

SUPPLEMENTARY INFORMATION

Virus Assay Using Antibody-Functionalized Peptide Nanotubes

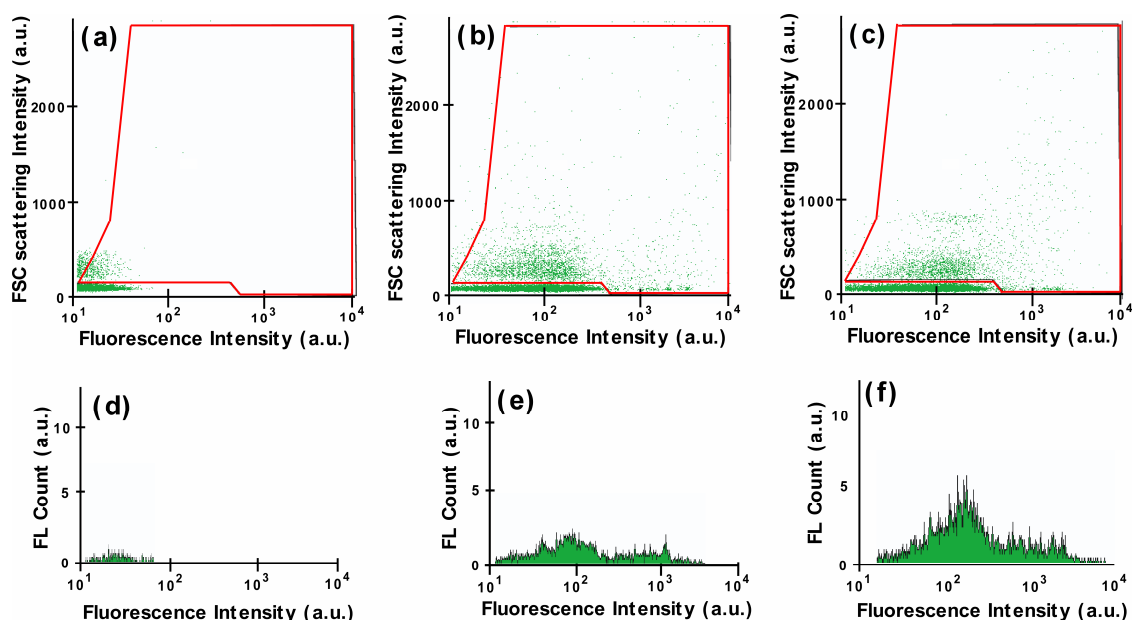
Authors: Robert I. MacCuspie[†], Ipsita A. Banerjee[†], Christophe Pejoux[†], Sanjay Gummalla[‡], Howard S. Mostowski[‡], Philip R. Krause[‡], Hiroshi Matsui^{†,*}

Author Affiliation:

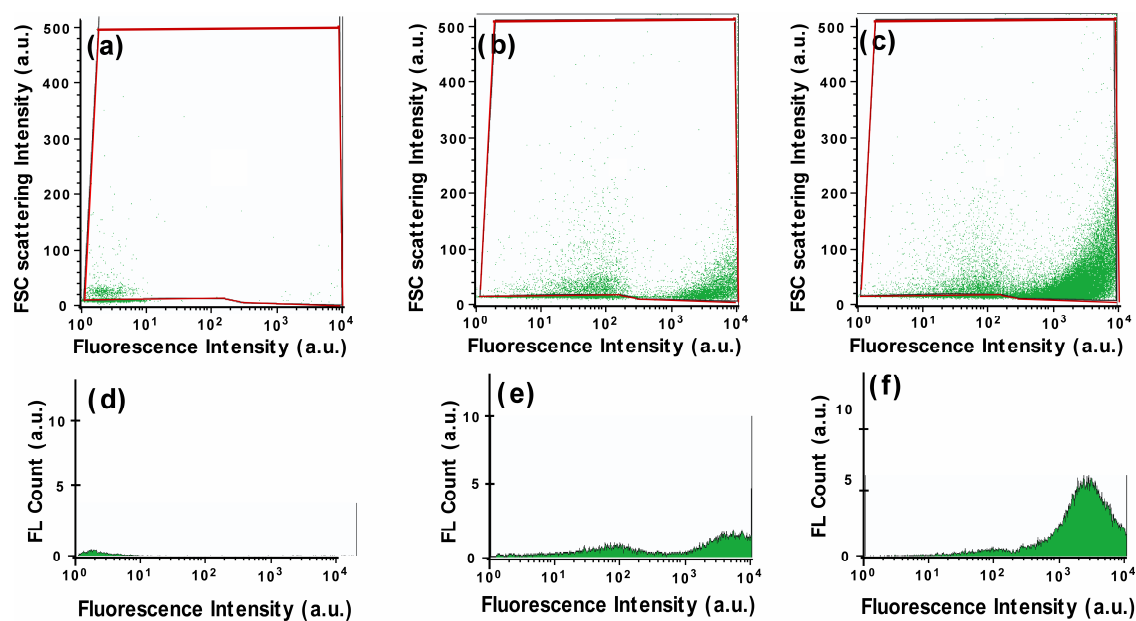
[†]Department of Chemistry, Hunter College and The Graduate Center, The City University of New York, 695 Park Ave, New York, NY, 10021.

