Supplementary Materials

Modeling airway dysfunction in asthma using synthetic mucus biomaterials

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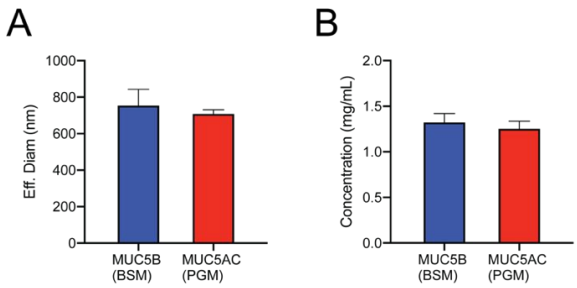

Fig. S1. (**A**) Effective hydrodynamic diameter of MUC5B (BSM) and MUC5AC (PGM) solutions measured in 10 mM NaCl using dynamic light scattering (NanoBrook Omni; Brookhaven Instruments). (**B**) Concentration of 1% mucin solutions measured using BCA assay.

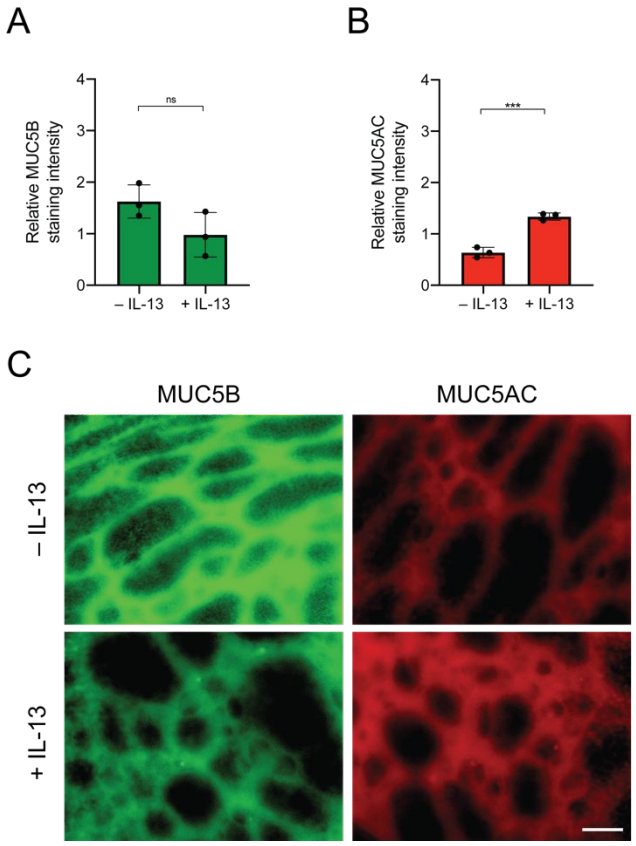

Fig. S2. (**A**) Relative MUC5B staining intensity from *en face* immunostaining. (**B**) Relative MUC5AC staining intensity. (**C**) Additional *en face* immunostaining images of mucus gels produced from unstimulated (–IL-13) or IL-13-stimulated (+IL-13) BCi-NS1.1 HAE cultures. Scale bar = 20 μm.

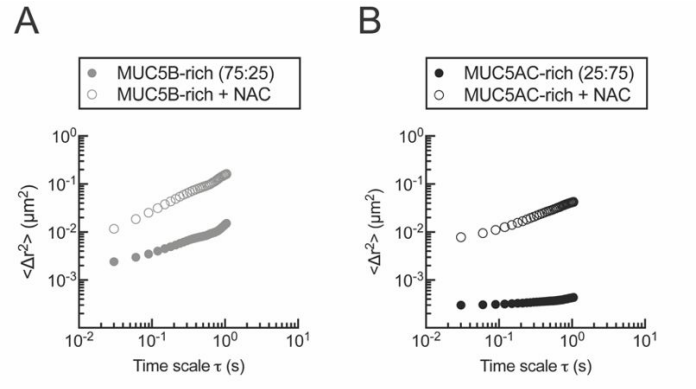

Fig. S3. (**A**) Ensemble average MSD ($\langle \Delta r^2 \rangle$) of 100 nm PEG-NP as a function of time scale (τ) in MUC5B-rich (75:25) gel before and after a 30-minute treatment with *N*-acetyl cysteine (NAC). (**B**) Ensemble average MSD ($\langle \Delta r^2 \rangle$) of 100 nm PEG-NP as a function of time scale (τ) in MUC5AC-rich (75:25) gel before and after a 30-minute treatment with NAC.