Supplementary Information

Comprehensive Studies to Improve Ultrasensitive Detection of HIV p24 Antigen.

Evan Reboli[1], Ajoke Williams [1], Ankan Biswas [1], Tianwei Jia[2], Ying Luo,[3] Mukesh Kumar,[4] Suri Iyer [1,*]

[1]Department of Chemistry, Kennedy College of Science, University of Massachusetts Lowell, 520 Olney Science Center, Lowell, Massachusetts 01854, United States

[2]Department of Surgery, Beth Israel Deaconess Medical Center, Harvard Medical School, National Center for Functional Glycomics, CLS 11087-3 Blackfan Circle, Boston, Massachusetts 02115, United States

[3]Department of Chemistry, Center for Diagnostics and Therapeutics, Georgia State University, 788 Petit Science Center, Atlanta, Georgia 30302, United States

[4]Department of Biology, Center for Diagnostics and Therapeutics, Georgia State University, 622 Petit Science Center, Atlanta, Georgia 30302, United States

Table of contents

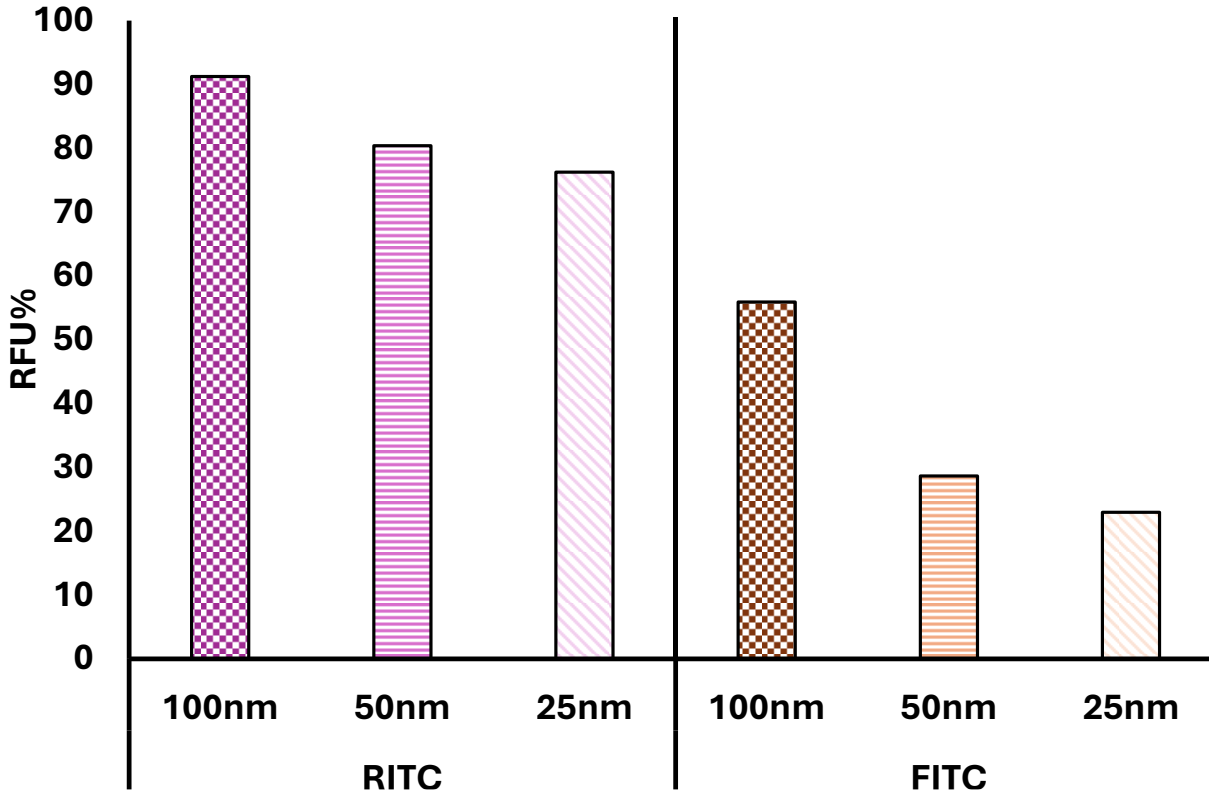

Figure S1. Relative fluorescence of different sized particles at the same weight concentration (50/.1 ug/mL) of different particle sizes. The y-axis, %RFU, is the percent relative fluorescence intensity of the sample as a function of an internal control.

