



Supplementary Materials: The following are available online at www.mdpi.com/xxx/s1,

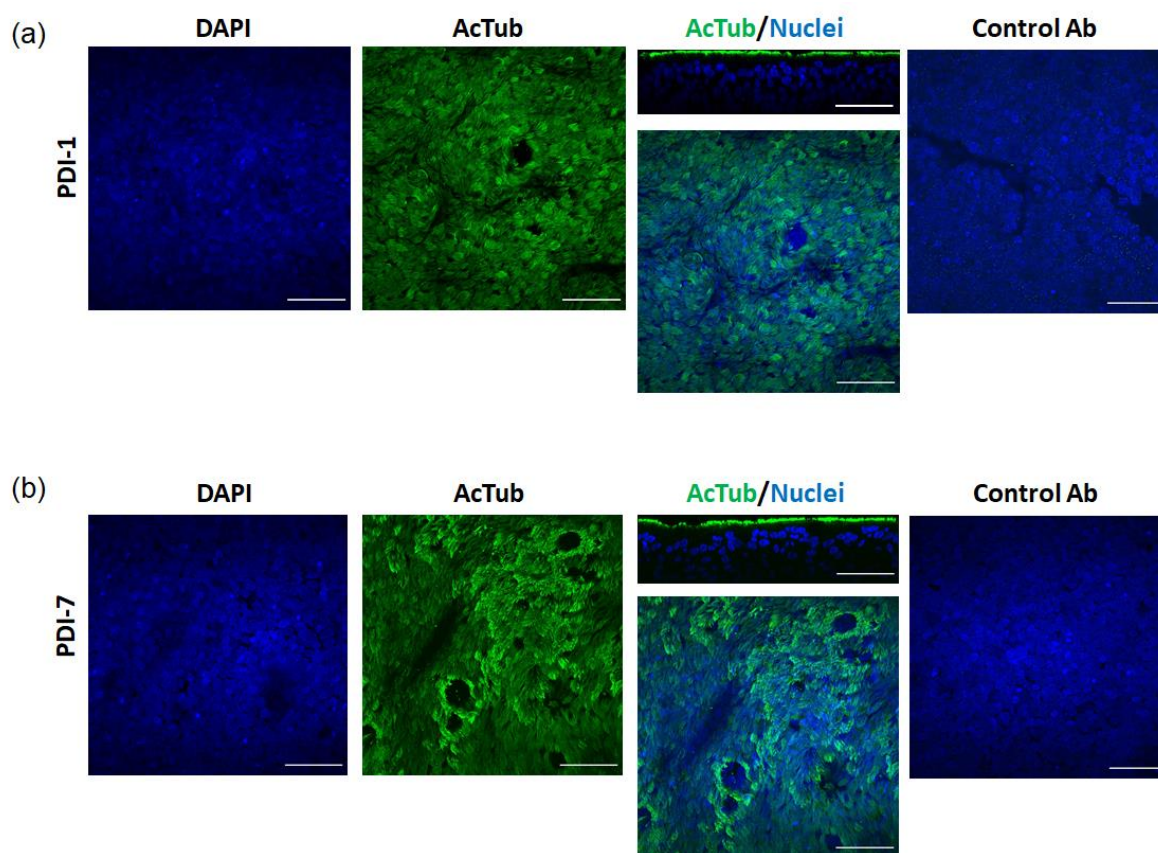


Figure S1. Human nasal epithelium differentiation at air-liquid interface. Adult (a) and child (b) air-liquid interface (ALI) differentiated human nasal epithelium (HNE) was characterized by immunofluorescent confocal microscopy staining for α -tubulin (AcTub, green) and DAPI for nuclei (blue) or control antibody (Control Ab). Top and orthogonal views are shown. Scale bar 50 μ m.

