

Figure S1. POSTN is upregulated in KFs. Immunofluorescence staining showing protein expression of POSTN in KFs and NFs. Scale bar: 50  $\mu$ m. Red arrows indicate the positive staining cells. KFs, keloid fibroblasts; NFs, normal fibroblasts; POSTN, periostin.

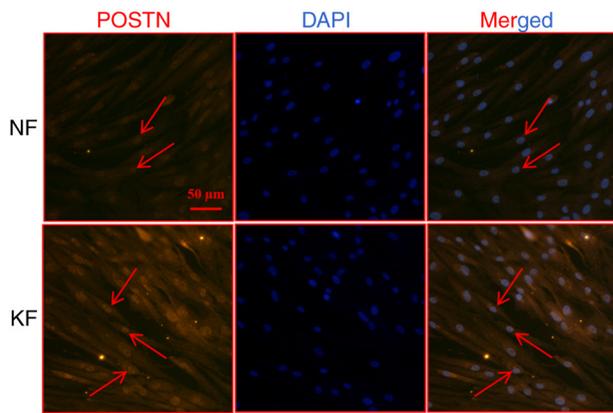


Figure S2. Volcano plot showing transcriptome difference between si-POSTN- and si-CTL-transfected keloid fibroblasts. POSTN, periostin; si, small interfering.

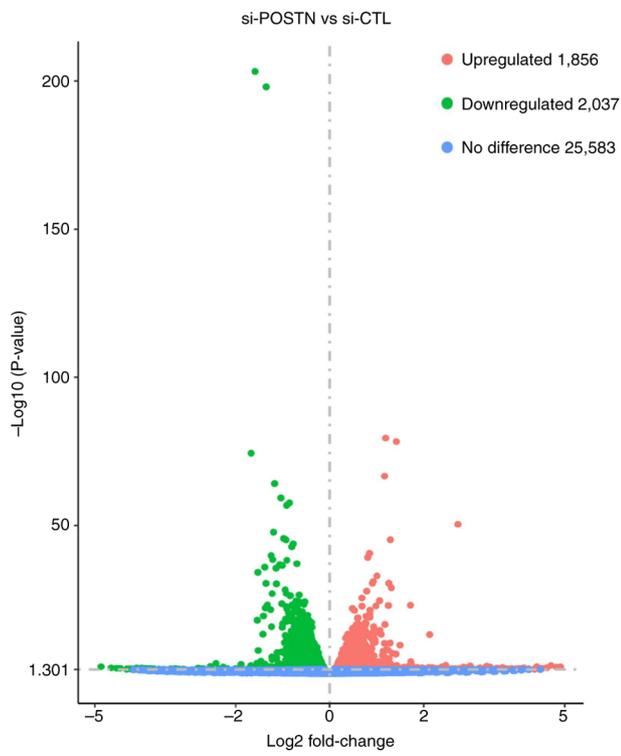


Figure S3. Critical pathways associated with periostin in keloid fibroblasts were explored by gene set enrichment analysis.