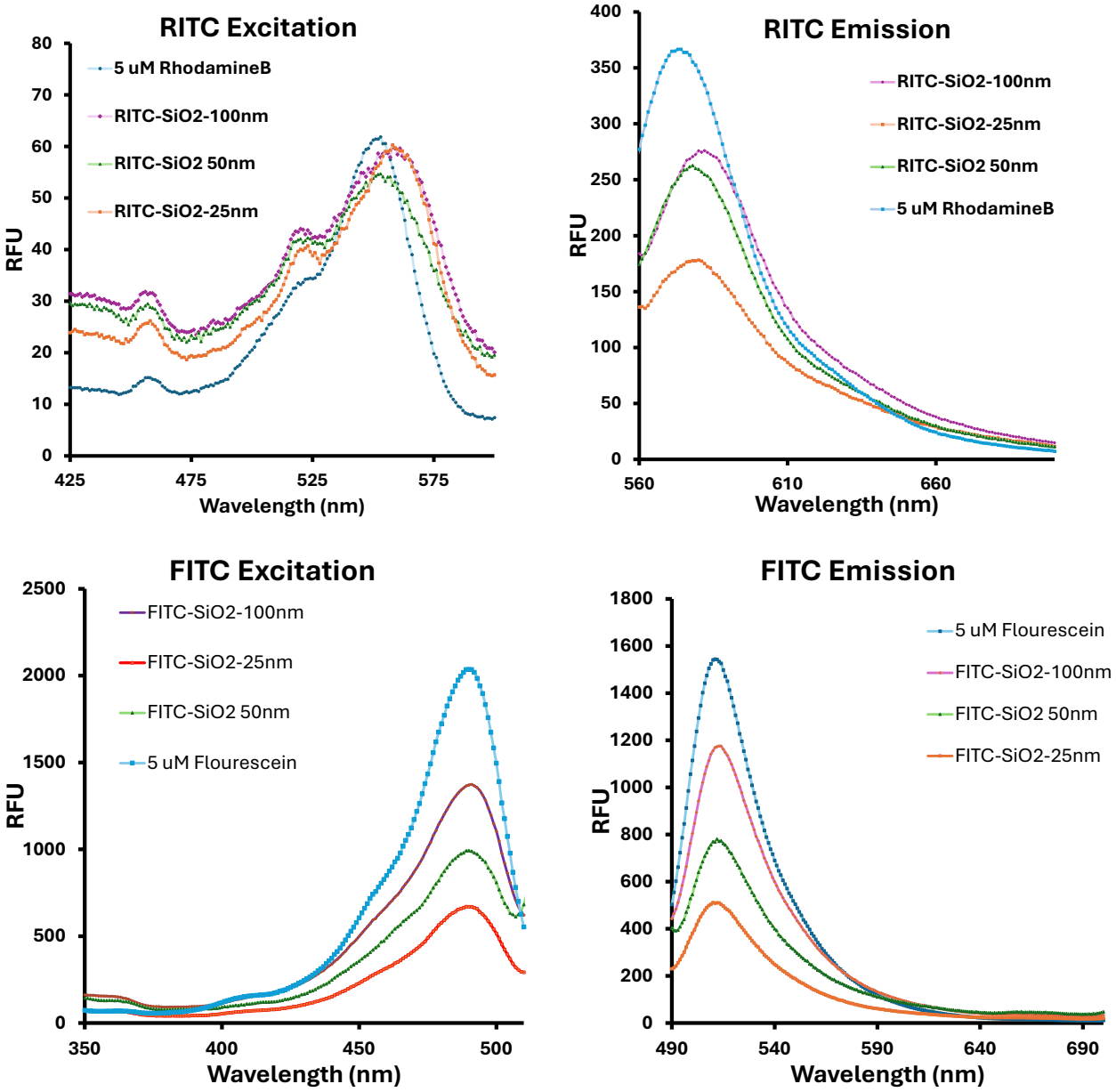

Figure S2. Excitation and Emission of RITC (top), Excitation and Emission of FITC (bottom)

