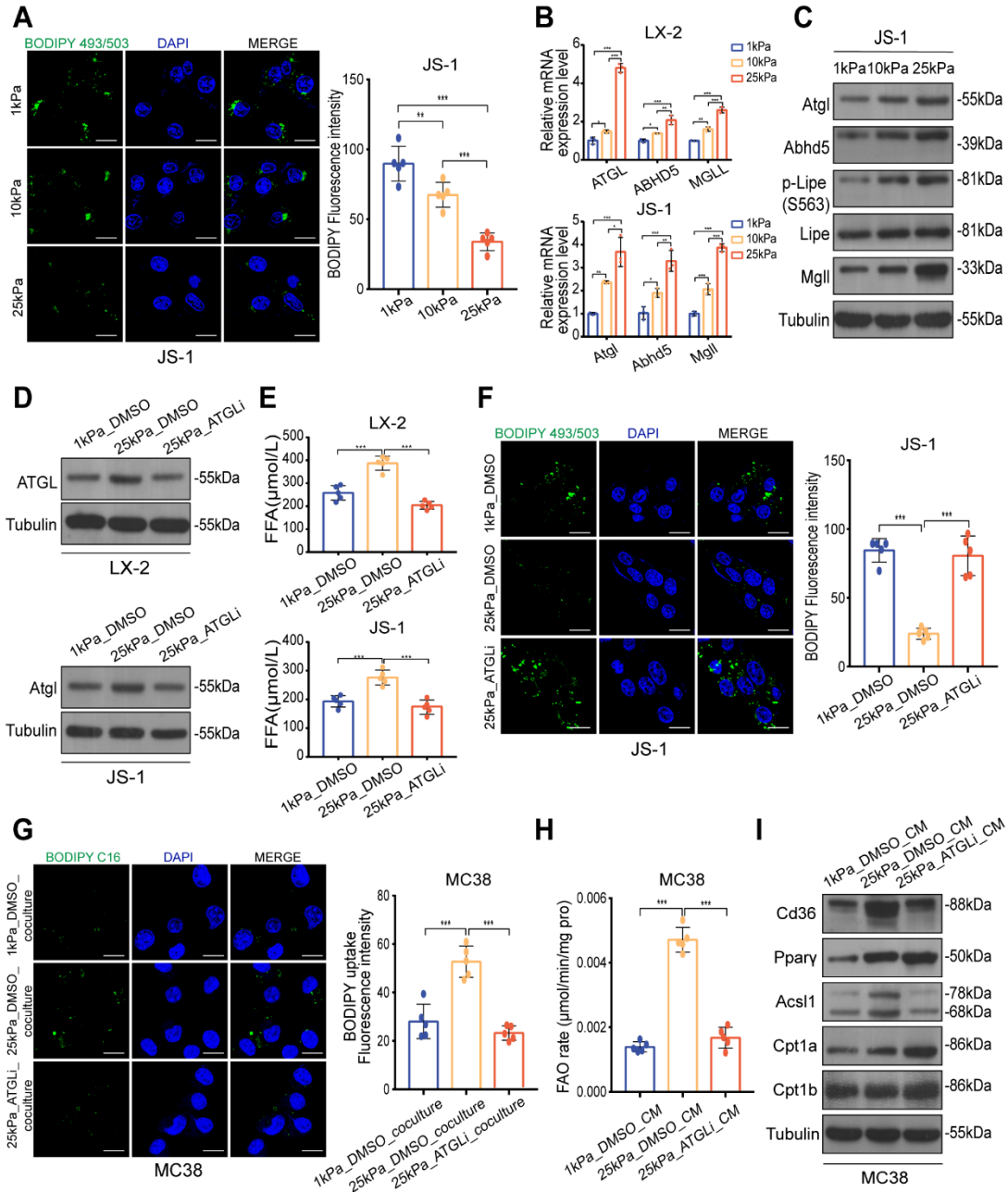


Supplementary Fig. S5



**Supplementary Figure. S5 Matrix stiffness activates lipolysis in HSCs.** (A) Representative images (left) and quantification (right) of lipid level in JS-1 cells cultured on 1kPa, 10kPa and 25kPa polyacrylamide hydrogels. Scale bar: 5 $\mu\text{m}$  (one-way ANOVA,  $n=5$  independent experiments). (B) Relative mRNA levels of lipolysis related genes in LX-2 (upper) and JS-1 cells (lower) cultured on 1kPa, 10kPa and 25kPa polyacrylamide hydrogels (one-way ANOVA,  $n=5$  independent experiments). (C) Protein levels of lipolysis related genes in cultured on 1kPa, 10kPa and 25kPa polyacrylamide hydrogels. (D) Protein levels of ATGL in LX-2 (upper) and JS-1 cells (lower) on indicated stiffness after treated with DMSO or 10 $\mu\text{M}$  atglitatin (ATGLi) for 24 h. (E) FFA content in supernatant from LX-2 (upper) and JS-1 cells (lower) on indicated stiffness after treated with DMSO or 10 $\mu\text{M}$  atglitatin (ATGLi) for 24 h (one-way ANOVA,

n=5 independent experiments). **(F)** Representative images (left) and quantification (right) of lipid level in JS-1 cells cultured on indicated stiffness after treated with DMSO or 10 $\mu$ M atglistatin (ATGLi) for 24 h. Scale bar: 5 $\mu$ m (one-way ANOVA, n=5 independent experiments). **(G)** Representative images (left) and quantification (right) of labelled lipids in MC38 cells after co-culturing with JS-1 cells with indicated treatment. Scale bar: 5 $\mu$ m (one-way ANOVA, n=5 independent experiments). **(H)** Fatty acid oxidation rate of MC38 cells treated with indicated conditioned medium from JS-1 cells (one-way ANOVA, n=5 independent experiments). **(I)** Protein levels of Cd36, Ppar $\gamma$ , Acs11, Cpt1a and Cpt1b in MC38 cells treated with indicated conditioned medium from JS-1 cells. Data are graphed as the mean  $\pm$  SD. \* $P$  < 0.05; \*\* $P$  < 0.01; \*\*\* $P$  < 0.001.