Supporting Information for:

SERS-based Immunoassay on a Plasmonic Syringe Filter for Improved Sampling and Labeling Efficiency of Biomarkers

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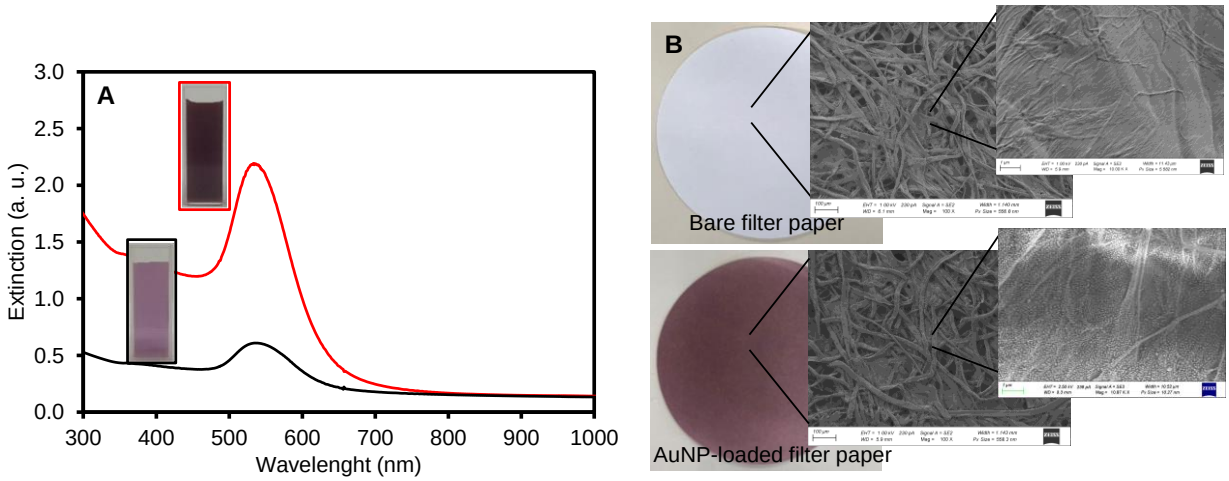

Figure S1. UV-Vis extinction spectra before (red) and after (black) loading of AuNPs onto Whatman grade 4 filter paper to form a plasmonic substrate (A) and corresponding photo and SEM images before and after the deposition of sphere AuNPs on the filter paper.

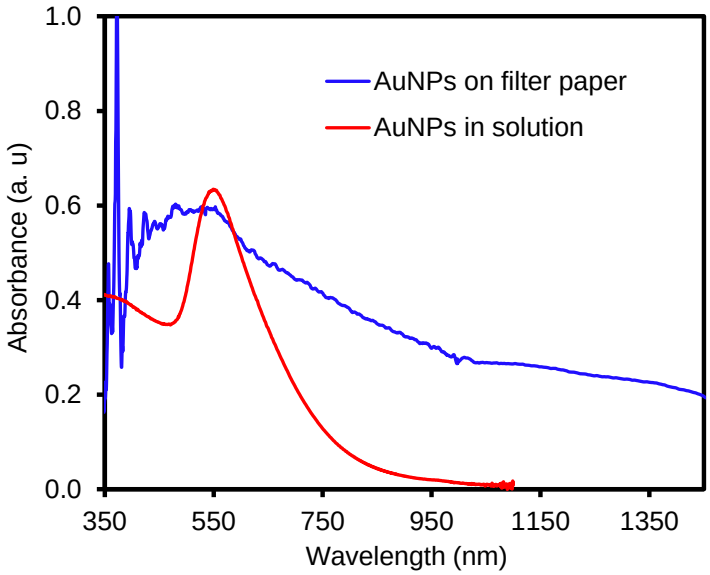

Figure S2. Absorption patterns of AuNPs on filter paper and in solution.