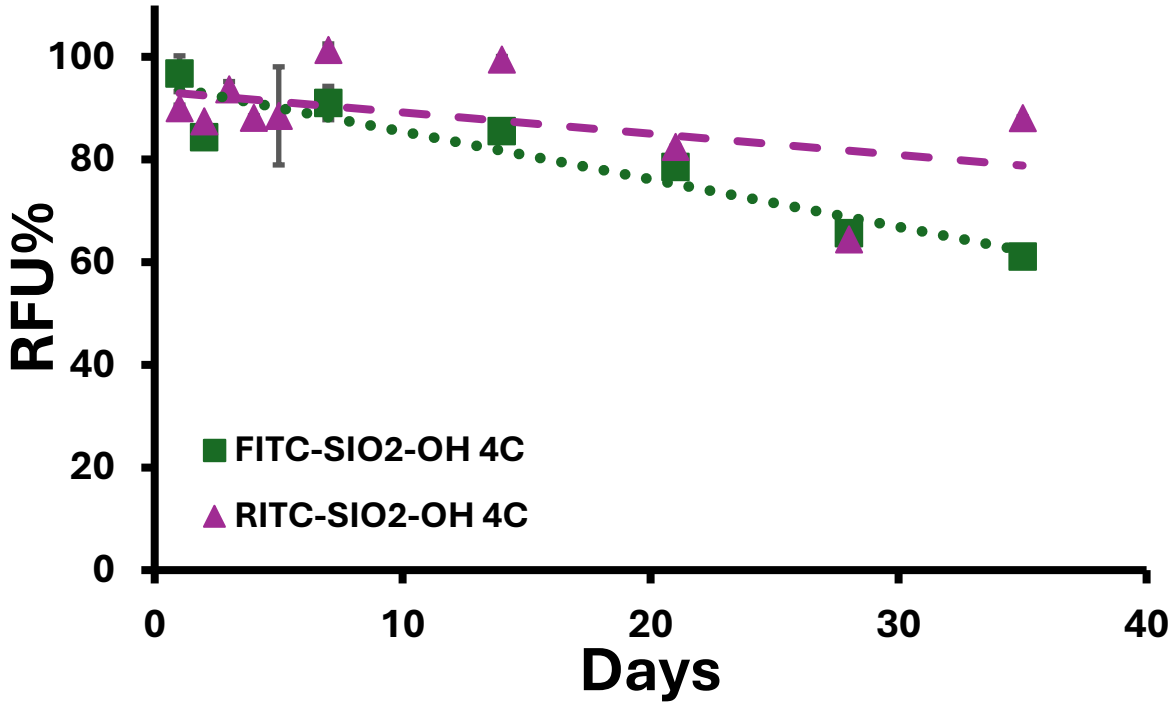

Figure S3. Photostability of FITC-SiO_2-OH and RITC-SiO_2-OH stored at 4 ^{0}C.

