Figure S1. Uncropped original gel images of the western blot experiment from Fig. 1A. Bronchial epithelial IB3-1 cells have been either untreated (#1) or treated with 0.5 μg/ml BNT182b2 vaccine (#2). After 48 h, cell lysates were analyzed by western blotting.

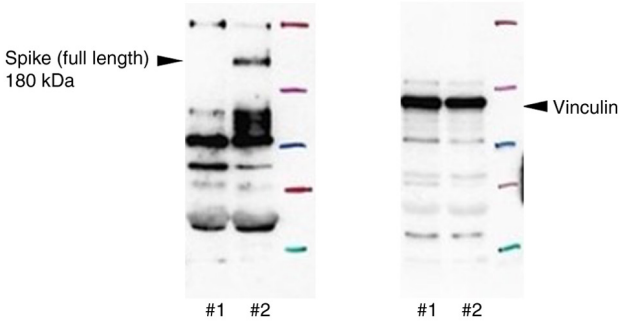

Figure S2. (A) Representative RT-qPCR analysis of SARS-CoV-2 S-protein mRNA expression. (B) Expression of the SARS-CoV-2 mRNA (fold increase with respect to trace amount of hybridizable material found in control cells, set as 1). SARS-CoV-2 S-protein mRNA expression was measured by RT-qPCR using protocols used by Aldén *et al* (25). Results represent the means ± standard deviation from three independent experiments ($P<0.001$). Endogenous β-actin was used as internal control. The threshold line and the amplification curves (two representative vaccine-treated samples) are reported in green and pink, respectively. SARS-CoV-2, Severe Acute Respiratory Syndrome Coronavirus 2; RT-qPCR, reverse transcription-quantitative PCR; RFU, relative fluorescence unit; (-) untreated samples.

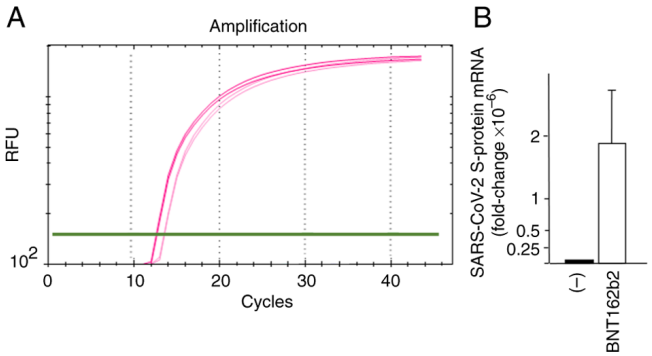

Figure S3. Bio-plex analysis showing the increase in the release of (A) IL-6, (B) IL-8, (C) G-CSF, (D) GM-CSF and (E) IP-10 following 48 h treatment of IB3-1 cells with 0.5 μg/ml BNT182b2 vaccine. Results represent the means ± standard deviation from four independent experiments. *P<0.05 and **P<0.01. CSF, colony stimulating factor; G, granulocyte; GM, granulocyte macrophage; IP-10, C-X-C motif chemokine ligand 10; (-) untreated samples.

