

# **IL-1 $\beta$ increases asporin expression via the NF- $\kappa$ B p65 pathway in nucleus pulposus cells during intervertebral disc degeneration**

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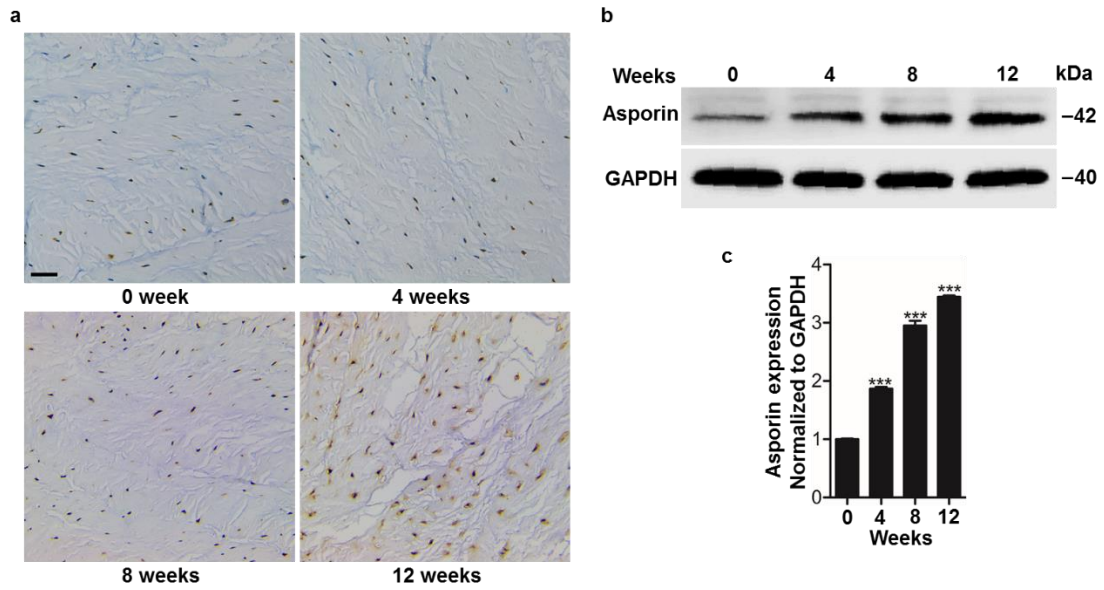
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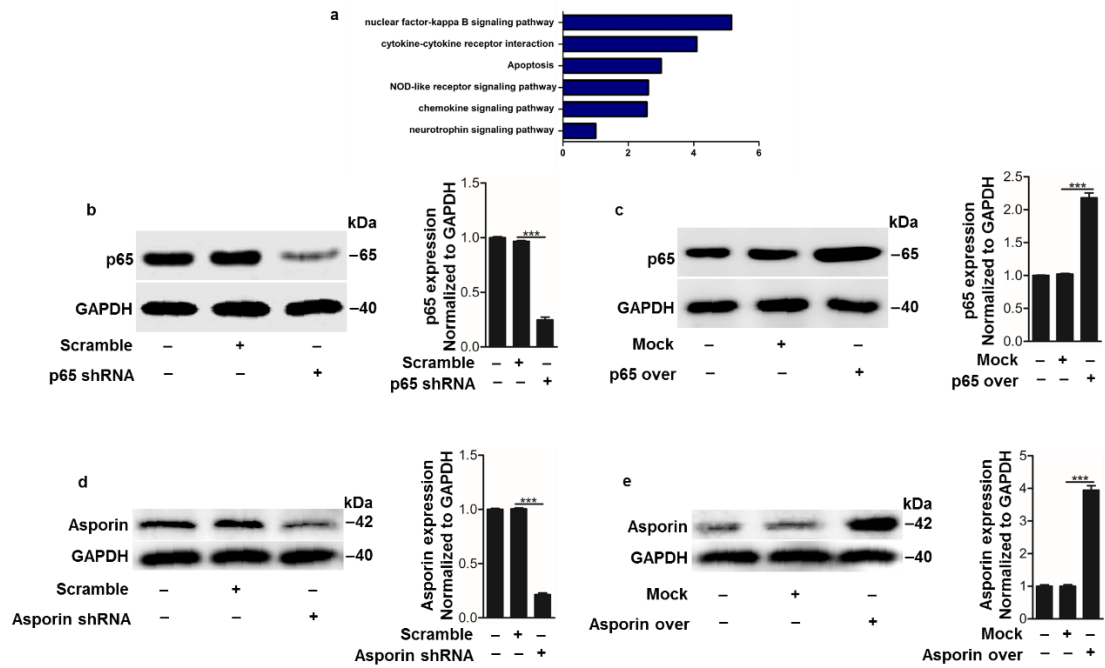
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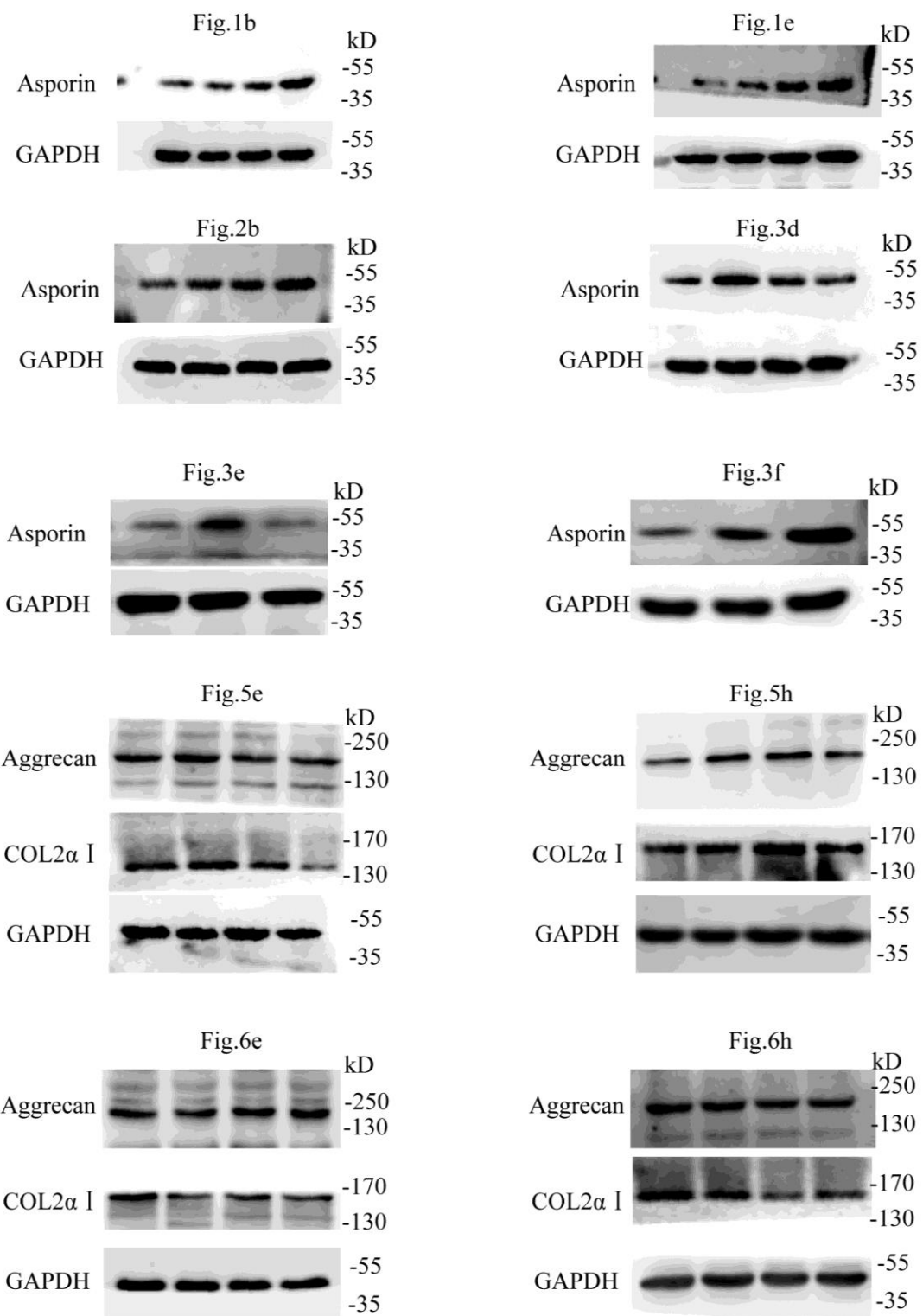
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**Supplementary figure 1. Needle puncture injury induced time-dependent expression of asporin in the annulus fibrosus and cartilage endplate.** (a) Immunohistochemical staining of asporin in rabbit annulus fibrosus after 0, 4, 8 and 12 weeks of needle puncture injury. Scale bars represent 10  $\mu\text{m}$ . (b & c) Western blot analysis of asporin in rabbit cartilage endplate after 0, 4, 8 and 12 weeks of needle puncture injury. \*\*\* $P < 0.001$ ,  $P$ -values were analyzed by one-way ANOVA.



**Supplementary figure 2.** (a) The comparison of genes expression between degenerated discs and non-degenerated discs. (b) p65 expression in nucleus pulposus in the presence or absence of p65 shRNA. (c) p65 expression in nucleus pulposus after transfected with or without p65 overexpression plasmid. (d) Asporin expression in nucleus pulposus in the presence or absence of asporin shRNA. (e) Asporin expression in nucleus pulposus after transfected with or without asporin overexpression plasmid. \*\*\* $P < 0.001$ ,  $P$ -values were analyzed by one-way ANOVA.



**Supplementary figure 3. Original immunoblots for indicated figures.**