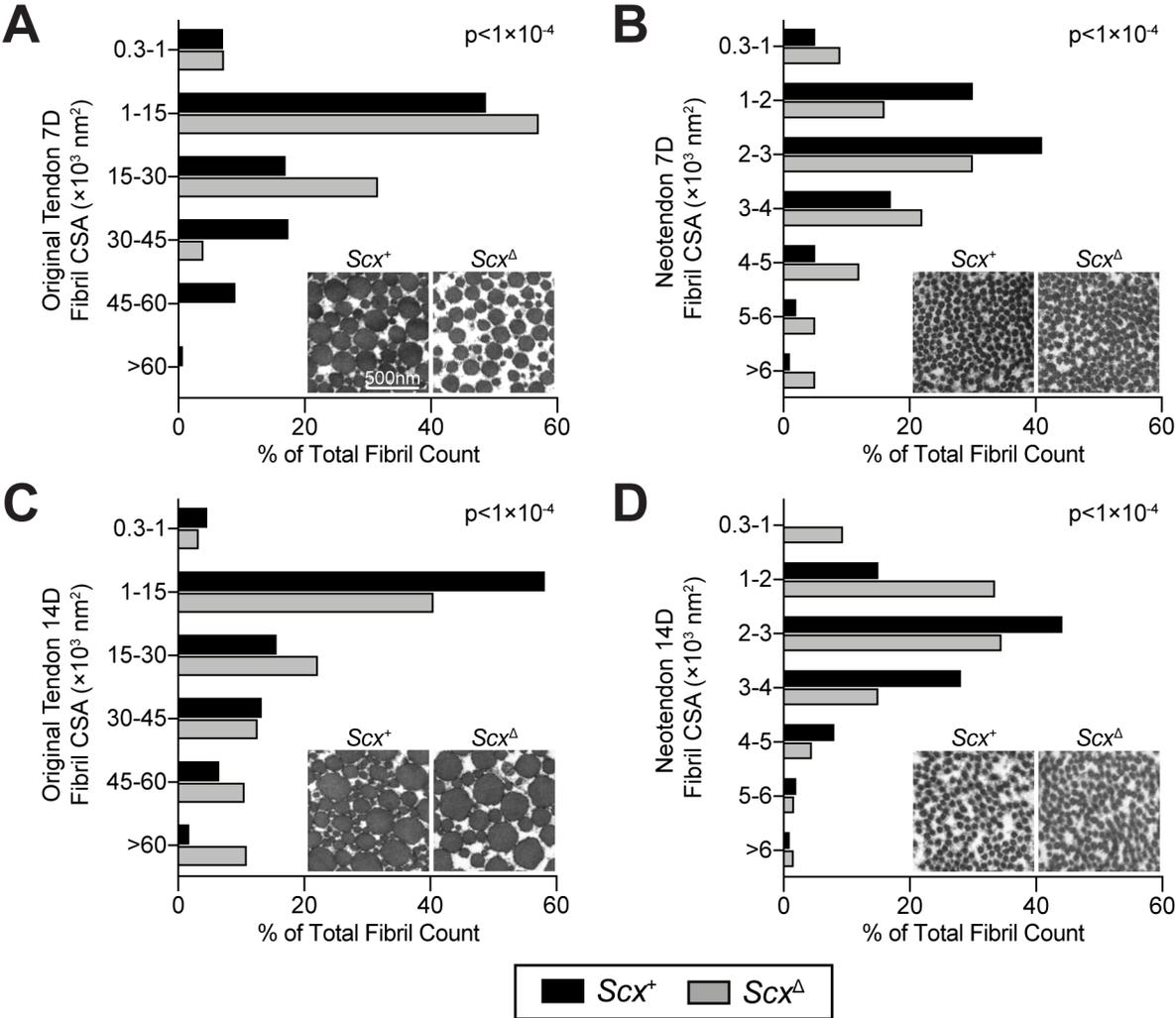
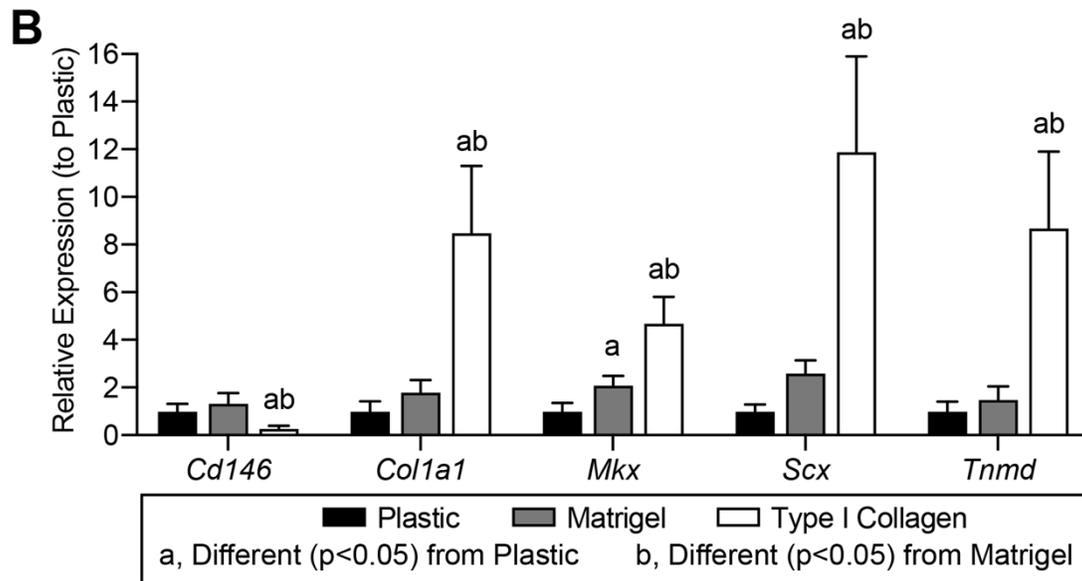
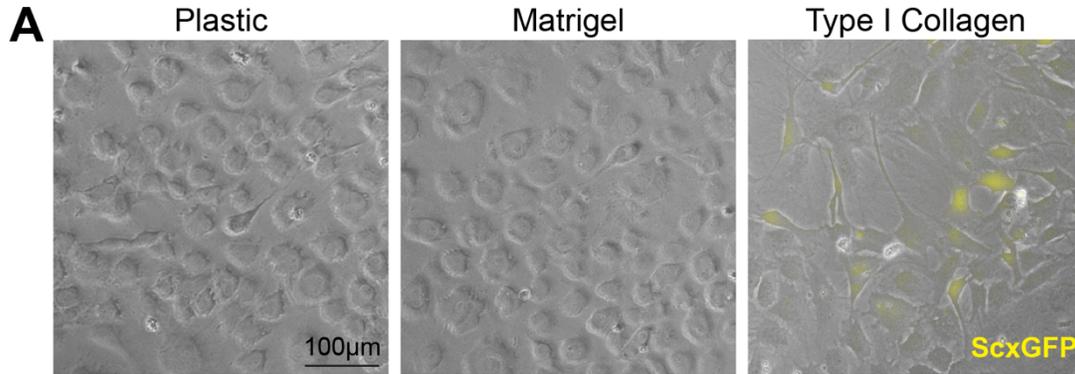


