

Supporting Information

Integrin $\alpha 6\beta 4$ identifies human distal lung epithelial progenitor cells with potential as a cell-based therapy for cystic fibrosis lung disease

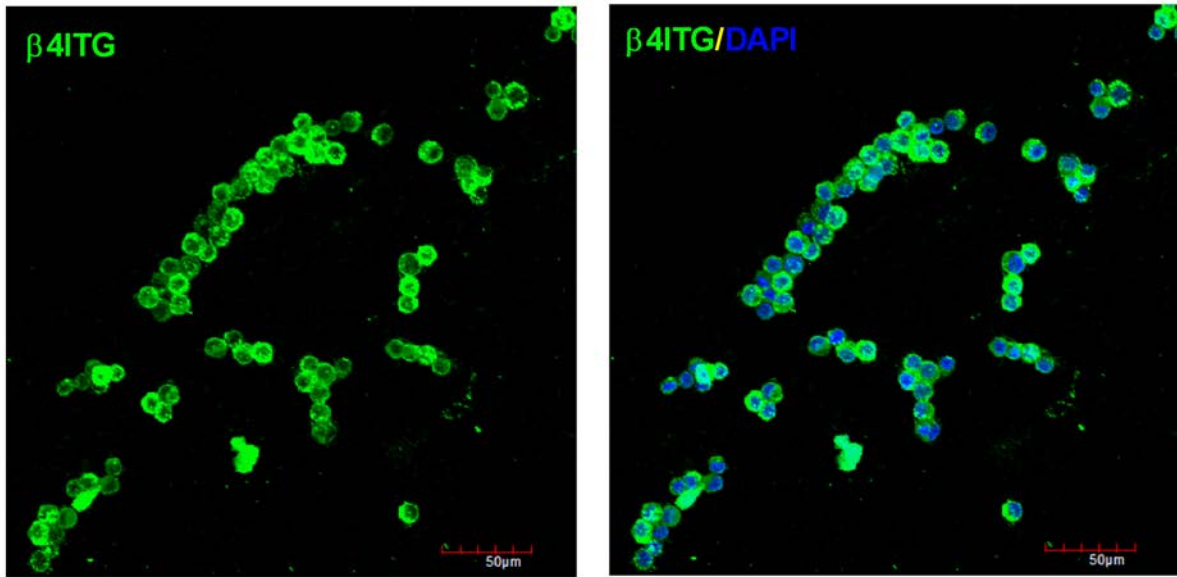
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Supporting Figure S1: Staining of sorted $\alpha 6^+$ /E-cad $^+$ cells with $\beta 4$.

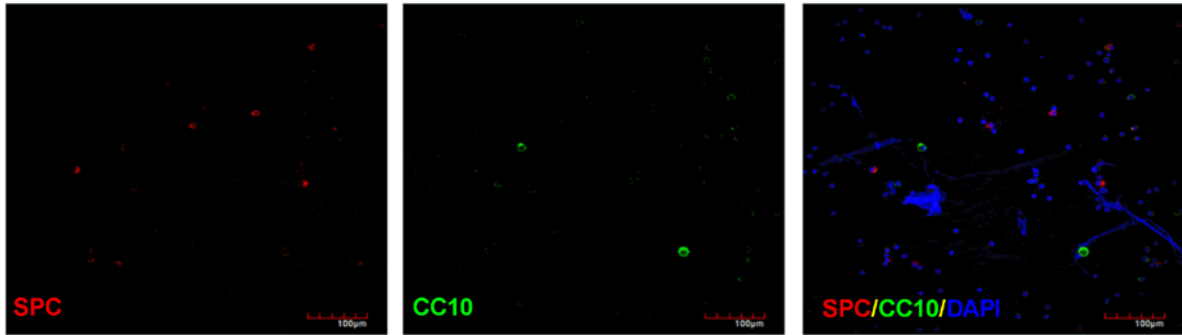
Supporting Figure S2: Control for SPC antibody.

Supporting Figure S3: Additional images of *de novo* induction of K-5 expression in human $\alpha 6^+$ cells.

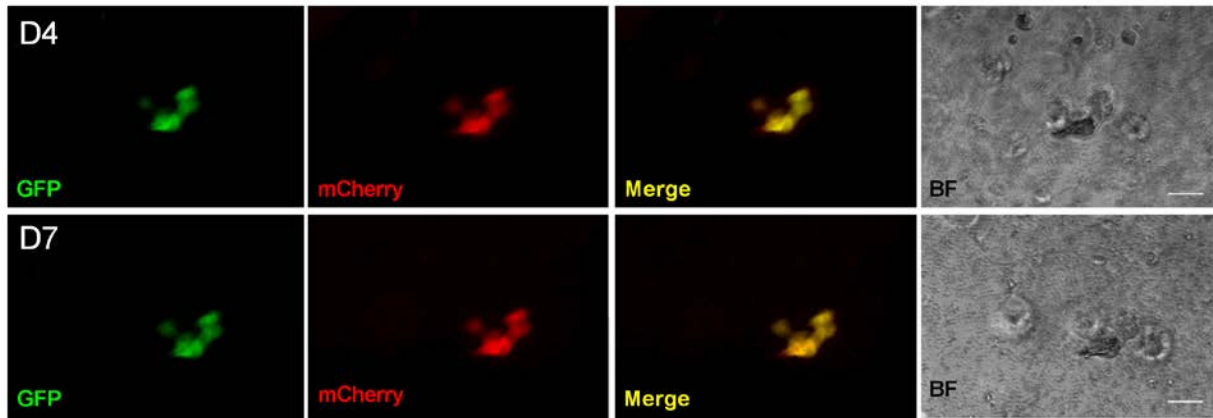
Supporting Video Image S1: Time-lapse videography of clonal expansion of $\alpha 6^+$ epithelial cells isolated from the distal human lung. **This video can be viewed using QuickTime Player.*



Supporting Figure S1: Staining of sorted $\alpha6^+$ /E-cad $^+$ cells with $\beta4$. Epithelial cells were isolated from a normal human lung, and surface markers $\alpha6$ and E-cadherin were labelled with Alexa Fluor-568 and Alexa Fluor-647, respectively, and analyzed by FACS. Populations of $\alpha6^+$ /E-cad $^+$ cells were cytopinned on slides and immediately immunostained with an antibody against $\beta4$ (green). Nuclei were stained with DAPI (blue). Scale bar= 50 μ m.



Supporting Figure S2: Control for SPC antibody. Populations of $\alpha 6^{+}/E\text{-cad}^{+}$ cells were cytopinned on slides and immediately immunostained with antibodies against SPC (red) and CC10 (green). Nuclei were stained with DAPI (blue). Scale bar= 100 μm .



Supporting Figure S3: Additional images of *de novo* induction of K-5 expression in human $\alpha 6^+$ cells. Fluorescence images of a dual GFP (green) and mCherry (red)-positive colony at 4 and 7 days of culture of $\alpha 6^+$ cells infected with the dual-color lentiviral reporter and co-cultured with HUVECs. Also shown are phase contrast images of colonies. Scale bar=100 μ m. Note that the cluster of cells does not increase in size between days 4 and 7, which suggests that freshly isolated $\alpha 6^+$ cells that were originally K-5⁺ do not undergo clonal expansion in the tested culture conditions. This is in contrast to colonies that were originally GFP-positive/mCherry-negative that later became mCherry-positive (see Figure 6B).