Supplemental Figure S2

A *Wild type (2 wks)*

B

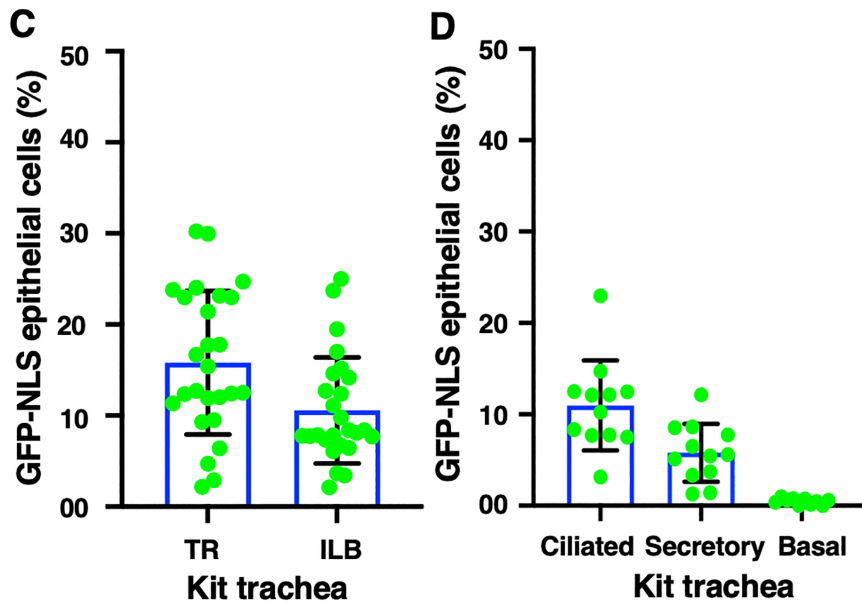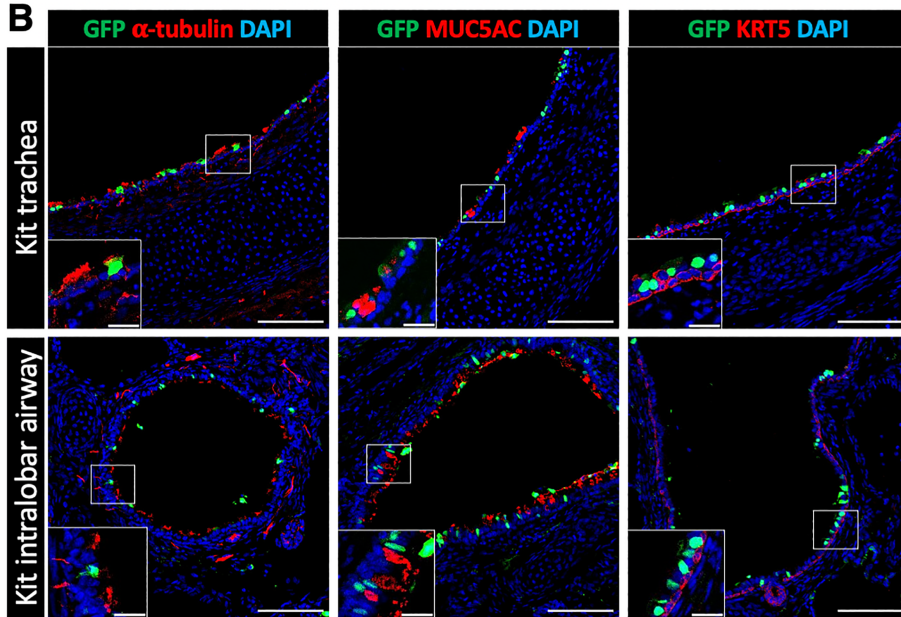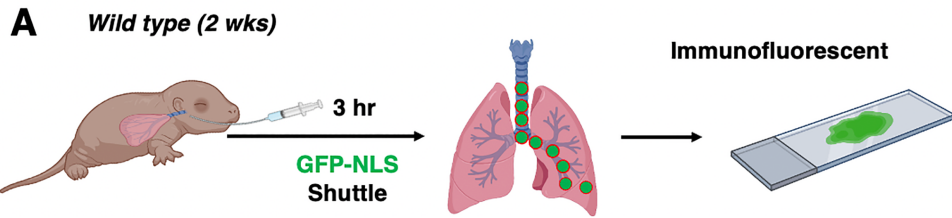**Suppl. Figure S2. Efficiency and distribution of S10 shuttle peptide-mediated D-Retro-inverso sequence of a NLS (DRI-NLS) peptide in ferret airway epithelia**. (A) Schematic showing the experimental workflow for the delivery Alexa Fluor 647 conjugated DRI-NLS (DRI-NLS-647) peptide into ferret airways by S10 shuttle peptides. The DRI-NLS-647 peptide (10µM) was delivered by S10 (20µM) to wildtype ferret airways at a dose of 1.0 mL/kG *via laryngotracheal route. The transfection efficiency and distribution of epithelial cell types was* evaluated at 30min post the delivery by an immunolocalization assay. (B) Representative image of epi-fluorescent DRI-NLS peptide (magenta) in adult (top panel) and kit (bottom) ferret tracheal epithelia (top panel) transfected by S10 shuttle peptides**.** (C) Representative images of immunolocalization of epi-fluorescent DRI-NLS-647 peptide (gray) and ciliated cell marker (α-tubulin, red) and goblet cell marker (MUC5AC, green) in ILB epithelia of adult ferret lung**.** Insets showing the enlargement of boxed area of corresponding image. (ci) The enlarged image of boxed area of corresponding image in C. (D) Representative image of immunolocalization of epi-fluorescent DRI-NLS-647 peptide (gray) and ciliated cell marker (α-tubulin, red) and goblet cell marker (MUC5AC, green) in bronchial epithelia of kit ferret**.** (E) The efficiency of delivery of DRI-NLS peptide in adult ferret trachea and ILB by S10. (F) The efficiency of delivery of DRI-NLS peptide in kit ferret trachea and ILB by S10. (G) The frequency of multiple epithelial cell types transfected with DRI-NLS peptide in adult ferret airways by S10. (H) The frequency of multiple epithelial cell types transfected with DRI-NLS peptide in kit ferret airways by S10. Nuclei were counterstained with DAPI in B-D. Bars, 100µm in B C and D, 20µm in ci and inset of C. Data in E, F, G and H represented mean ± SD from 30 (N=30), 26 (N=26), 28 (N=28) and 34 (N=34) sections from 3 ferrets, and was evaluated by Student *t*-test, respectively.