Supplemental Material



Supplemental Figure 1. Effect of scleraxis deletion on tendon collagen fibril size distributions. Quantification of collagen fibril cross-sectional area (CSA) measurements, from transmission electron micrographs of Scx^+ and Scx^Δ (A, C) original tendons or (B, D) neotendons at either (A, B) 7D or (C, D) 14D after synergist ablation/plantar growth procedure. Fibril counts are expressed as percentage of total fibril abundance. Scale bar for all images is 500nm. Differences between the distribution of Scx^+ and Scx^Δ fibrils for each time point and tendon area were tested using the Chi-squared test ($p < 0.05$). $N \geq 2$ mice per group.



Supplemental Figure 2. Effect of matrix substrate on pericyte differentiation. (A) $CD146^+$ pericytes from *ScxGFP* mice were cultured on plastic, or on thin gels of Matrigel or type I collagen, for 5 days. Fluorescent images demonstrate GFP expression (driven by scleraxis, shown in yellow), with phase contrast overlay. Scale bar for all images is $100\mu\text{m}$. (B) Gene expression of pericytes placed on different culture substrates for 5 days. Values are mean \pm SD. Differences between groups were tested using a two-way ANOVA: a, significantly different ($p < 0.05$) from Plastic; b, significantly different ($p < 0.05$) from Matrigel. N=6 replicates per group.