Supporting information

Fig. S1. The waveforms of the applied voltage and discharge current in the preparation of plasma-activated water.

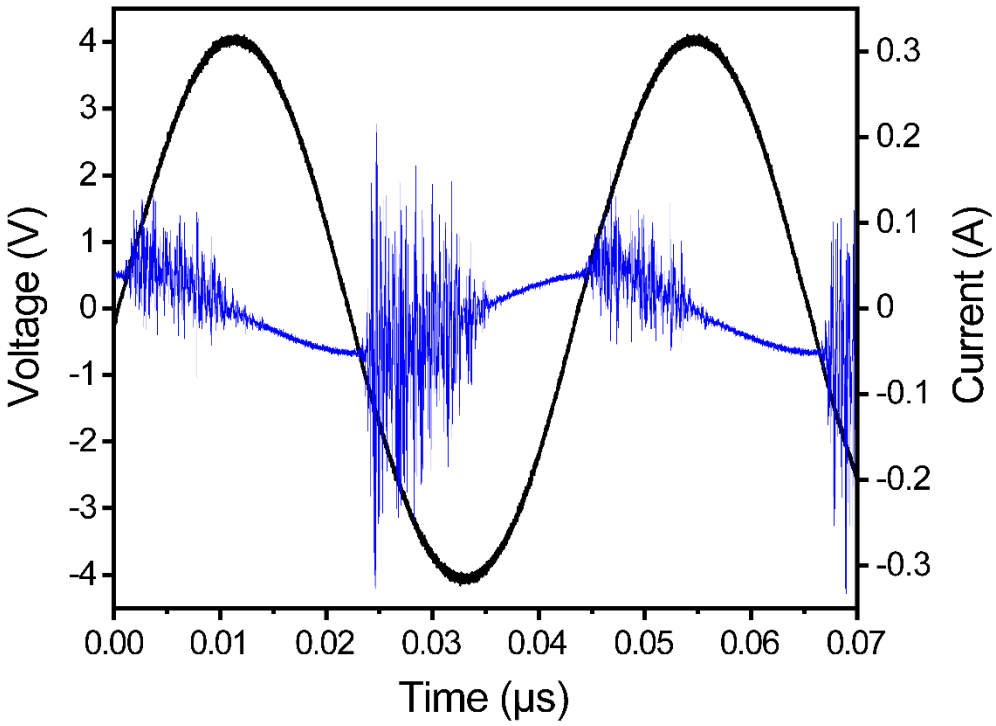

Fig. S2. The cell viabilities of COS-7 and HEK-293T cells infected with pseudoviruses.