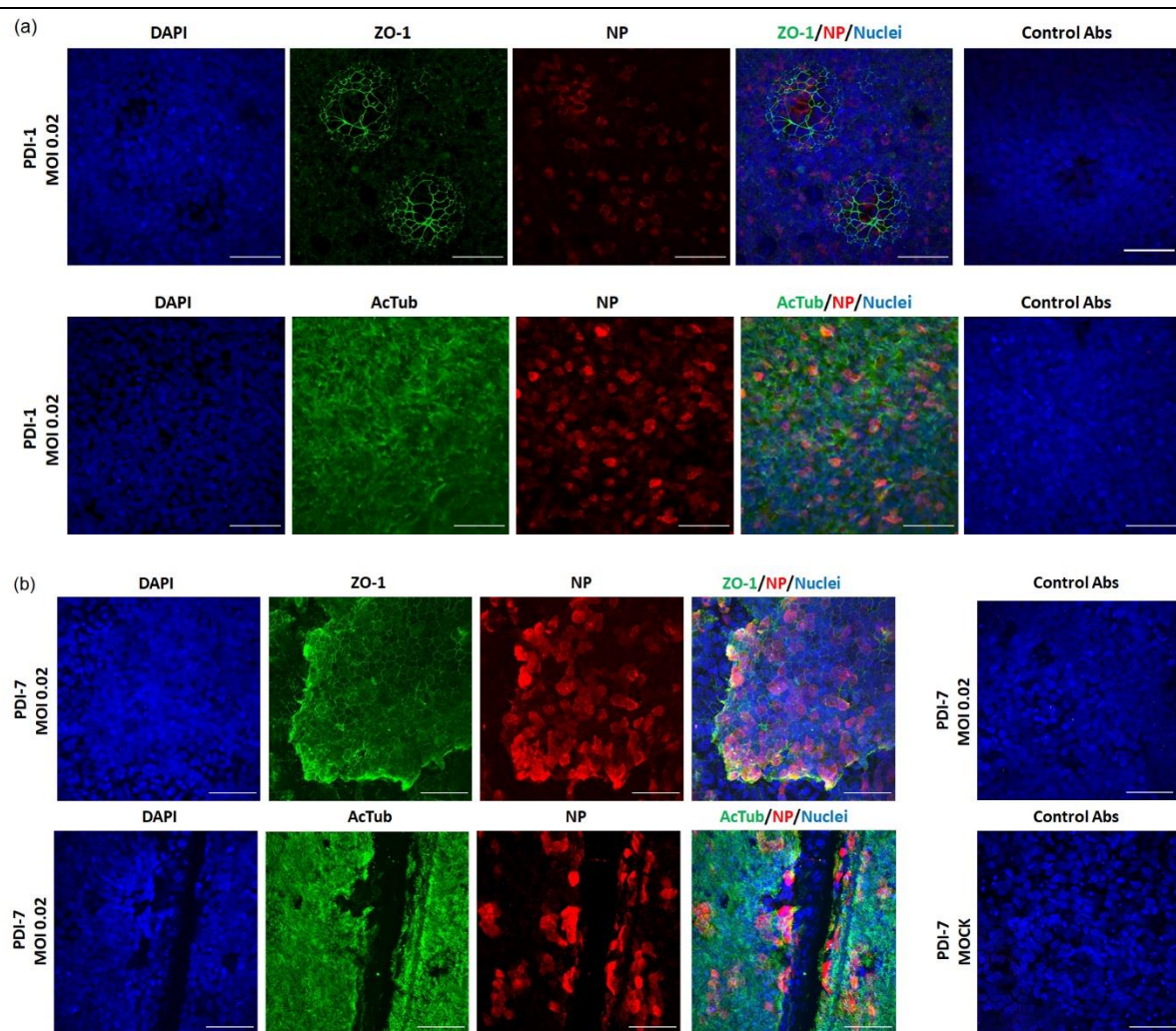


Figure S2. SARS-CoV-2 infected ALI-HNE. Adult (a) and child (b) ALI-HNE infected with VIC01. Immunofluorescent confocal microscopy staining for α -tubulin (AcTub, green) and nucleoprotein (NP, red) or control antibodies (Control Abs). Nuclei are blue (DAPI). Scale bar 50 μ m. Extended data for Figure 1.

