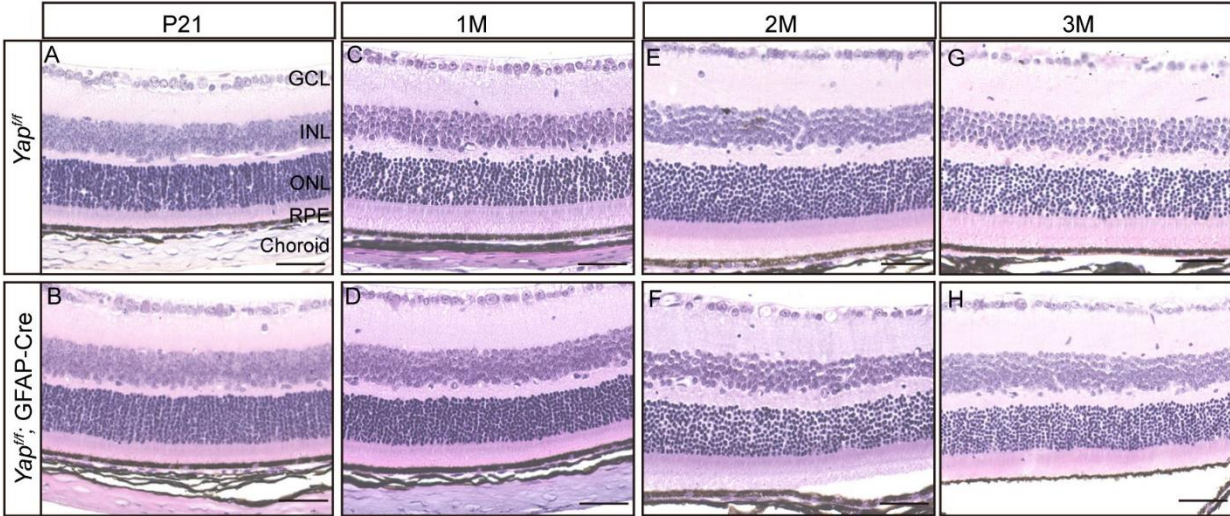


Supplemental Figure 2. The knockout efficiency of lens and retina in Yap-deficient mice at different ages. (A-B) Lens and retina were collected from *Yap^{fl/fl}* and *Yap^{fl/fl}; GFAP-cre* littermate mice at different stages and were subjected to immunoblotting with indicated antibodies. (C) The normalized levels of Yap in lens at different stages based on quantification by using ImageJ software. The data are shown as mean \pm S.E.M. (Student's *t*-test, **P*<0.05, ***P*<0.01, n=3). (D) The Yap mRNA levels in the lens of *Yap^{fl/fl}; GFAP-cre* mice were reduced compared with *Yap^{fl/fl}* mice (Student's *t*-test, **P*<0.05, ***P*<0.01, n=6).

