

**Supplement Figure 1:** **A.** Double IHC for vimentin (green) and SMA (red) in an unwounded control cornea shows that no SMA+ cells were detected. Normal keratocytes that occupy the stroma are either weakly vimentin+ or vimentin-, except immediately posterior to the EBM (arrows) or immediately anterior to DBM (arrowheads) where keratocytes tend to be strongly vimentin+. Mag. 100X **B.** The distribution of vimentin+ cells in the unwounded cornea is seen more clearly when only the vimentin+ staining is shown (same section as **A** with arrows and arrowheads in the same position). Mag. 100X. **C.** A no vimentin or SMA primary antibody control IHC staining of a cornea that had removal of the Descemet's membrane-endothelial complex shows no non-specific staining. Mag 100X

**Supplement Figure 2:** Greater magnification Fig 2 F and G to allow SMA+ CD45+ cells to be clearly seen. **F.** Double IHC for CD45 and SMA showed that many of the cells in the keratocan-SMA- cell band anterior to the fibrosis zone were CD45+ (arrows). In addition, some of the SMA+ cells within the fibrosis were CD45+ (arrowheads). Mag. 200X **G.** The distribution of CD45+ cells in the keratocan- SMA- cell band and within the fibrosis zone is seen more clearly when only the CD45+ staining is shown (same section as **F**). Mag. 200X.