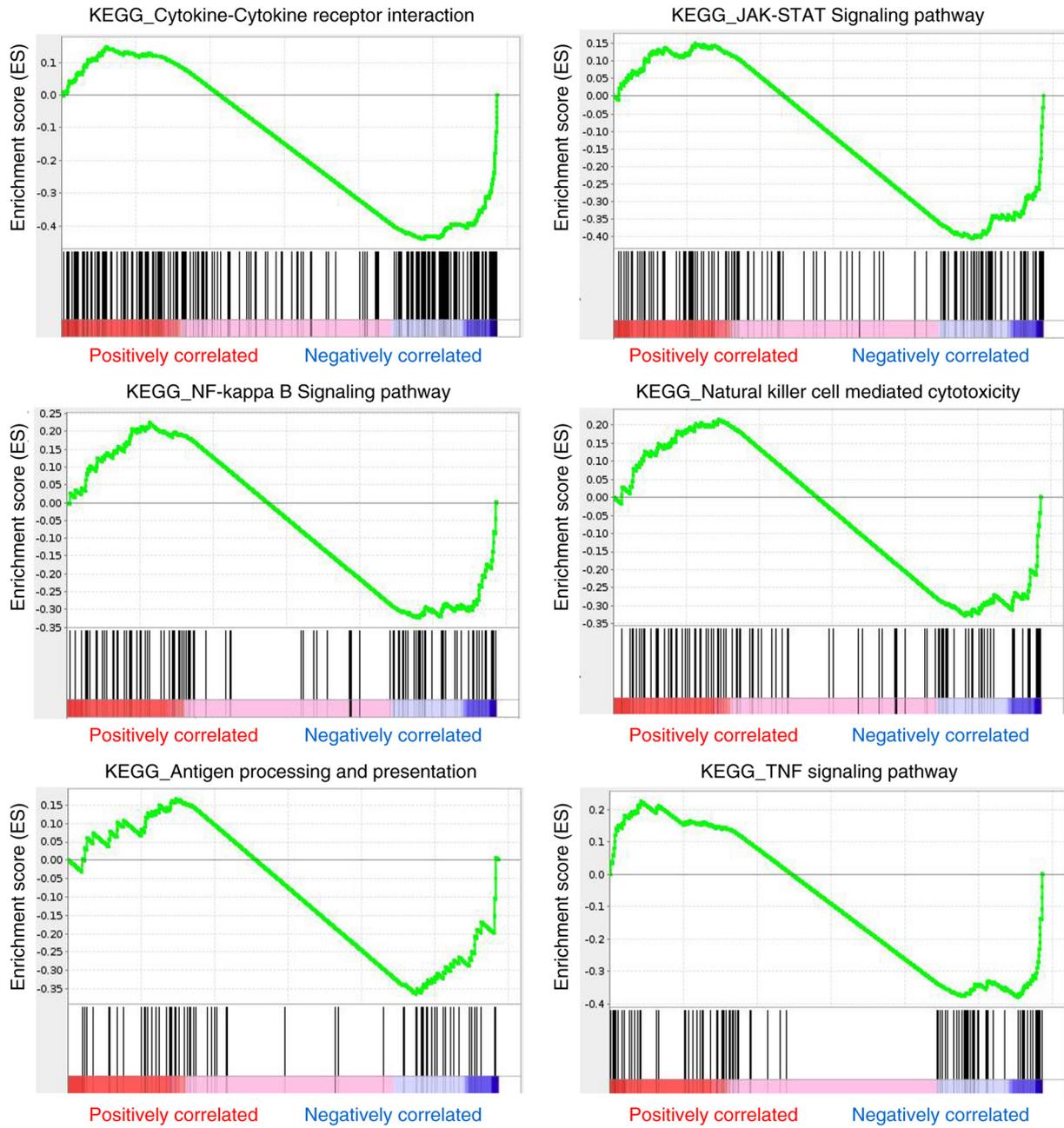


Figure S4. Expression of IL-4R is positively associated with POSTN in KFs and NFs. (A) Protein expression levels of POSTN and IL-4R in KFs and NFs (n=3/group). (B) Reverse transcription-quantitative PCR and western blotting were used to confirm the efficient silencing of IL-4R in KFs (n=4/group). Data are presented as the mean  $\pm$  SEM. \*\*\*P<0.001. IL-4R, IL-4 receptor; KFs, keloid fibroblasts; NFs, normal fibroblasts; POSTN, periostin; si, small interfering.

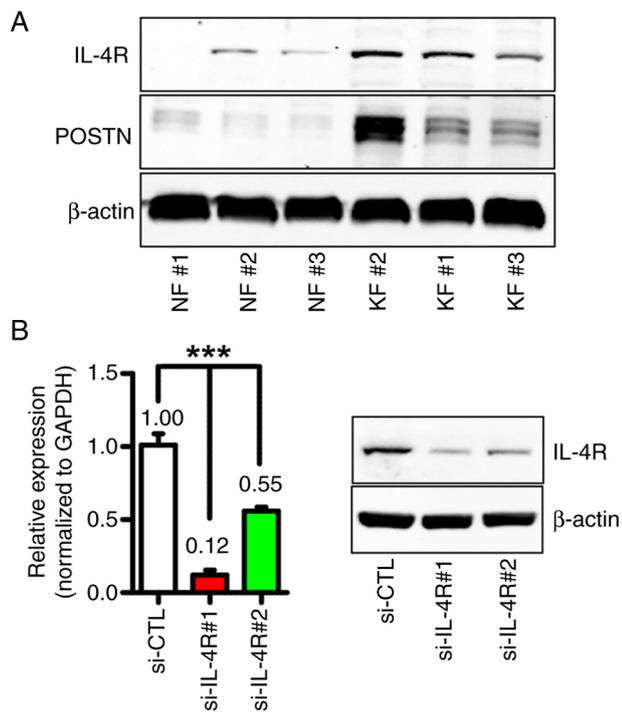


Figure S5. Knockdown of POSTN decreases the expression of genes associated with extracellular matrix organization in KFs. (A) Heatmap showing DEGs related to extracellular matrix organization in si-POSTN and si-CTL KFs. Three independent RNA-sequencing experiments are shown in each group. (B) Reverse transcription-quantitative PCR analysis was performed to validate the DEGs related to extracellular matrix organization in si-POSTN and si-CTL transfected KFs (n=3). Data are presented as the mean  $\pm$  SEM. \*\*P<0.01, \*P<0.05. DEGs, differentially expressed genes; KFs, keloid fibroblasts; POSTN, periostin; si, small interfering.