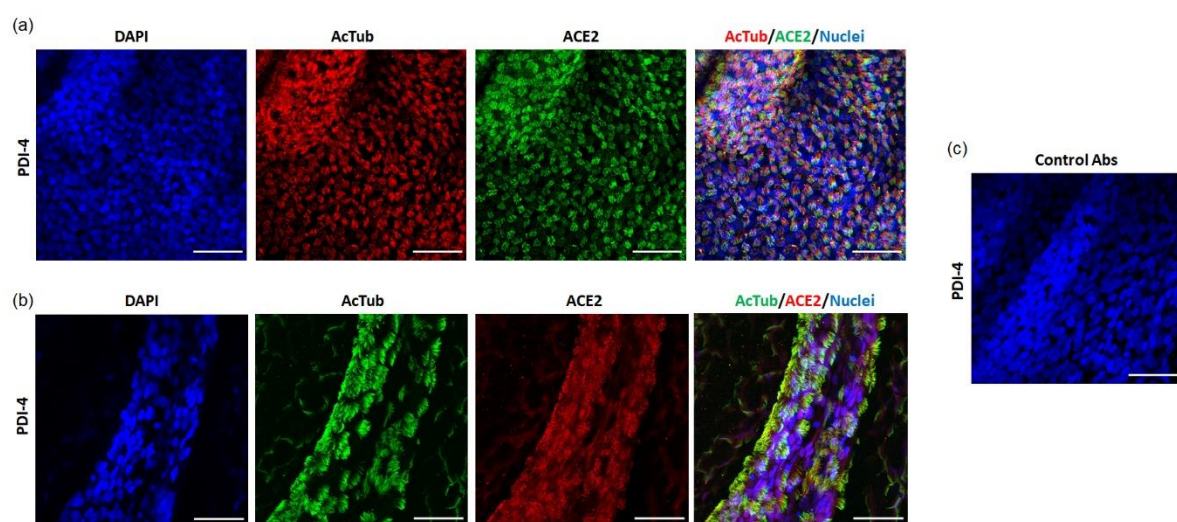


Figure S3. ACE2 is expressed by ALI-HNE. Immunofluorescent staining for ACE2 (green) and α -tubulin (red); nuclei are blue (DAPI) or control antibodies (Control Abs). Scale bar 50 μ m. Extended data for Figure 2.

