Figure S1. Human IgG immobilization efficacy of gold biochips with three different chemical modifications. Serial two-fold dilutions of human IgG with concentrations ranging between 0.001 and  $10 \,\mu\text{g/ml}$  were prepared to test the protein-binding efficiency of the chemically modified biochips. Binding efficacies of human IgG protein were revealed on (A) PDITC-modified biochip, (B) PAMAM-modified biochip and (C) PDITC-activated PAMAM-modified biochip. Fluorescence intensity indicates strength of binding. IgG, immunoglobulin G; PDITC, 1, 4-phenylene diisothiocyanate; PAMAM, polyamidoamine.

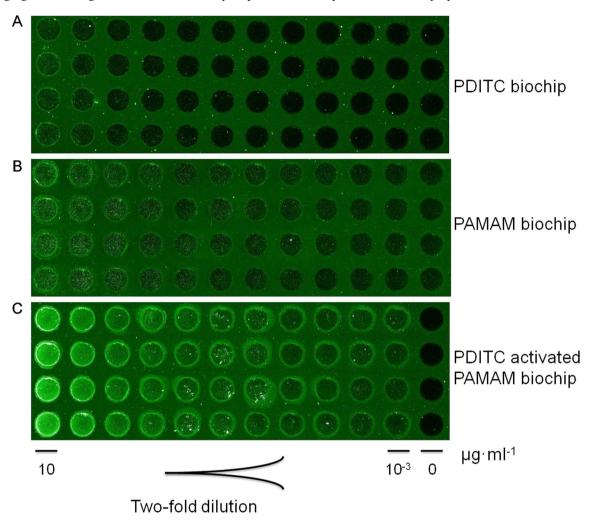


Figure S2. Optimization of the immobilization concentration of anti-human interferon- $\gamma$  pAb (capture Ab) on the biochip. Fluorescence intensity indicates strength of binding. The three rows represent three repeats. The data are presented as the mean  $\pm$  SD. Ab, antibody.

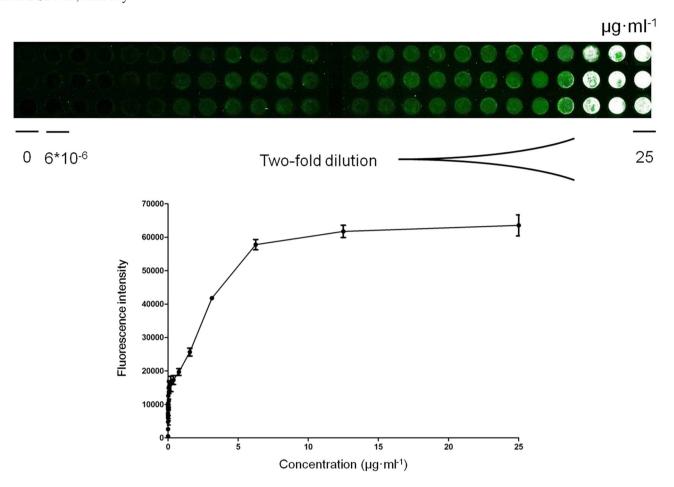


Figure S3. Optimization of the reaction concentration of anti-human interferon- $\gamma$  mAb (detection Ab) on the biochip. The green fluorescence represents stronger binding strength. The three rows represent three repeats. The data are presented as the mean  $\pm$  SD (n=3). Ab, antibody.