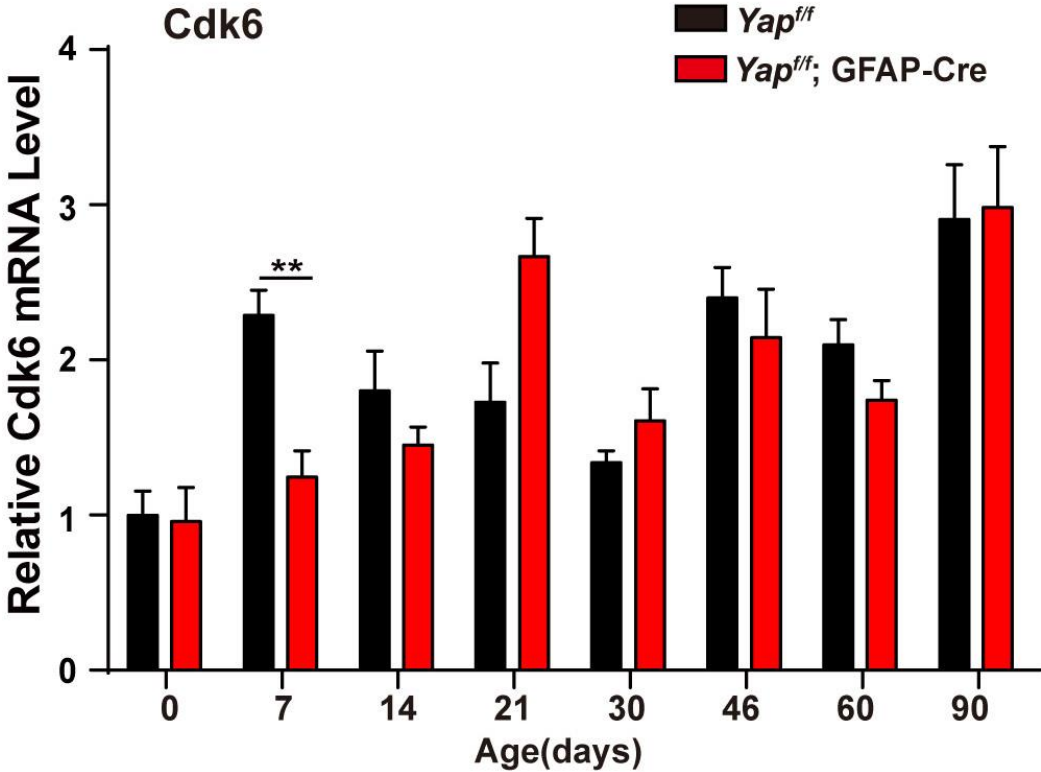


Supplemental Figure 3. Normal structure of lens in Yap-deficient mice at early stages. (A-F) H&E staining of lens from *Yap^{fl/fl}* and *Yap^{fl/fl}; GFAP-cre* mice at P0, P7 and P14.

SUPPLEMENTARY DATA

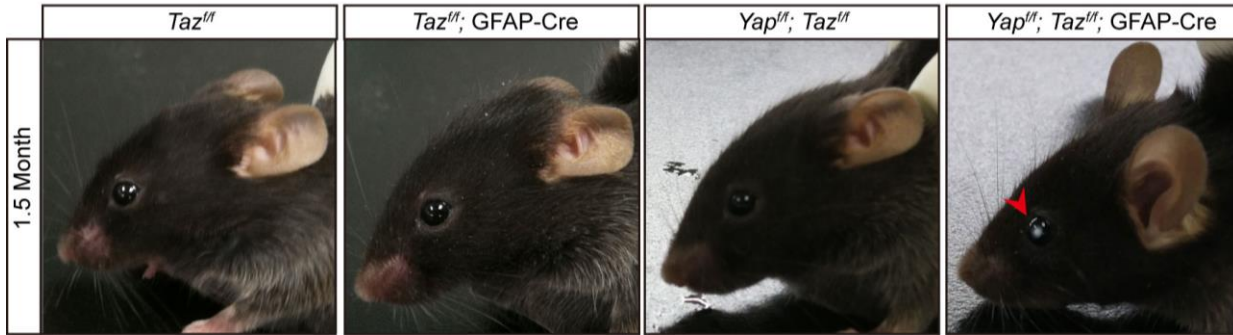


Supplemental Figure 4. Normal structure of retina in Yap-deficient mice at different stages. (A–H) H&E staining of retina from *Yap^{ff}* and *Yap^{ff}; GFAP-Cre* mice at P21, 1M, 2M and 3M. GCL, ganglion cell layer; INL, inner nuclear layer; ONL, outer nuclear layer; RPE, retinal pigment epithelium. Scale bars: 100µm.



Supplemental Figure 5. Relative Cdk6 mRNA level in Yap-deficient mice at different stages. qRT-PCR analysis of relative Cdk6 mRNA level in lens from *Yap^{ff}* and *Yap^{ff}; GFAP-Cre* littermate mice at different stages.

SUPPLEMENTARY DATA



Supplemental Figure 6. Compared to Yap cKO, GFAP-mediated Taz cKO mice have no cataract phenotype at 1.5-month age.