



**Supplementary Figure 1. Effect of exogenous SEMA3A on expression of  $\alpha$ -SMA in cultured cat corneal fibroblasts.** Representative Western blot showing protein levels for  $\alpha$ -SMA in cells treated with different doses of recombinant human SEMA3A.  $\beta$ -tubulin was used as a loading control. Corneal fibroblasts were seeded at a density of  $8 \times 10^4$  cells/well in 6-well plates containing DMEM/F12 + 15% serum (5% FBS + 10% NBCS). After attachment, the medium was changed to one containing DMEM/F12 + 0.5% serum (0.25% FBS + 0.25% NBCS) for 1 day, at which point cells were pretreated with 0, 10, 100 and 500 ng/ml of recombinant SEMA3A (R&D Systems Inc.) for 30 min, followed by addition of 0 or 1 ng/ml recombinant human TGF- $\beta$ 1 (R&D Systems Inc.), and further incubation for 3 days. The addition of recombinant SEMA3A failed to increase expression of  $\alpha$ -SMA on its own. This required addition of 1 ng/ml TGF- $\beta$ 1. However, adding 1 ng/ml TGF- $\beta$ 1 to 10 ng/ml SEMA3A was not sufficient to increase  $\alpha$ -SMA expression above levels obtained with TGF- $\beta$ 1 alone. This required using a higher dose of SEMA3A. Given the efficacy of 100 ng/ml (see Figure 3), this concentration was then used for all experiments performed in the present study.