Antiviral activity of lambda-carrageenan against influenza viruses and severe acute respiratory syndrome coronavirus 2

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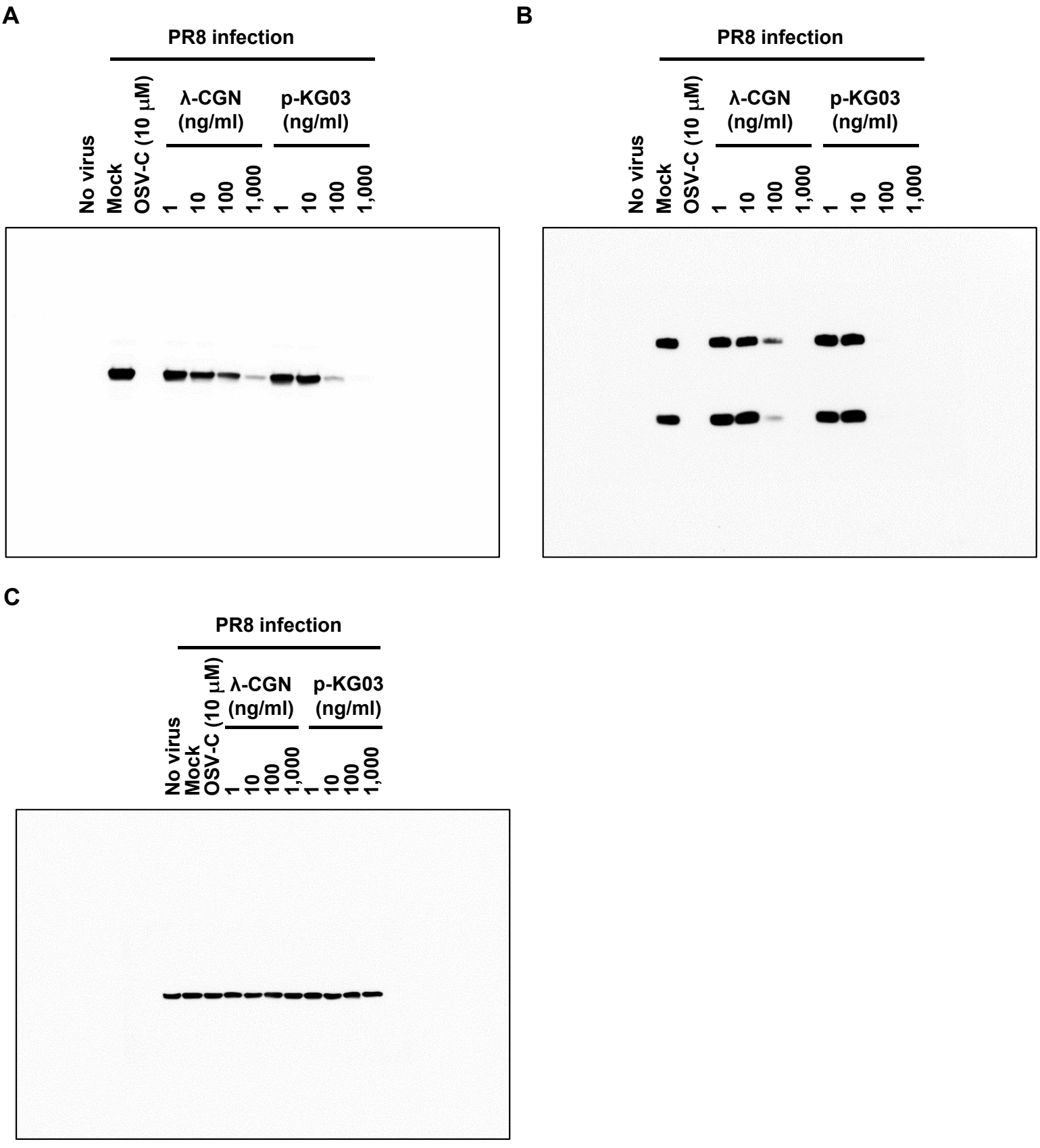
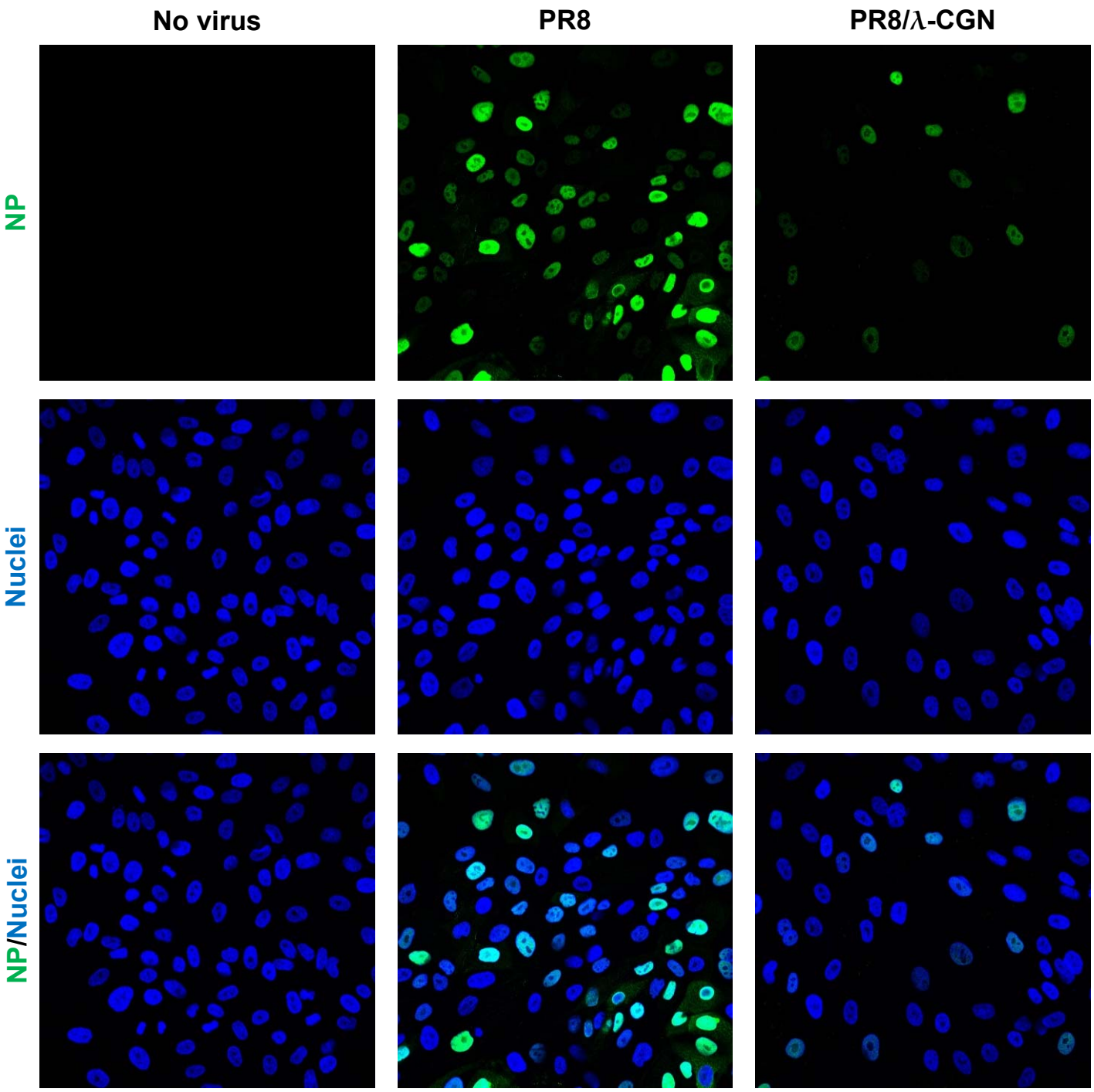
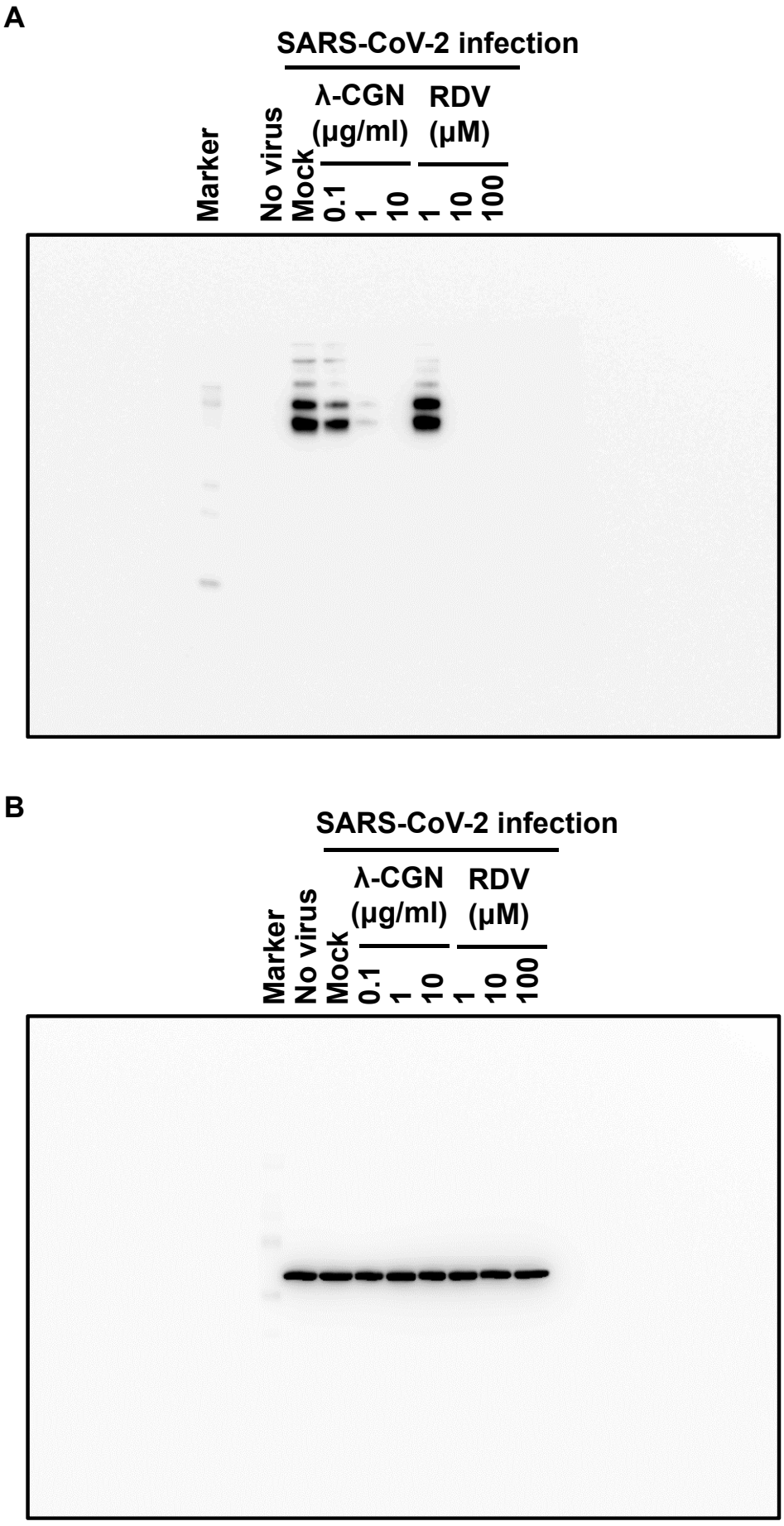


Supplementary Figure S1. Raw data showing full images of the western blots presented in Fig. 1B. MDCK cells infected with PR8 at an MOI of 0.001 were mock-treated (Mock) or treated with increasing concentrations of λ-CGN or p-KG03, or with 10 μM of OSV-C, at 35°C. On the next day, cell lysates were harvested for SDS-PAGE and immunoblotting with anti-NP (A) or anti-HA antibodies (B). β-Actin was used as a loading control (C). 'No virus' means negative control without viral infection. HRP on the membranes for detecting NP and HA was developed using Western Femto ECL kit (LPS Solution, Daejeon, Republic of Korea) (A, B), while it was done for β-actin using Super Signal West Pico Plus Chemiluminescent kit (Thermo Fisher Scientific, Rockford, IL, USA) (C).



Supplementary Figure S2. Wider field images of confocal microscopy. MDCK cells were mock-infected (No virus) or infected with PR8 (MOI, 5). Infected cells were treated with λ-CGN at a concentration of 10 μg/ml. At 4 h post-infection, viral NP was detected with an anti-NP antibody and an Alex Fluor 488-conjugated goat anti-mouse secondary antibody (green). Cell nuclei were counterstained with DAPI (blue). Original magnification, 400×.



Supplementary Figure S3. Raw data showing full images of the western blots presented in Fig. 7A. Vero cells infected with SARS-CoV-2 at an MOI of 0.005 were mock-treated (Mock) or treated with increasing concentrations of λ-CGN or remdesivir (RDV) at 37℃. On day 2, cell lysates were harvested for SDS-PAGE and immunoblotting with anti-spike antibody (A) or anti-β-actin as a loading control (B). 'Marker', protein size markers. 'No virus', a negative control without viral infection.