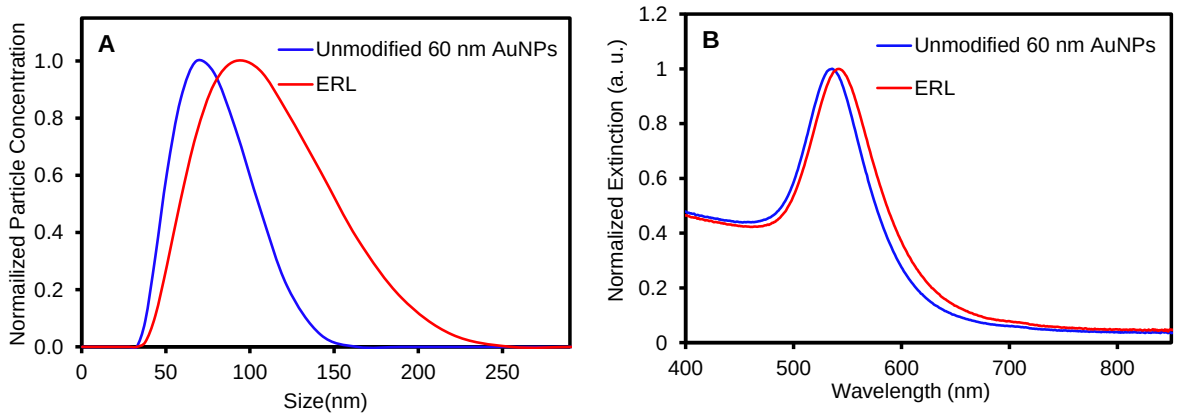

Figure S3. DLS size distribution (A) and extinction spectra (B) of unconjugated 60 nm AuNPs and ERLs.

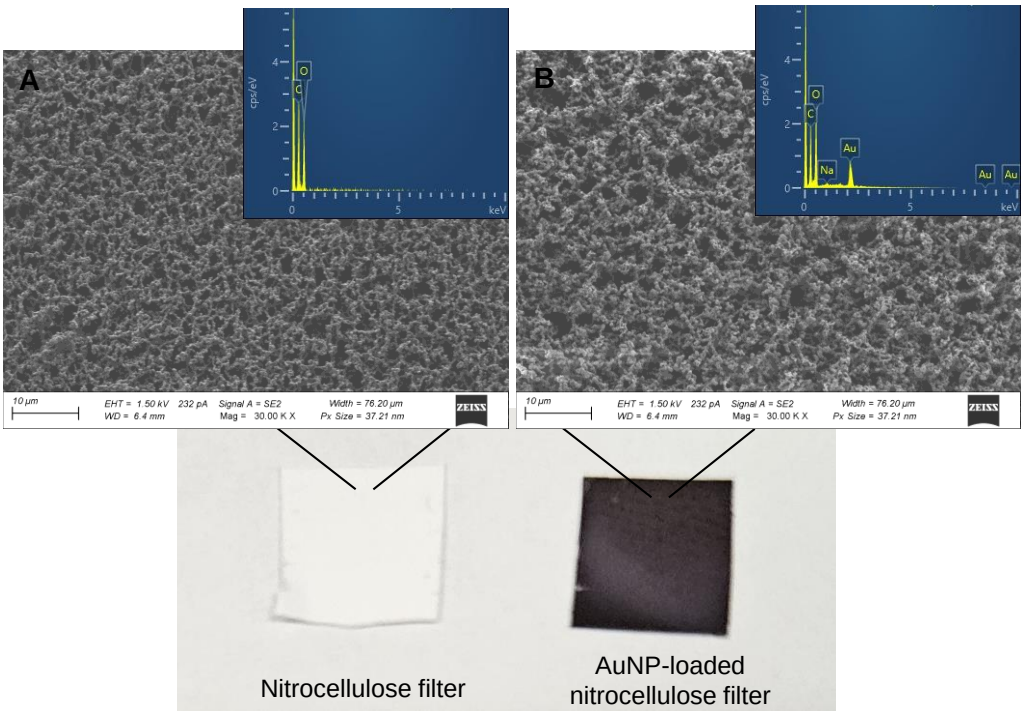

Figure S4. Digital photos, SEM images, and EDX spectra of bare (A) and AuNP-loaded nitrocellulose filter paper (note: EDX was obtained by Oxford AZtecLive Standard EDS System with Ultim Max 65 detector).

