Supplementary figures

Ocular Anterior Segment Dysgenesis upon Ablation of p120 Catenin in Neural Crest Cells

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Supplementary Fig. S1. Defects in the optic nerve of a p120\(^{fl/fl}\);Wnt1Cre mouse at the age of three months, in comparison to the optic nerve of a WT mouse. (A, B) Myelin was visualized using a 1% Luxol® fast blue solution on cross-sections of the optic nerve in WT and p120\(^{fl/fl}\);Wnt1Cre mice. Sections were at approximately 3 mm from where the optic nerve emerges from the posterior eye globe. Counter staining was done with 1% periodic acid, Schiff’s reagent and hematoxylin. The mutant optic nerve showed obvious loss of (blue staining) myelin, in combination with increased nuclear counts. (C, D) GFAP expression was analyzed by immunohistochemistry on consecutive sections. Rabbit anti-GFAP (1/500, Sigma-Aldrich, St. Louis, MO, USA) was used. All nuclei resided in GFAP-positive cytoplasm, indicative of gliosis in mutant eyes. Bars: 50 µm.
**Supplementary Fig. S2.** Defective separation of the cornea from the lens in p120<sup>fl/fl</sup>;Wnt1Cre mice. In comparison with the well defined corneal endothelium of wild type mice at the age of 4 months (A), the lens was hardly separated from the cornea in p120<sup>fl/fl</sup>;Wnt1Cre mice of comparable age (B). Proliferating cells of undetermined origin are present at the site of the cornea’s attachment to the lens (arrow). Bars: 50 µm.
Supplementary Fig. S3. Expression analysis in WT and p120^{0/0};Wnt1Cre mice of key transcription factors involved in ocular anterior segment development. The following factors were detected by immunofluorescence or immunohistochemistry of eyes of E13.5 mouse embryos: (A, B) FoxC1 was normally expressed mainly in the nuclei of ocular mesenchymal cells (Me) in WT and p120^{0/0};Wnt1Cre mice. The antibody used was goat anti-FoxC1 (1/200, Abcam, Cambridge, UK). Comparable results were obtained for goat anti-FoxC2 antibody (1/200, Abcam, Cambridge, UK). (C, D) Pax6 expression was analyzed by immunohistochemistry using rabbit anti-Pax6 (1/100, MBL, Nagoya, Japan). Positive nuclear staining was observed in the epithelial cells of the surface epithelium (SE), lens (L) and retina (R). Bars (A, B): 50 µm. Bars (C, D): 100 µm.