

Electronic Supplementary Information

Sensitive electrochemical detection of vaccinia virus in a solution containing a high concentration of L-ascorbic acid

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Fig. S1 Cyclic voltammograms obtained in PBS containing (i) 1.0 mM AP and (ii) 1.0 mM AP and 100 mM KIO_3 at rGO/ITO electrode.

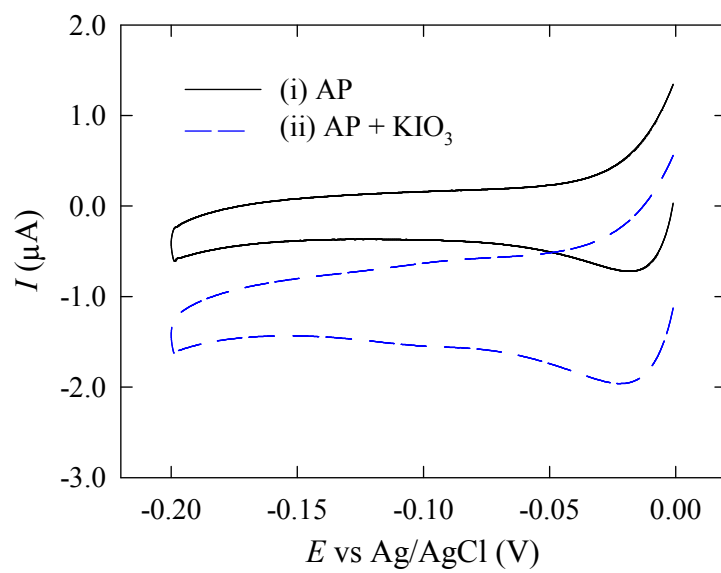


Fig. S2 (a) Cyclic voltammograms obtained at a scan rate of 20 mV/s (i, ii) after rGO/ITO electrodes modified with avidin and biotinylated antimouse IgG were incubated in PBSB containing 1.0 mM AA for 30 min, the electrodes were washed (ii) twice and (iii) three times with rinsing buffer, and the electrodes were incubated for 10 min in PBS and (iii) after a rGO/ITO electrode modified with avidin and biotinylated antimouse IgG was incubated for 10 min in PBS. (b) Cyclic voltammograms obtained at a scan rate of 20 mV/s in PBS containing 1.0 mM AA, 1.0 mM UA, and 1.0 mM AcP at rGO/ITO electrodes.