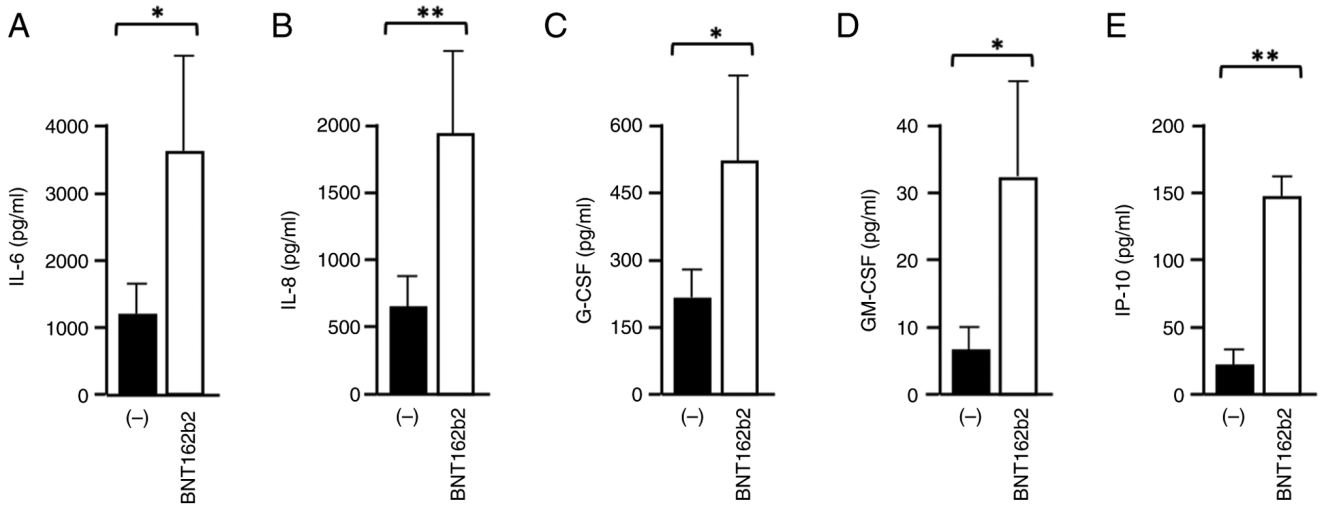

Figure S4. Effects of exposure to the SARS-CoV-2 S-protein and BNT162b2 vaccine on the expression levels of IL-8 mRNA. The (A) SARS-CoV-2 S-protein and the (B) BNT162b2 vaccine were used at 5 nM and 0.5 μg/ml concentrations, respectively (22,40). IB3-1 cells were seeded at 200,000 cells/ml and treatments were conducted for 48 h before RNA isolation. Results represent the means ± standard deviation from three independent experiments. *P<0.05 and **P<0.01. SARS-CoV-2, Severe Acute Respiratory Syndrome Coronavirus 2; (-) untreated samples.

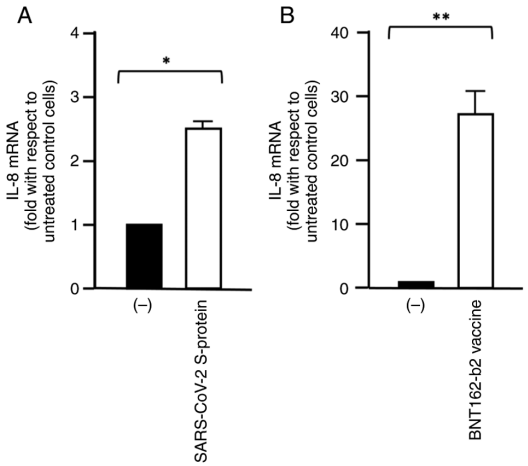

Figure S5. Effects of 50 μM S1PC on NF-κB p105/p50 accumulation in BNT162b2-stimulated IB3-1 cells. (A) Original version of the western blotting images relative to the effects of S1PC (lane #2) on NF-κB p105/p50 accumulation (arrows) on BNT162b2-stimulated IB3-1 cells. Lane #1 represents control IB3-1 cells treated with BNT162b2 in the absence of S1PC. (B) Original version of the western blotting images relative to the effects of S1PC (lane #2) on β-actin accumulation (arrow) in BNT162b2-stimulated IB3-1 cells. Lane #1 represents control IB3-1 cells treated with BNT162b2 in the absence of S1PC. (C) Relative protein/β-actin ratios obtained after densitometry analysis. ChemiDoc instrument and Image Lab software (both from Bio-Rad Laboratories, Inc.) were used for densitometry analysis of the obtained bands. *P<0.05 from three independent experiments. S1PC, S-1-propenyl-l-cysteine.