[‡]Food & Drug Administration, Center for Biologics Evaluation and Research, Office of Vaccine Research and Review, Division of Viral Products, 29 Lincoln Drive, Bethesda, MD, 20852.

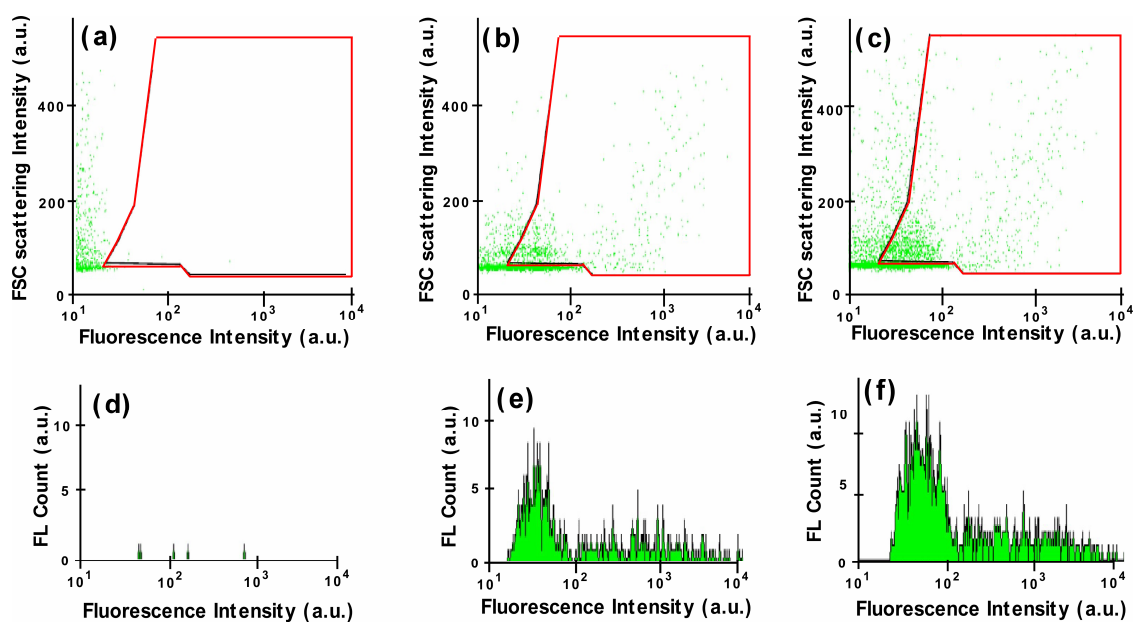
S-1. Distribution of forward light scattering (FSC) intensity and fluorescence intensity of (a) neat anti-influenza nanotubes (b) anti-influenza nanotubes with 10^3 pfu/mL influenza-B in solution (c) anti-influenza nanotubes with 10^6 pfu/mL influenza-B in solution. Integrated fluorescence intensities inside the gates (red lines) in (a), (b), and (c) are normalized in (d), (e), and (f).