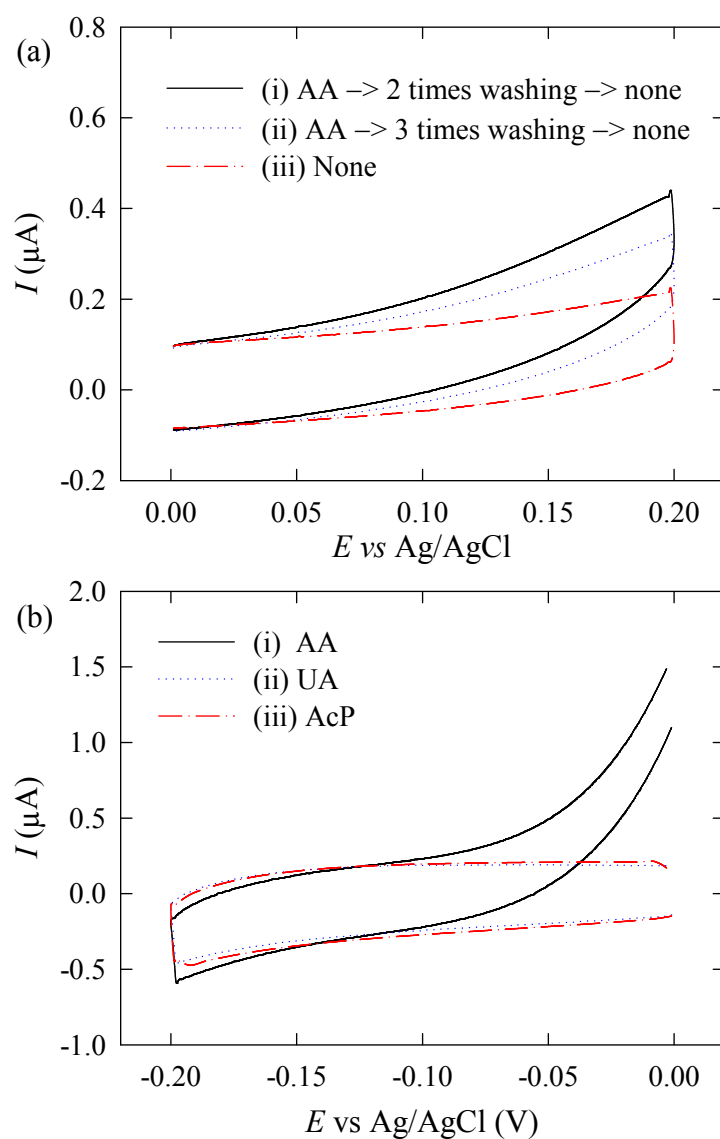


Fig. S3 Chronocoulougrams obtained at -0.20 V, -0.15 V, -0.10 V, and -0.05 V at rGO/ITO electrodes after an incubation for 10 min at 25 °C in PBS containing (a) 1.0 mM AP-GP and 100 mM KIO_3 and (b) 1.0 mM AP-GP, 100 mM KIO_3 , and 50 $\mu\text{g/mL}$ Gal.

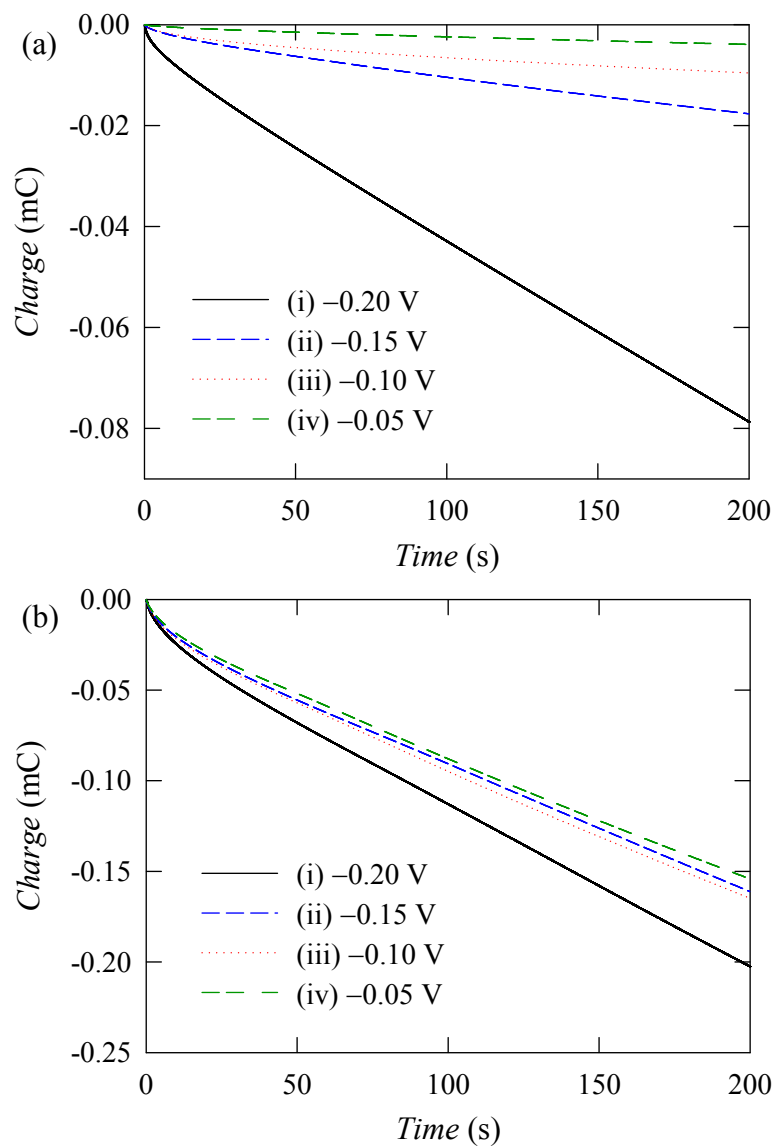


Fig. S4 Chronocoulograms obtained at -0.05 V at rGO/ITO electrodes for (a) different concentrations of mouse IgG in PBS, (b) different concentrations of VV in PBSB, and (c) different concentrations of VV in 50% mandarin juice after the final immunosensing electrodes were incubated for 10 min in PBS containing 1.0 mM AP-GP and 100 mM KIO_3 .