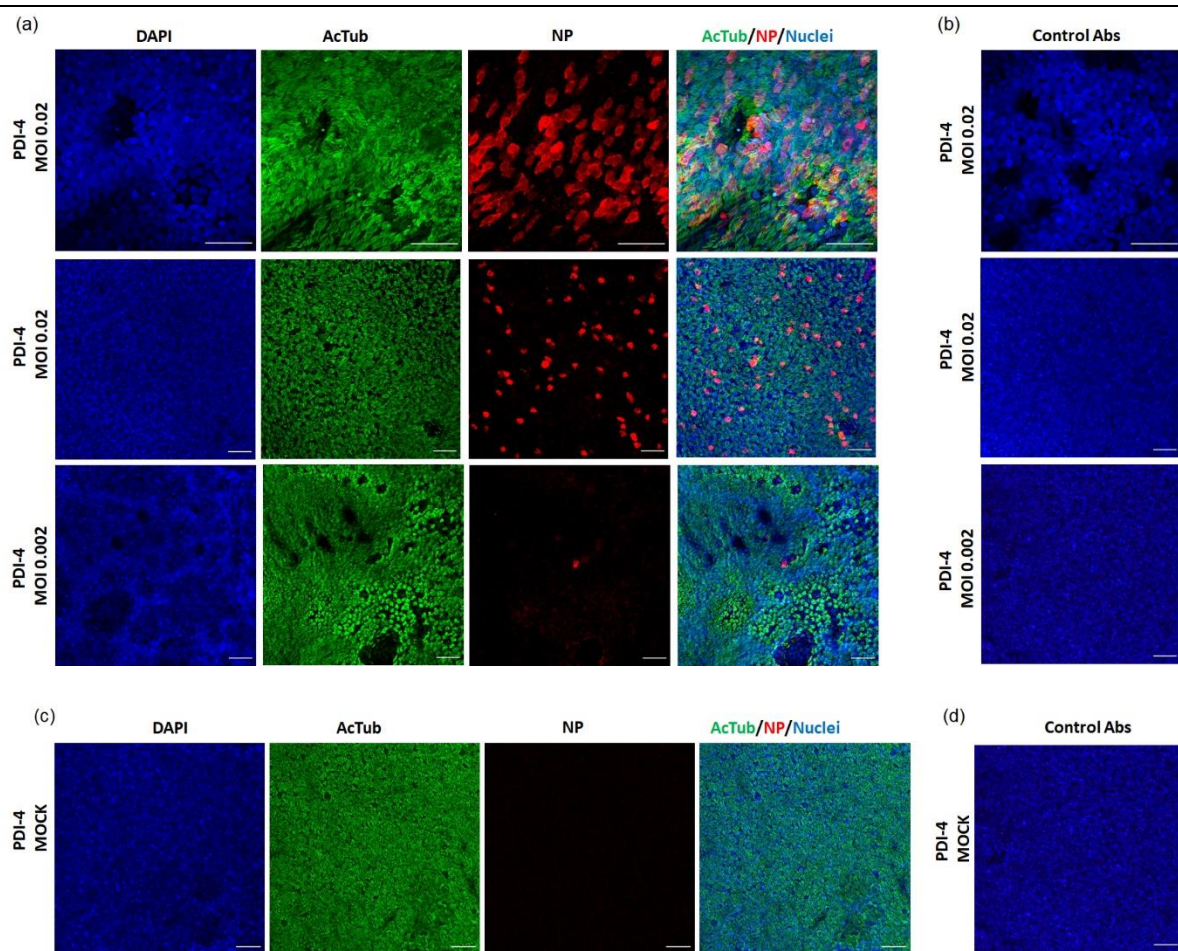


Figure S4. Dose dependent SARS-CoV-2 infection of PDI-4 ALI-HNE. ALI-HNE infected with VIC01 at MOI 0.02 and 0.002 (a, b) or mock (b). Immunofluorescent confocal microscopy staining for α -tubulin (AcTub, green) and nucleoprotein (NP, red) or control antibodies (Control Abs) are shown; nuclei are blue (DAPI). Scale bar 50 μ m. Extended data for Figure 3.