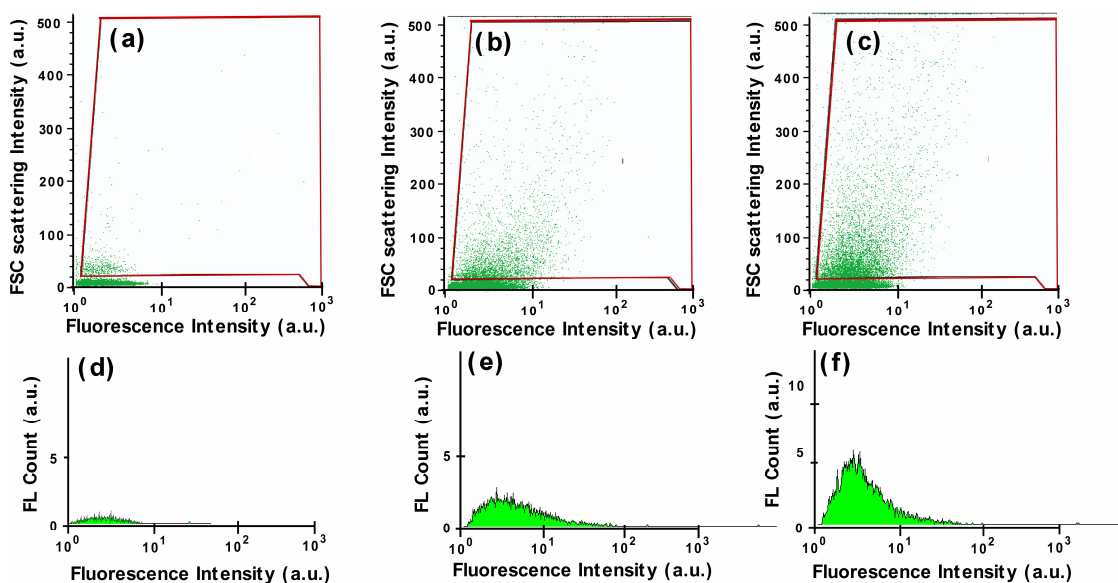
S-2. Distribution of forward light scattering (FSC) intensity and fluorescence intensity of (a) neat anti-vaccinia nanotubes (b) anti-vaccinia nanotubes with 10^3 pfu/mL vaccinia in solution (c) anti-vaccinia nanotubes with 10^6 pfu/mL vaccinia in solution. Integrated fluorescence intensities inside the gates (red lines) in (a), (b), and (c) are normalized in (d), (e), and (f).



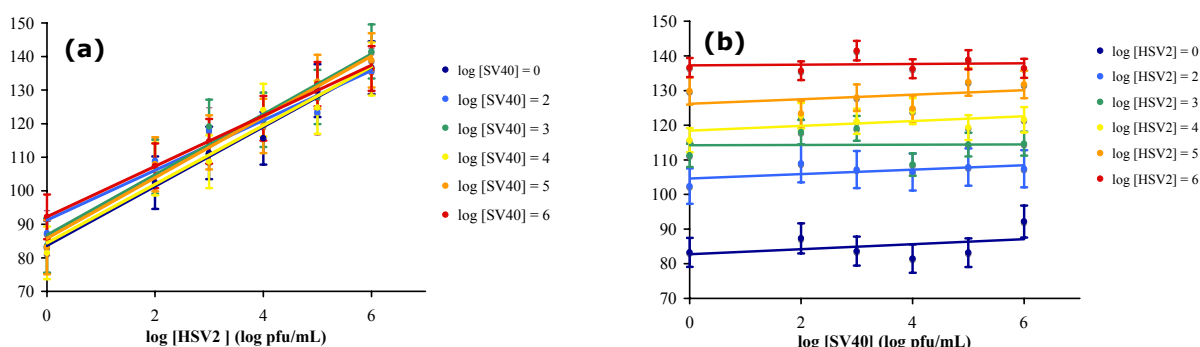
S-3. Distribution of forward light scattering (FSC) intensity and fluorescence intensity of (a) neat anti-adenovirus nanotubes (b) anti-adenovirus nanotubes with 10^3 pfu/mL adenovirus in solution (c) anti-adenovirus nanotubes with 10^6 pfu/mL adenovirus in solution. Integrated fluorescence intensities inside the gates (red lines) in (a), (b), and (c) are normalized in (d), (e), and (f).



S-4. Distribution of forward light scattering (FSC) intensity and fluorescence intensity of (a) neat anti-SV40 nanotubes (b) anti-SV40 nanotubes with 10^3 pfu/mL SV40 in solution (c) anti-SV40 nanotubes with 10^6 pfu/mL SV40 in solution. Integrated fluorescence intensities inside the gates (red lines) in (a), (b), and (c) are normalized in (d), (e), and (f).



S-5. *Quantification of the concentration of HSV-2 in mixed solutions of HSV-2 and SV-40, probed by anti-HSV-2 nanotubes. (a) Correlation between the HSV-2 concentration and integrated fluorescence intensity of the anti-HSV nanotube-HSV-2 aggregates under known concentrations of the SV-40 addition ($0, 10^2, 10^3, 10^4, 10^5, 10^6$ pfu/mL, shown in different colors). (b) Correlation between the SV-40 concentration and integrated fluorescence intensity of the anti-HSV nanotube-HSV-2 aggregates under known concentrations of the HSV-2 addition ($0, 10^2, 10^3, 10^4, 10^5, 10^6$ pfu/mL, shown in different*



colors).