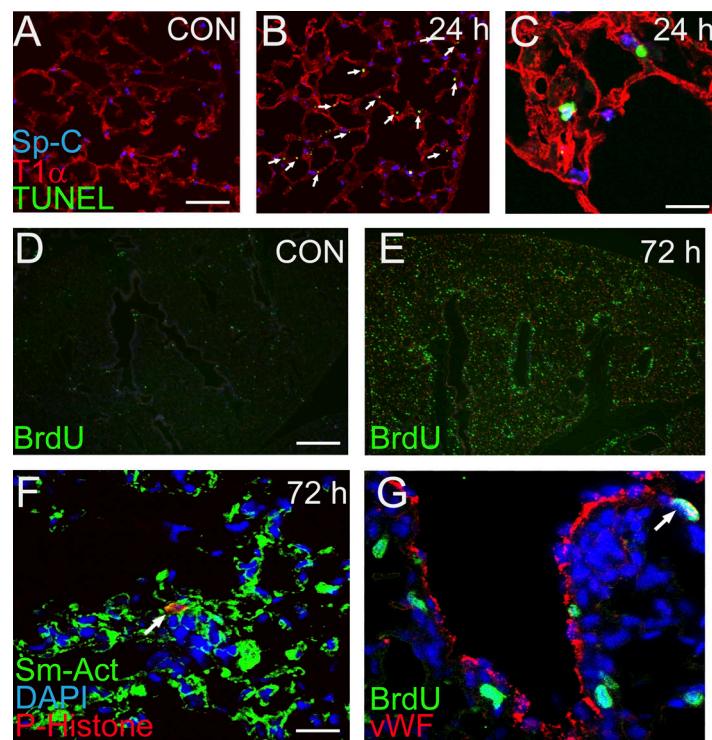
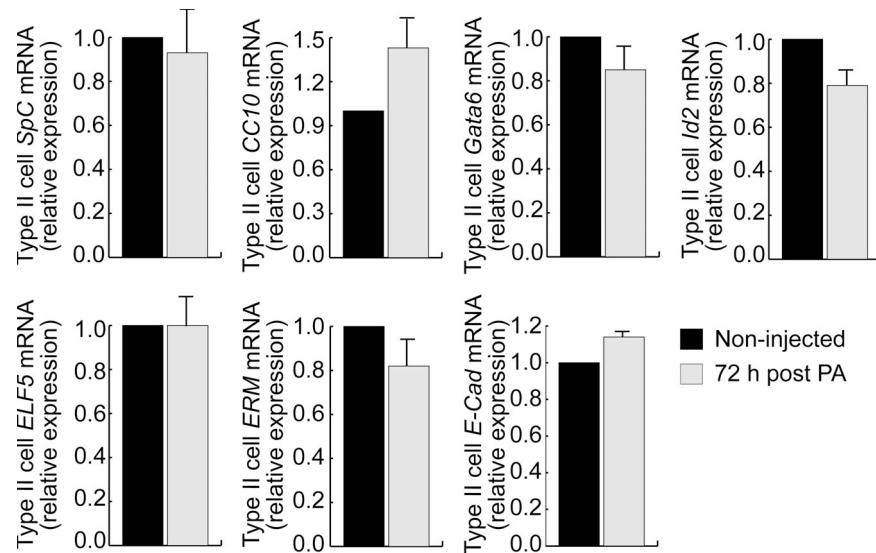


## SUPPLEMENTAL MATERIAL

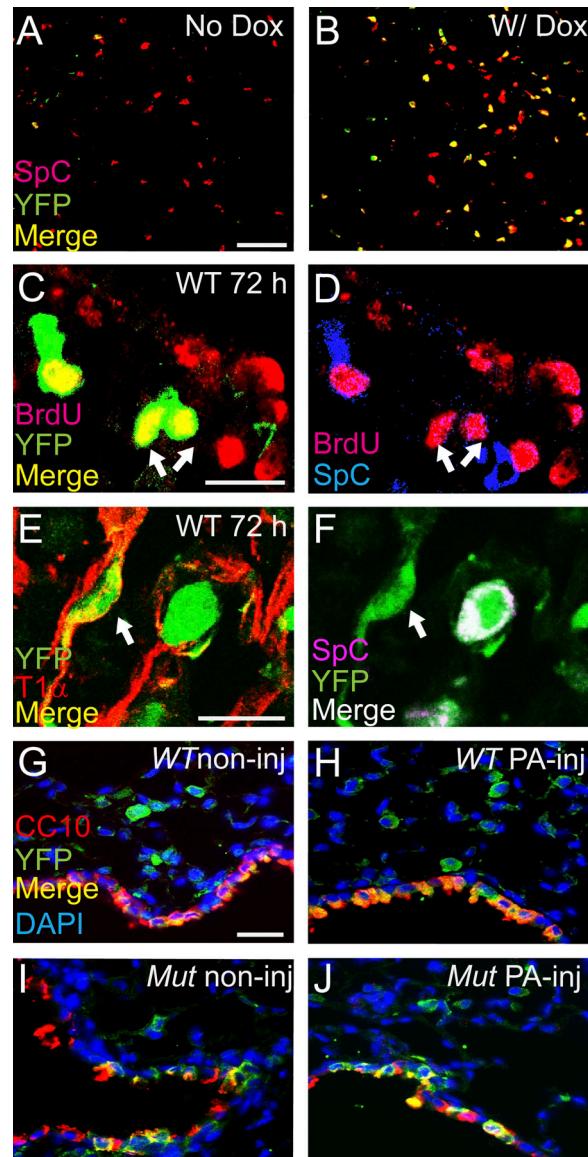
Liu et al., <http://www.jem.org/cgi/content/full/jem.20102041/DC1>



