**Parathyroid hormone-related protein Activates HSCs during Liver Fibrosis Development by Hedgehog signaling**

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**Supplementary Fig. S1. N-terminal PTHrP were detected in different species hepatocytes. (A)** The viability and purity of rat hepatocytes and mouse HSCs. **(B)** Western blots were used to determine the expression levels of PTHrP in hepatocytes. **(C)** AML12 and LO2 cells were transuded with a LV-NC or LV-PTHrP, and then Quantitative RT-PCR was used to determine the mRNA levels of PTHrP**.** The relative mRNA levels are expressed as fold induction over the level in the vehicle-treated group after normalization to GAPDH. Data was mean ± SD folds over the control. \*p < 0.05; \*\*p < 0.01.

**Supplementary Fig. S2.** **PTHrP(1-36) could not induce PKA activation.** (A) Immunoblotting showed that the PTHrP(1-36) do not enhanced the expression of PKA C-α and PKA RI-α/β. (B) Immunoblotting for phosphorylated CREB (Ser133) showed that PTHrP(1-36) do not promote phosphorylated CREB. The relative protein levels are normalized respectively by GAPDH and CREB. Data was mean ± SD folds over the control. \*P < 0.05; \*\*P< 0.01.

**Supplementary Fig.S1**



**Supplementary Fig.S2**