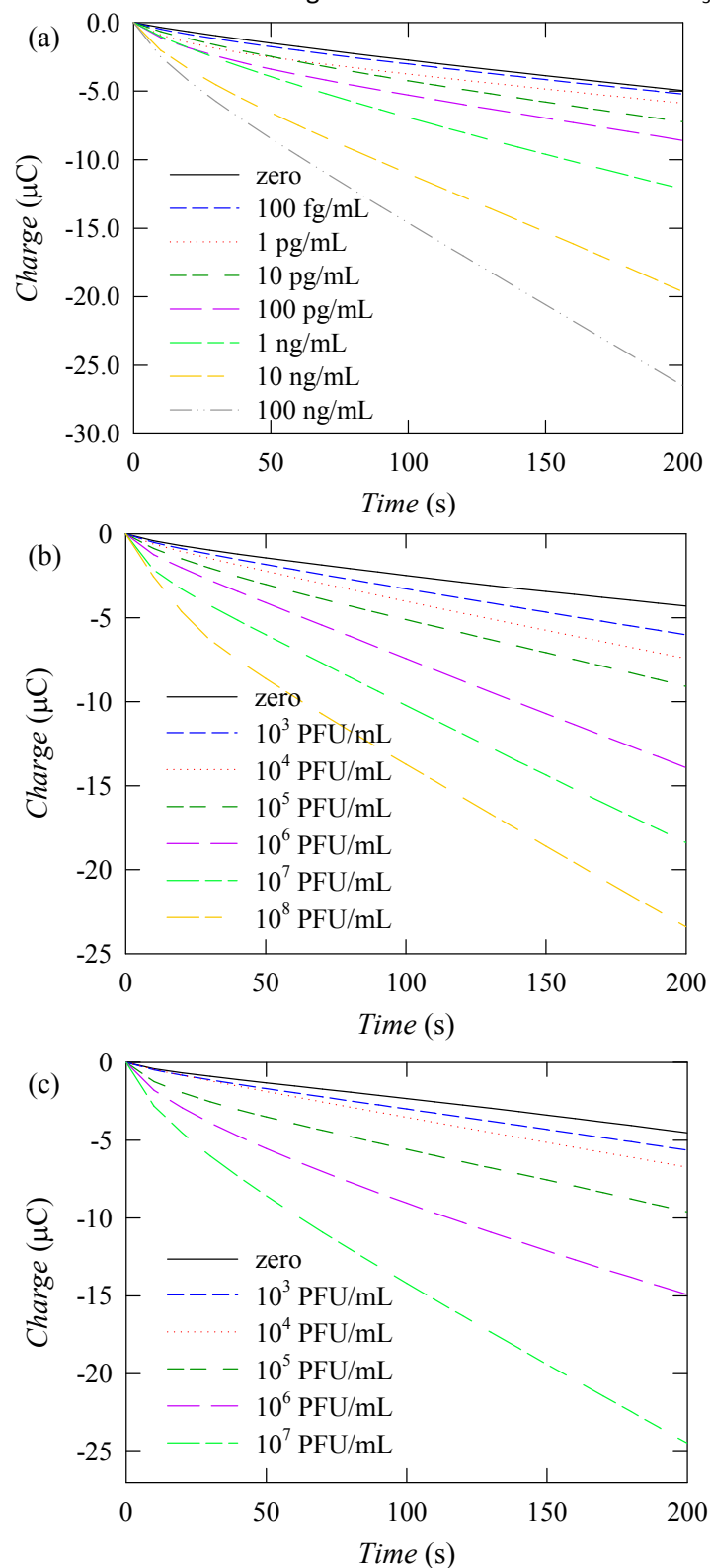


Fig. S5 Scanning electron microscopic images of (a) a bare ITO electrode, (b) a rGO/ITO electrode, and (c) an immunosensing electrode obtained after treating 10^5 PFU/mL VV.