**Figure S1. Additional analysis of PA lung injury model in mice.** (A–C) TUNEL assay was used to identify the alveolar cell apoptosis in a PA-injured lung. TUNEL assay was performed in a frozen lung section of control (CON; A) and 24 h after PA challenge (B and C), and the lung sections were further stained with antibodies to type I cell marker T1 $\alpha$  and type II cell marker Sp-C. Arrows denote TUNEL-positive cells. (C) Higher magnification picture of B. (D and E) BrdU labeling of control lung (D) and lung 72 h after PA injection (E) to identify BrdU-positive proliferating cells. (F) Proliferating interstitial cells as labeled by antibodies to phospho-histone H3 (P-Histone) and smooth muscle actin (Sm-Act). (G) Proliferating endothelial cells as labeled by BrdU and endothelial marker von Willebrand factor (vWF). Results are representative of more than three independent observations. Bars: (A and B) 50  $\mu$ m; (D and E) 100  $\mu$ m; (C, F, and G) 20  $\mu$ m.



**Figure S2. Gene expression in type II cells isolated from PA-challenged lungs.** mRNA expression levels of several genes were evaluated by real-time RT-PCR using isolated mouse type II cells. The relative expression levels of *Sp-C*, *CC10*, *Gata6*, *Id2*, *Elf5*, *Erm*, and *E-cadherin* were compared between cells from noninfected lungs and from lungs 72 h after infection. Data are presented as mean  $\pm$  SE ( $n = 3\text{--}5$  mice for each group from three to four independent experiments).



**Figure S3. Additional analysis of the *SPC-rtTA/TetO-Cre/ROSA-YFP/+ (ROSA-YFP)* mouse line.** (A and B) The expression of YFP in type II cells before (A) and after (B) doxycycline (Dox) treatment. All following panels show results from doxycycline-treated mice. (C and D) At 72 h after PA infection, some YFP<sup>+</sup>Sp-C<sup>-</sup> cells were labeled with BrdU (arrows). The localizations of YFP and BrdU (C) and Sp-C and BrdU (D) are shown for the same section. (E and F) At 72 h after PA challenge, some YFP<sup>+</sup>Sp-C<sup>-</sup> cells were positive for the type I cell marker T1 $\alpha$  (arrows). The localizations of YFP and T1 $\alpha$  (E) and YFP and Sp-C (F) are shown for the same section. (G–J) YFP expression in CC10-positive cells in bronchioles. Some CC10-positive cells also expressed YFP, and the distribution of these CC10<sup>+</sup>YFP<sup>+</sup> cells was compared in both WT non-PA-challenged lungs (G) versus WT lungs at 5 d after PA challenge (H) as well as in between mutant noninjected lungs (non-inj; I) and mutant lungs 5 d after PA challenge (J). Results are representative of at least three independent experiments. Bars: (A and B) 50  $\mu$ m; (C, D, and G–J) 20  $\mu$ m; (E and F) 10  $\mu$ m.

**Table S1.** Primers used for RT-PCR

Gene	Forward primer	Reverse primer
<i>FoxM1</i>	5'-CACTGGATTGAGGACCACTT-3'	5'-GTCGTTCTGCTGTGATTCC-3'
<i>Elf5</i>	5'-GGACTCCGTAACCCATAGCA-3'	5'-TACTGGTCGCAGCAGAATTG-3'
<i>CC10</i>	5'-CATGCTGTCCATCTGCTGC-3'	5'-CTCTTGAGGGAGGGTATCC-3'
<i>Erm</i>	5'-GCCGAGGCATGGAATTAAAG-3'	5'-AGAGCGGCTCAGCTTGTATA-3'
<i>Id2</i>	5'-GAAAAAACAGCCTGTCGGACCA-3'	5'-CCAGGGCGATCTGCAGGT-3'
<i>Gata6</i>	5'-TTAACACTGATTGCTGCAACG-3'	5'-GTTCATCGTAACGTGGCTGA-3'
<i>CLO</i>	5'-CTTGTCCATGGCAAATGCTG-3'	5'-TGATCTTCTGCTGGCTTGC-3'
<i>E-cadherin</i>	5'-AAAATCCATCTCAAGCTCGCG-3'	5'-ATTCCCGCCTTCATGCAGTT-3'
<i>Aqp5</i>	5'-GCCACCCCATCTCGTCTCTT-3'	5'-TGGTTGCCTATTAAGAGGGCCAGA-3'
<i>Sca-1</i>	5'-TGGATTCTCAAACAAGGAAAGTAAAGA-3'	5'-ACCCAGGATCTCCATACTTCAATA-3'
<i>Sp-C</i>	5'-GCCTTCTCATCGTGGTTGT-3'	5'-CCAGTATCATGCCCTCC-3'