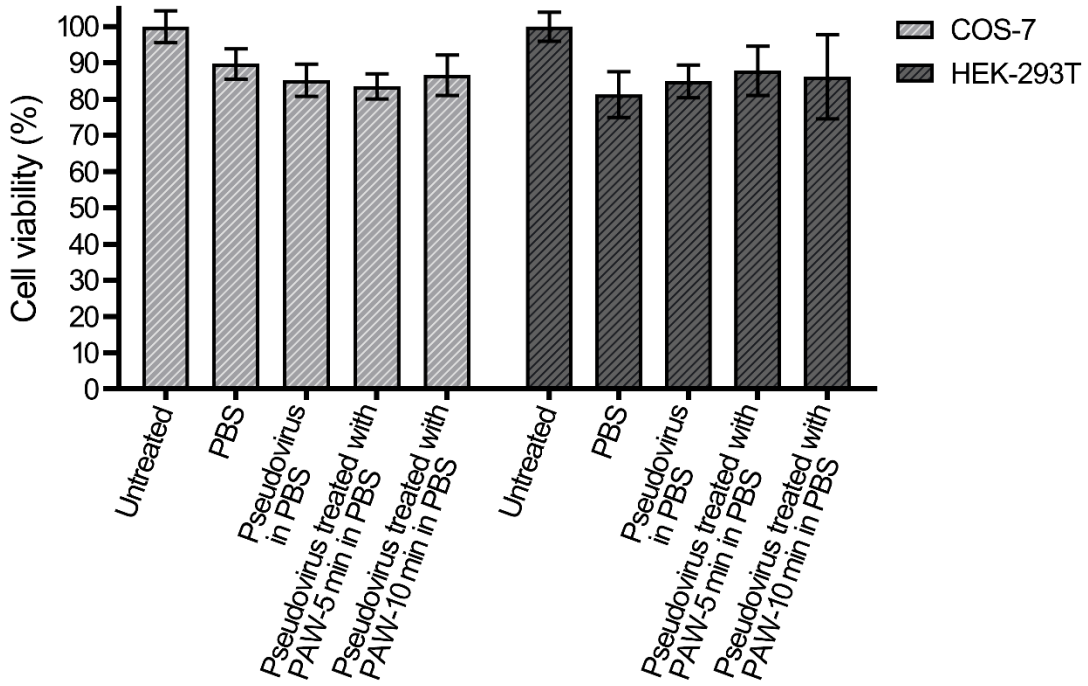

Fig. S3.Quantitative analysis of SDS-polyacrylamide gel electrophoresis of untreated and PAW-treated RBDs. The intensities were analyzed by Image J software.

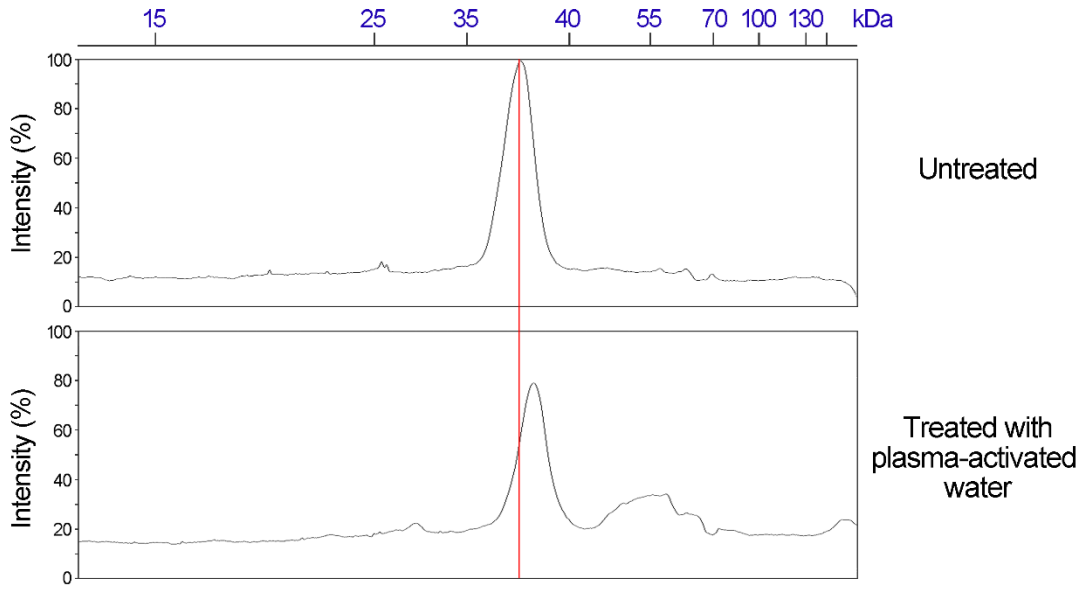

Fig. S4. The inactivation effects of PAW-10 min, ozone water, direct UV treatment, and UV-treated water on the SARS-CoV-2 RBD. Ozone water was prepared by an ozone water device (EnozO_3 K100). The concentration of ozone in ozone water was approximately 0.15 mg/L, and that in PAW was approximately 0.14 mg/L. The concentrations of ozone were measured by AccuVac O_3 reagent and spectrophotometer DR3900 (HACH). The intensity of UV lights (UV-1800, UVP) was approximately 7750 μw/cm^2, and that of the surface plasma used in our study was approximately 0.3 μw/cm^2. The intensities of UV were measured by UV radiometer (Photoelectric Instrument Factory of Beijing Normal University). The RBD protein was directly treated with UV for 10 min or treated with UV-treated water prepared by the UV treatment of water for 10 min.

