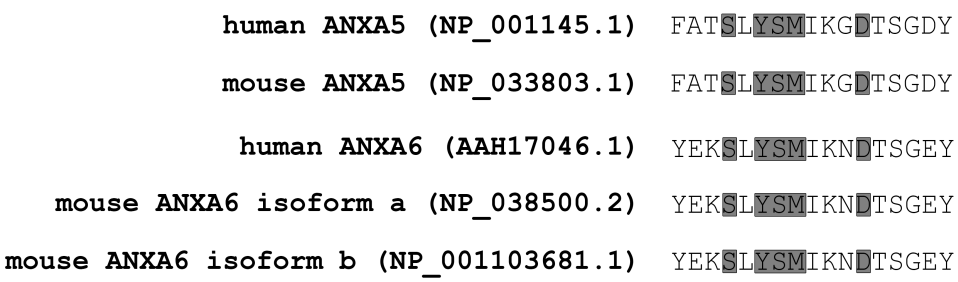

Figure S1. The integrin β5 binding motif in ANXA5 and ANXA6 is conserved between human and mouse. Gray boxes show the published integrin β5 binding motif of ANXA5.

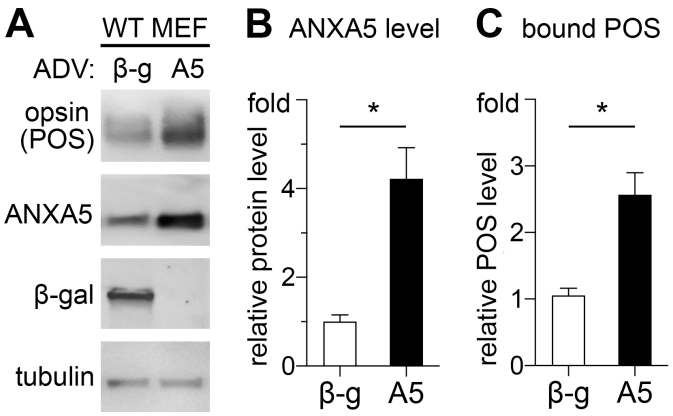

Figure S2. ANXA5 overexpression increases POS binding by WT MEFs. WT MEFs were infected with recombinant adenoviruses encoding β-gal (β-g) or ANXA5 (A5) before challenge with POS at 20°C for 1 h. Whole cell lysate representing equal numbers of cells were analyzed by immunoblotting with antibodies as indicated. **A.** A representative immunoblot shows bound POS-opsin and cellular proteins as indicated. A single blot membrane is shown probed sequentially to detect relevant proteins. **B.** Quantification of ANXA5 of WT MEFs using densitometry of immunoblots as shown in A. ANXA5 levels are normalized to ANXA5 of WT MEFs expressing β-gal, which is set as 1. **C.** Quantification of bound POS of WT MEFs using densitometry of immunoblots as shown in A. Bound POS are normalized to bound POS of WT MEFs expressing β-gal, which is set as 1. Data in B and C are expressed as mean ± s.d.; n = 6 independent experiments with duplicate samples each.

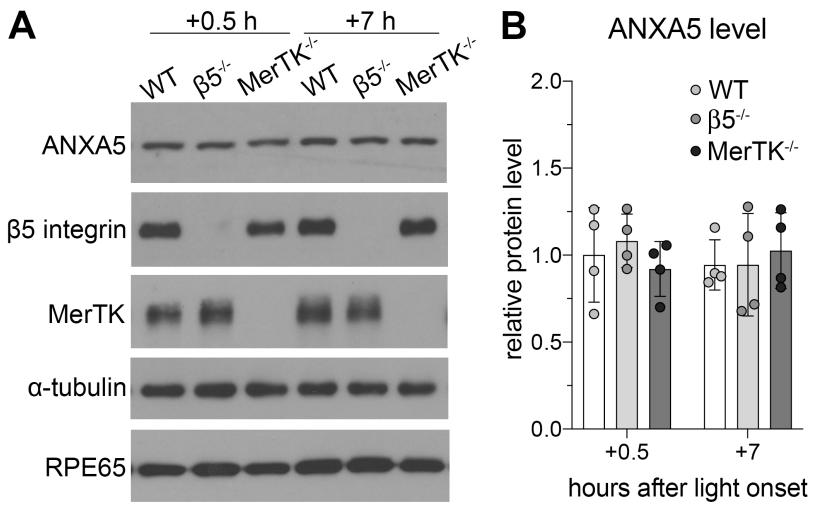

Figure S3. ANXA5 protein levels are the same in RPE/choroid tissues of WT, β5$^{-/-}$ and MerTK$^{-/-}$ mice. A. Representative immunoblots showing ANXA5 and marker proteins as indicated in RPE/choroid tissues from WT, β5$^{-/-}$ and MerTK$^{-/-}$ mice. Mice were sacrificed at 0.5 h or 7 h after light onset as indicated. **B.** Comparison of ANXA5 protein levels relative to the RPE specific marker RPE65. ANXA5 content of WT mice at 0.5 h after light onset was set as 1. Data are expressed as mean ± s.d.; eyes from 4 mice per time point per group.

Table S1. Primary antibodies used in this study. Abbreviations:

IB: immunoblotting; IF: immunofluorescence.

	Company	Catalog #	Dilution
rhodopsin (clone B630)	N/A	N/A	IB: 1:1000; IF: 1:100
annexin A5	Hyphen Biomed	PA120A	IB: 1:500; IF: 1:100
β-galactosidase	Abcam	ab4761	IB: 1:2000
annexin A2	BD Transduction	610068	IB: 1:10000
αv integrin	BD Transduction	611013	IB: 1:500
β-catenin	BD Transduction	610154	IF: 1:200
β-actin	Millipore-Sigma	M4758	IB: 1:2000
annexin A6	Santa Cruz	sc-1931	IB: 1:500
β5 integrin (H-96)	Santa Cruz	sc-14010	IB: 1:400
GFP	Santa Cruz	sc-9996	IB: 1:2000; IF: 1:100
αvβ5 integrin (clone P1F6)	BioLegend	MMS-474R	live IF: 1:50
RPE65	Genetex	GTX103472	IB: 1:3000
α-tubulin	Abcam	ab7291	IB: 1:3000
zap70	Cell Signaling	99F2	IB: 1:500

Table S2. Primers used to generate ANXA5 mutants.

ID	Sequence
A5-FL	forward: GCAGCGATCGCCATGGCTACGAGAGGCAC
	reverse: ATTACGCGTGTCATCCTCGCCCCCGCA
A5-nd20	forward: ATT GCGATCGCATG CTTCGGAAGGCCATGAAAG
	reverse: ATT ACGCGT GTCATCCTCGCCCCCGCA
A5-cd67	forward: GCAGCGATCGCCATGGCTACGAGAGGCAC
	reverse: GCAACGCGTGGTCTCTGCAAGGTAGGC
A5-cd20	forward: GCAGCGATCGCCATGGCTACGAGAGGCAC
	reverse: GCAACGCGTCTTGATCATAGAGTACAGGGAGGTGG