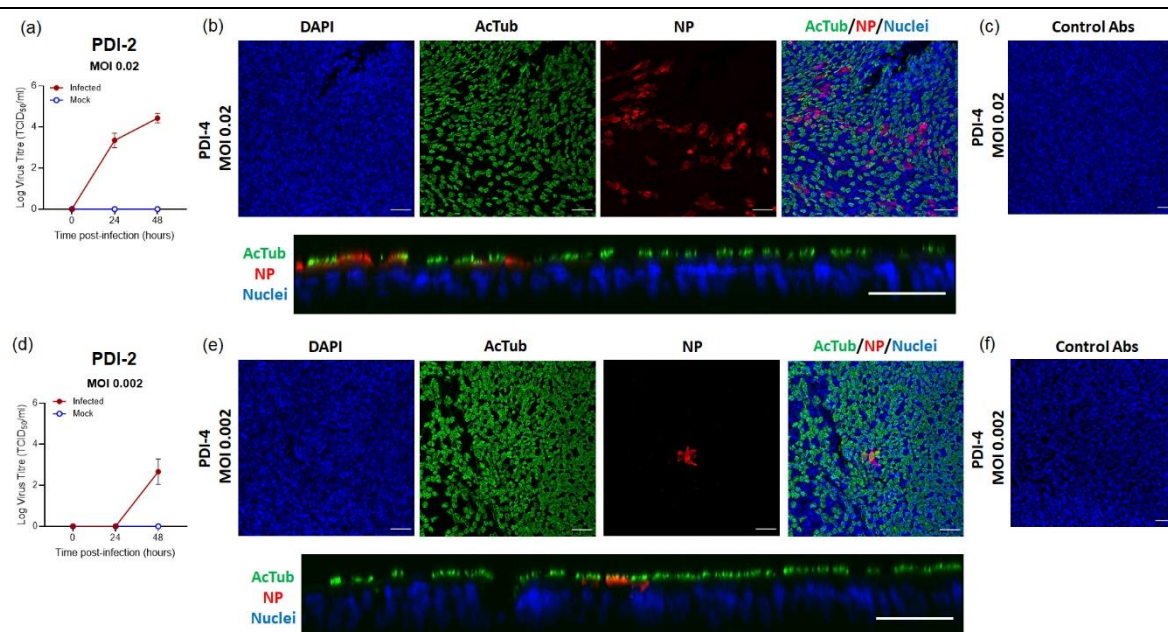


Figure S5. Dose dependent SARS-CoV-2 infection of PDI-2 ALI-HNE. ALI-HNE infected with VIC01 at MOI 0.02 (a, b, c) and 0.002 (d, e, f); (a, d) infectious virus (TCID₅₀) in the apical wash harvested at the indicated times; (b, c, e, f) immunofluorescent confocal microscopy staining for α -tubulin (AcTub, green) and nucleoprotein (NP, red) or control antibodies (Control Abs); nuclei are blue (DAPI). Top and orthogonal views are shown. Scale bar 50 μ m.

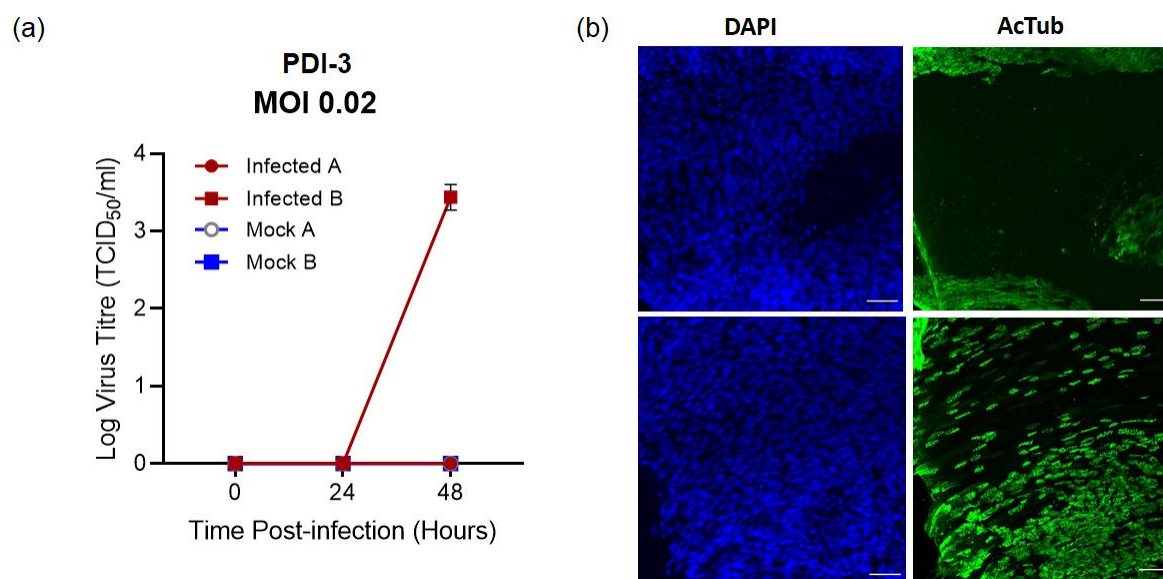


Figure S6. SARS-CoV-2 infected PDI-3 ALI-HNE. (a) Infectious virus (TCID₅₀) in the apical wash harvested at the indicated times. (b) Immunofluorescent confocal microscopy staining for α -tubulin (AcTub, green) shows non-uniform ALI differentiation towards the ciliated cell type; nuclei are blue (DAPI). Scale bar 50 μ m.

