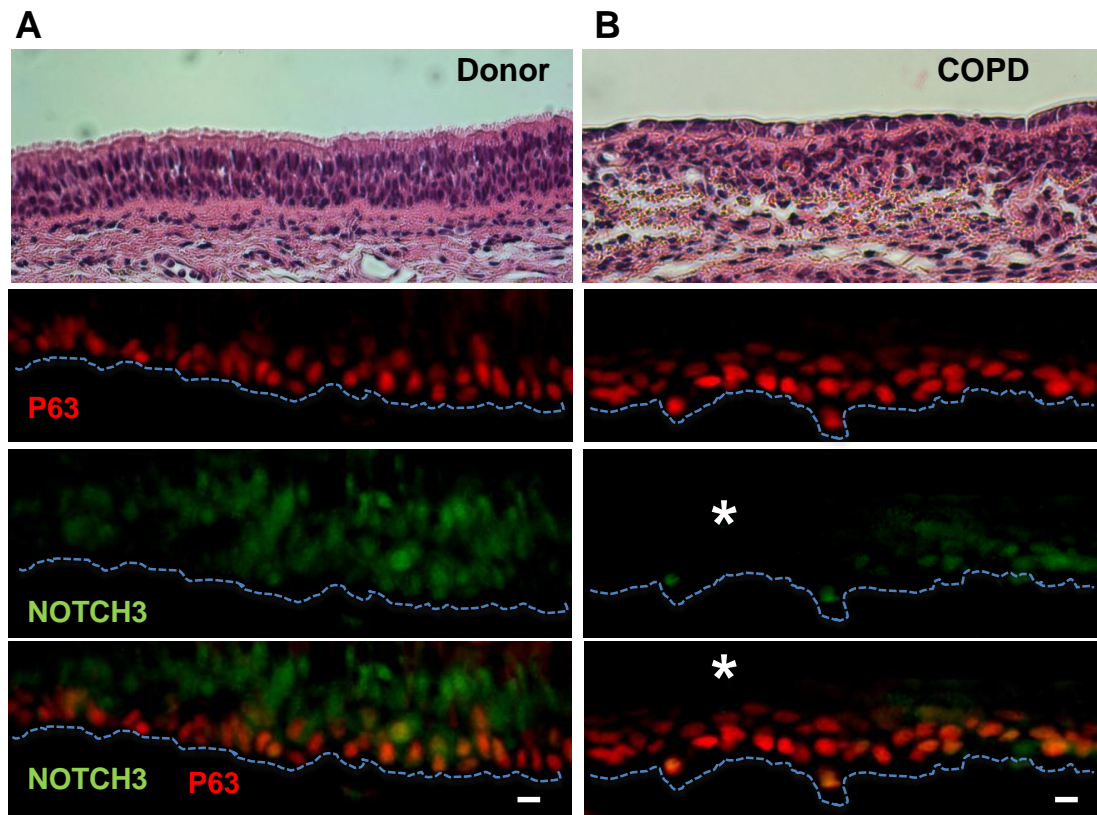


**Supplemental Figure 1.** Disrupting Notch signaling in cultured adult airway progenitors at different stages of expansion and differentiation results in distinct effects. (A) Airway epithelial progenitors cultured under submerged (Sub) and then air-liquid interface (ALI) conditions in DMSO (Ctr: control, blue) or DAPT (red) for different periods from 3 Days prior to ALI (Day-3) to 8 Days after ALI. All cultures analyzed at Day8 by immunofluorescence (p63, Foxj1, Scgb3a2). (B) Morphometric analysis of ALI Day8 cultures in each condition: relative number of cells expressing each marker per total cells (%) in Ctr or DAPT treated cells (n=3, each 6 fields  $\pm$  SEM). Asterisks, significance at  $p < 0.05^*$  and  $p < 0.01^{**}$  (Student's T test; ns: no significance). Scale bar in A, 20  $\mu$ m



**Supplemental Figure 2.** NOTCH3 is expressed in parabasal cells of human airways and is inhibited in COPD. HE and immunofluorescence staining of adult human airway (main bronchus) from (A) normal donor, showing P63 and NOTCH3 expression in basal and parabasal cells, respectively (B) COPD patient showing areas of unbalance in these cell populations with marked decrease in the NOTCH3-expressing parabasal cells relative to the P63+ basal cells (asterisks). Scale bar in A-B, 10  $\mu$ m.