Supplementary Figure S1 - Impedance response recorded for solutions of varying conductivity (DMEM culture medium versus 1, 10 or 100 mM NaCl).
Supplementary Figure S2 - Background electrochemical impedance spectroscopy in DMEM culture medium in the presence and absence of 2 mM EGTA.
Supplementary Figure S3–A. Overlay of impedance values recorded during exposure of the Airway-on-Chip to 2 mM EGTA at different time points post-treatment (N=2 chips/condition).

B. TEER and capacitance values extracted from A recorded over the course of the experiment.

Phase contrast image of well differentiated human primary airway epithelial cells (C) before and (D) after treatment with 2 mM EGTA (original magnification, x20; scale bar: 100 µm).