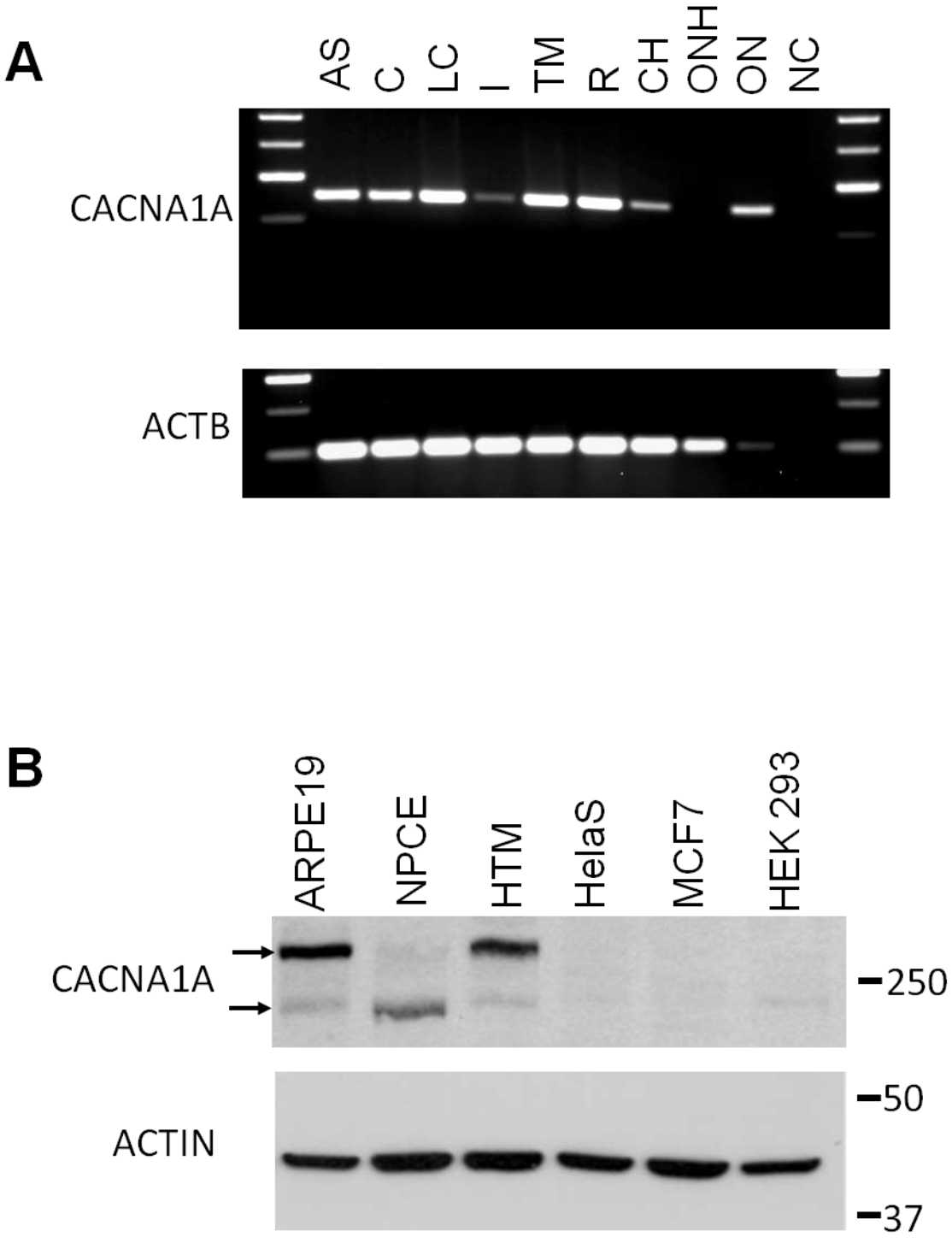
Supplementary Figure 10

Analysis of *CACNA1A* expression in human ocular tissues:

Panel A) The *CACNA1A* specific 250bp RT-PCR product was seen in anterior sclera (AS), cornea (C), lens capsule (LC), iris (I), trabecular meshwork (TM), retina and retinal pigment epithelium (R), choroid (CH) and the optic nerve (ON). RT-PCR product was not observed for the optic nerve head (ONH). The amplification product shown was from a PCR that used CACNA1A primers **F4** 5'-CAGAGCAAGGCCAAGAAGC-3' and **R4** 5'-CTTGTTCCGGACTCCATGTG-3'. The ubiquitously expressed gene, *ACTB* was used as the normalizing control. A no template sample acted as the negative control (NC) to ensure non-contamination of the RT-PCR reaction mix. M denotes molecular-weight marker.

Panel B) Whole cell lysates from ARPE19, NPCE, HTM, HelaS, MCF7, and HEK293 were analyzed for CACNA1A expression. Two CACNA1A protein bands ~275kDa and ~250kDa were observed (arrows), which likely correspond to the 2506 and 2261 amino acid isoforms, $Ca_V2.1\_V2$ and $Ca_V2.1\_V1$ (NCBI Reference Sequences: NP_001120694.1 and NP_001120693.1). Human ocular tissue derived cell lines (ARPE19, NPCE, and HTM(displayed a higher CACNA1A expression levels when compared against the non-ocular derived cell lines (HelaS, MCF7 and HEK293). Amongst the ocular cell lines, ARPE19 and HTM cells expressed higher levels of the larger 275kDa protein while NPCE cell line expressed higher level of the smaller 250kDa protein.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CACNA1A
250
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37