`

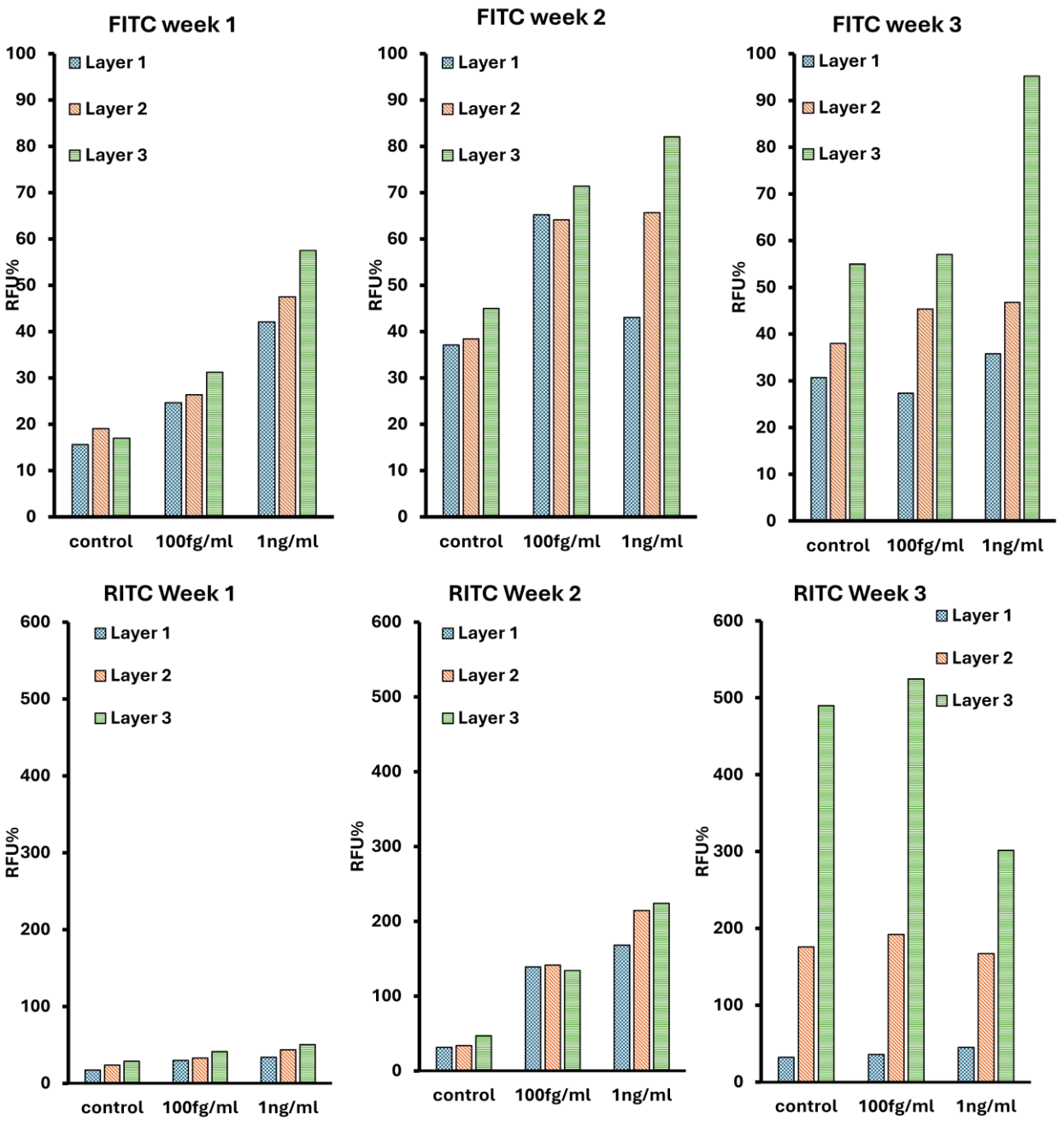

Figure S4. Functional stability of FITC (top) over three weeks, and functional stability of RITC (bottom) for 3 weeks.

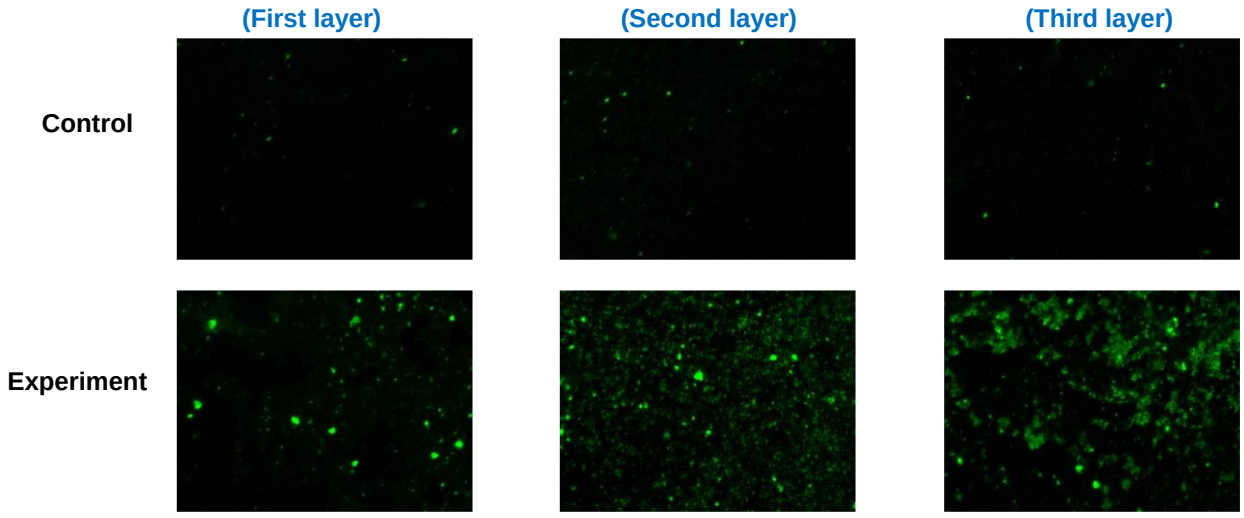

Figure S5. Confocal microscopy images of the FITC-SiO2-PEG5k-TZ/TCO nanoparticle layers