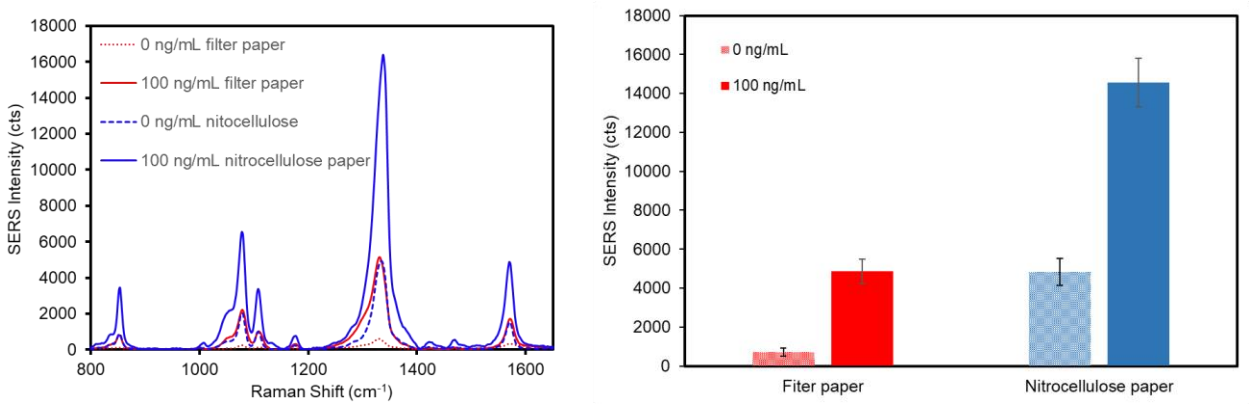

Figure S5. SERS spectra for positive and negative assays on AuNP-loaded filter paper and nitrocellulose paper (left). Average intensity of the SERS band at 1338 cm^{-1} for positive and negative control samples (right).