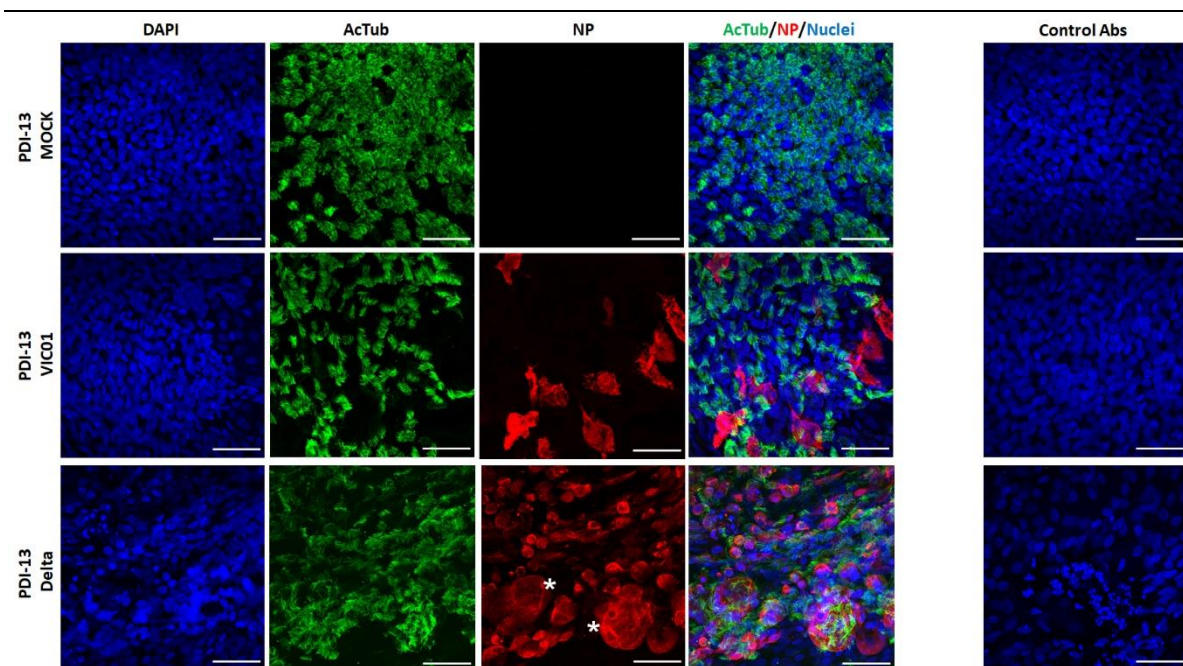


Figure S7. VIC01 and Delta SARS-CoV-2 infected ALI-HNE. Immunofluorescent confocal microscopy staining for α -tubulin (AcTub, green) and nucleoprotein (NP, red) or control antibodies (Control Abs); nuclei are blue (DAPI). *Indicates examples of syncytia formation. Scale bar 50 μ m. Extended data for Figure 4.

Table S1. Antibodies used for immunofluorescent microscopy

Antibody	Supplier and catalogue number	Dilution
Acetylated α -tubulin	Sigma-Aldrich #T7451	1:250
Human ACE2	Sigma-Aldrich #HPA000288	1:100
ZO-1	Invitrogen # 33-9100	1:200
SARS Nucleocapsid Protein	Novus Biologicals #NB100-56683	1:200
Goat anti-Mouse Alexa Fluor 488	Invitrogen #A11001	1:450
Goat anti-Mouse Alexa Fluor 647	Invitrogen #A21236	1:450
Goat anti-Rabbit Alexa Fluor 488	Invitrogen #A1034	1:450
Goat anti-Rabbit Alexa Fluor 647	Invitrogen #A21244	1:450