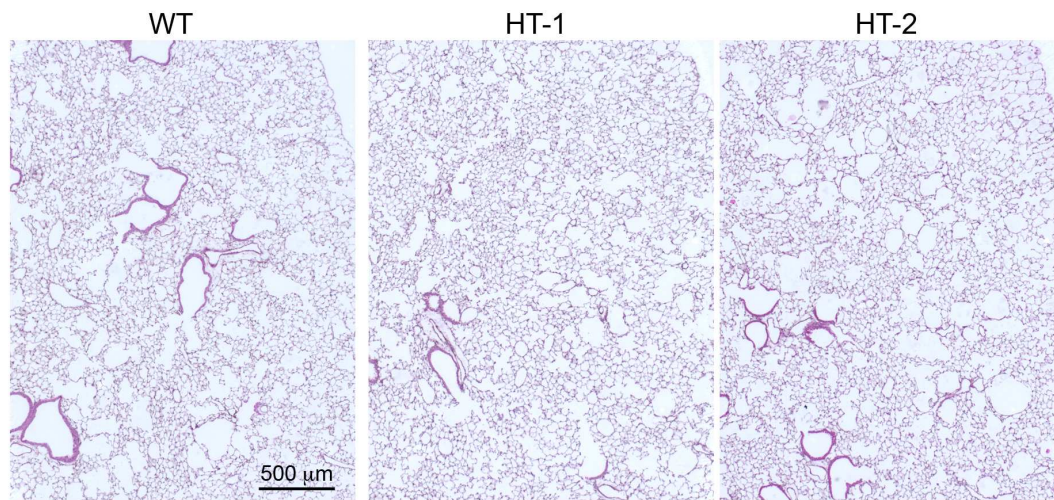
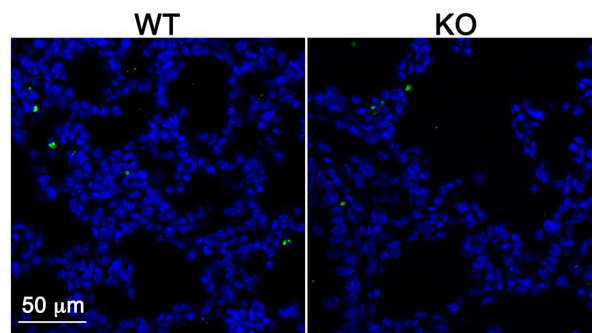


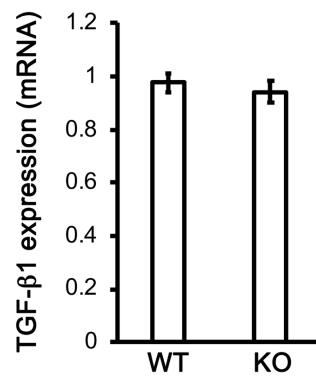
Supplementary figure 1. The heart and lung histology of died P14 *Flcn* knockout mice. The tissues were obtained by autopsy, and the sections were stained with H&E. In heart, the area with degenerated cardiomyocytes (arrow) is highlighted. In lung, alveolar edema was pointed with arrowheads.



Supplementary figure 2. Histological comparison between wild type (WT) and *Fln* heterozygous knockout (HT) lungs at 4 months of age. No significant difference was observed.



Supplementary figure 3. Immunofluorescence staining of active caspase 3. There was no increase of active caspase 3-positive cells (green) in *Fln* knockout (KO) lungs at P10 compared to wild type (WT) littermate controls.



Supplementary figure 4. TGF-β1 mRNA expression in P10 lung tissues was measured by real time PCR, shown as arbitrary unit (mean \pm s.d., n=3 per genotype). WT: wild type lung tissues, KO: *Fln* knockout lung tissues by Dermo1-Cre driver.

Supplementary Table 1: The calculated ratios of normalized *Fln* KO band intensities to *Fln* WT band intensities as detected by western blot in Fig.6.

	P10	P28
pS6	2.86 ± 0.85 (p=0.045)*	0.56 ± 0.08 (p=0.008)*
S6	1.08 ± 0.09 (p=0.183)	0.94 ± 0.11 (p=0.243)
pAMPK	2.56 ± 0.65 (p=0.038)*	0.54 ± 0.09 (p=0.009)*
AMPK	1.04 ± 0.02 (p=0.064)	1.24 ± 0.16 (p=0.079)
pERK1/2	3.15 ± 1.00 (p=0.047)*	0.22 ± 0.10 (p=0.004)*
ERK1/2	0.99 ± 0.33 (p=0.478)	0.84 ± 0.10 (p=0.077)
Active β-Catenin	0.56 ± 0.05 (p=0.003)*	0.19 ± 0.25 (p=0.023)*
Total β -Catenin	1.28 ± 0.13 (p=0.069)	0.54 ± 0.10 (p=0.013)*

Three independent pairs of samples were analyzed. Actb1 intensity of each sample was used for loading normalization. *p<0.05