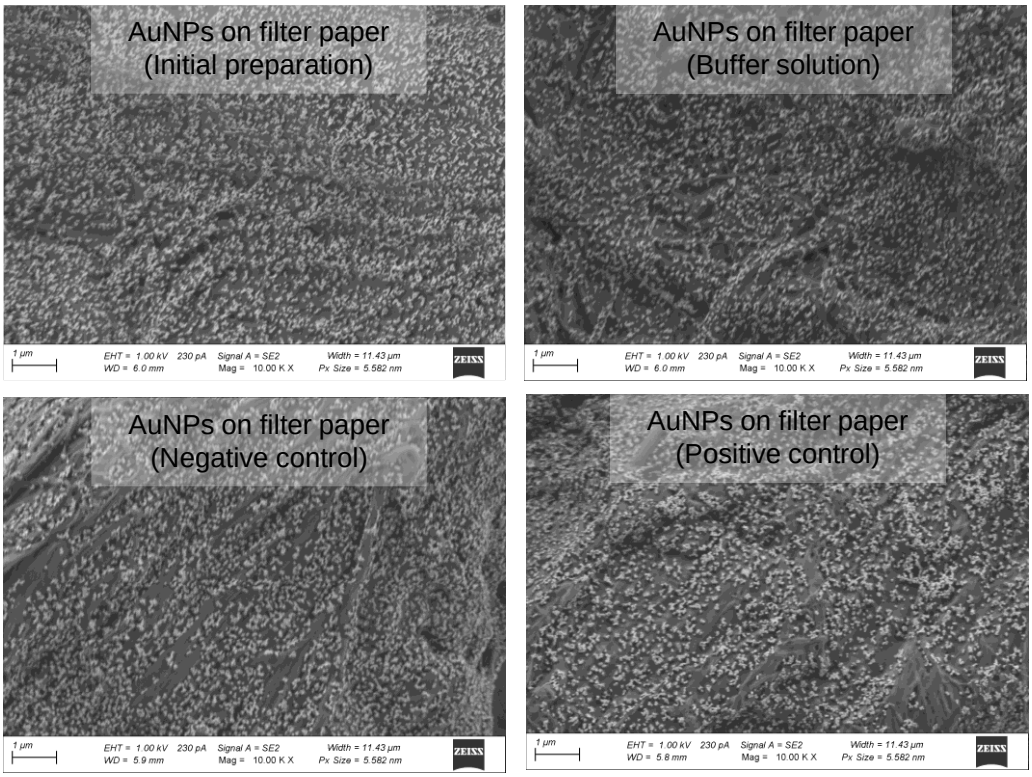

Figure S6. SEM images of AuNP-loaded filter paper as a function of sampling process using a syringe filter system.

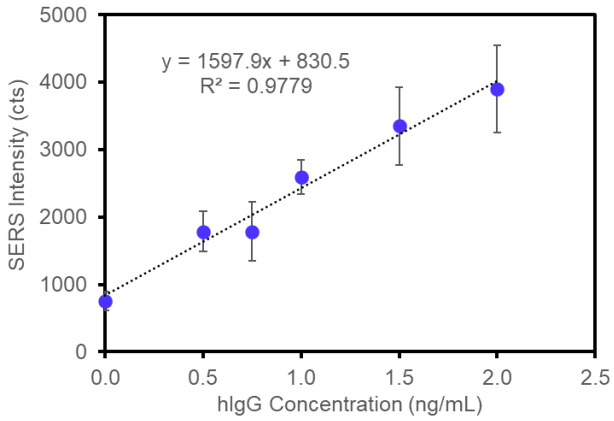

Figure S7. Calibration curve for the detection of human IgG in the low concentration range to determine the LOD.

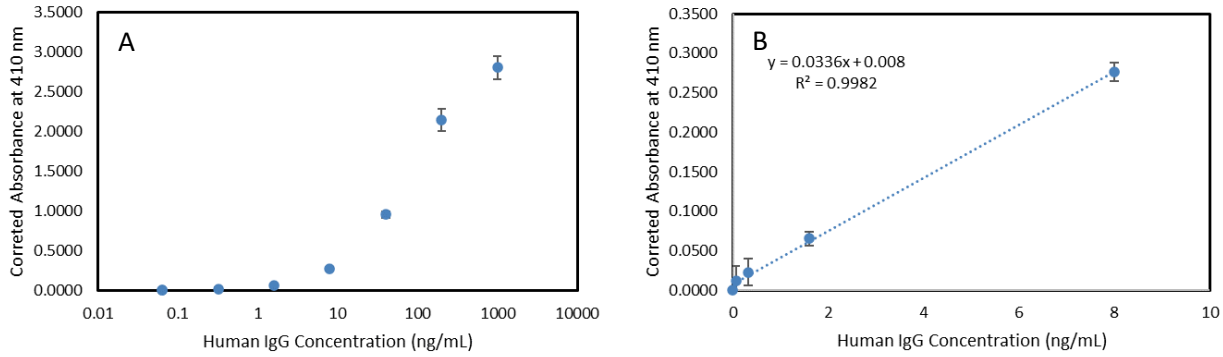

Figure S8. ELISA calibration curve for the detection of human IgG for a broad concentration range (A) and for the low concentration range to determine the LOD (B).