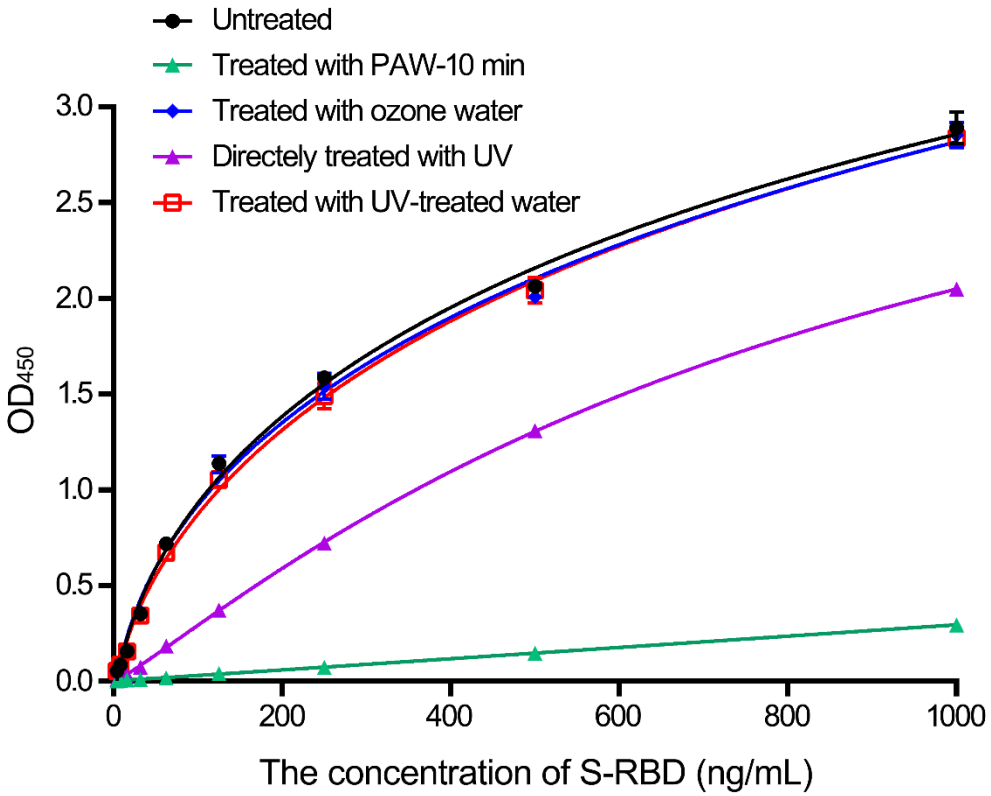

Fig. S5. The inactivation effects of PAW-10 min and a 3% H_2O_2 solution on the SARS-CoV-2 RBD.

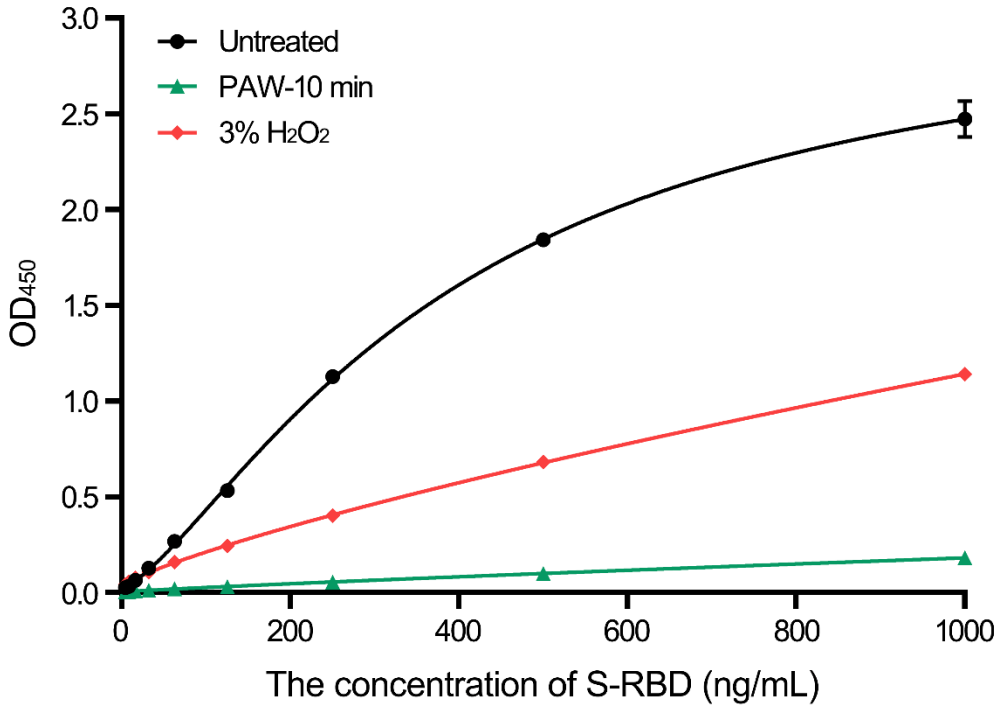

Fig. S6. The inactivation effects of freshly prepared PAW-10 min and PAW-10 min stored for 10 days, 20 days, and 30 days.