Supporting information for: Folate Receptor Targeted Theranostic Nanoconstruct for Surface-Enhanced Raman Scattering (SERS) Imaging and Photodynamic Therapy (PDT)

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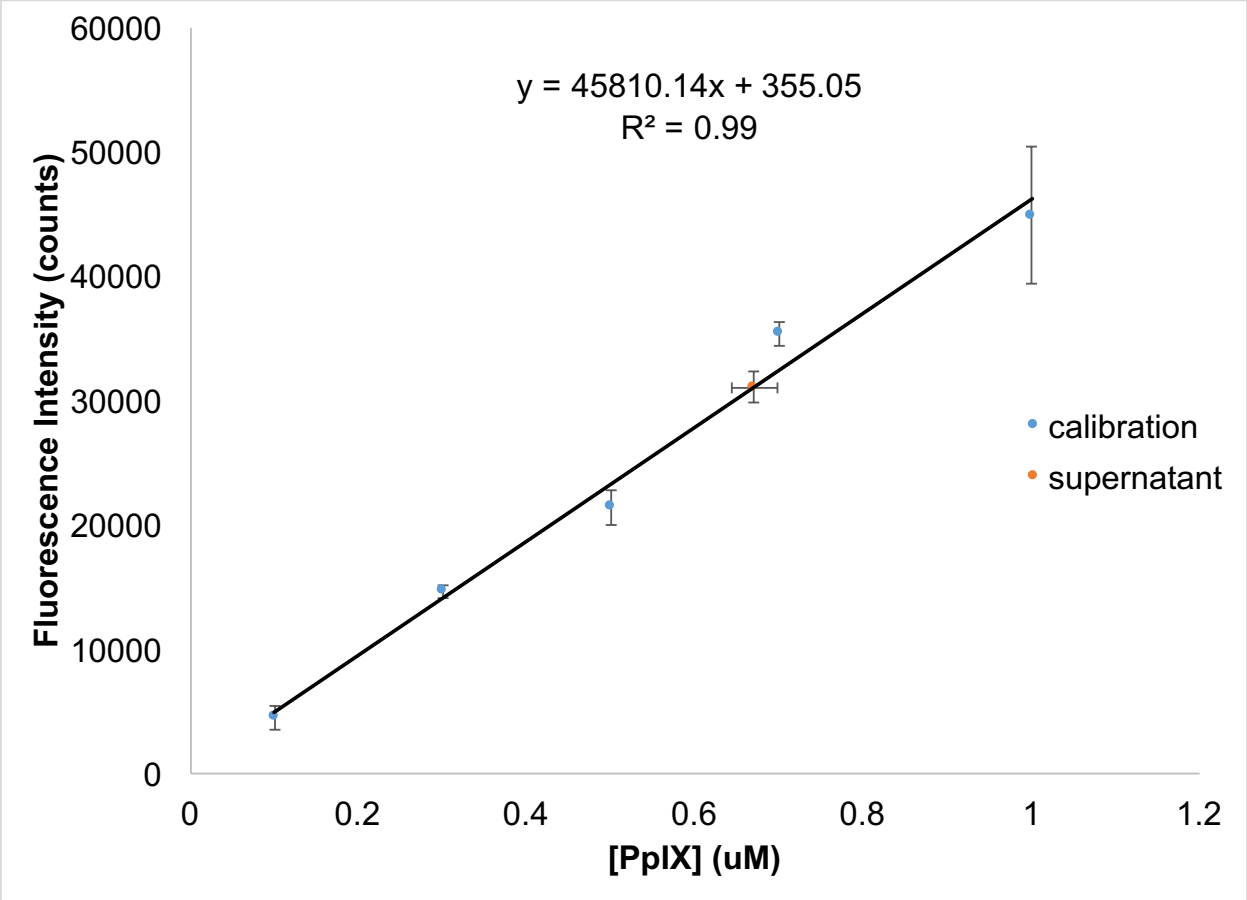

Figure S1.Calibration curve for the quantitation of PpIX encapsulated in the theranostic nanoparticles. Of the initial 1 µM PpIX, there was found to be 0.67 ± 0.03 µM remaining in the supernatant after silica coating. This results in an estimated 0.33 ± 0.03 µM loaded on 0.1 nM of particles.

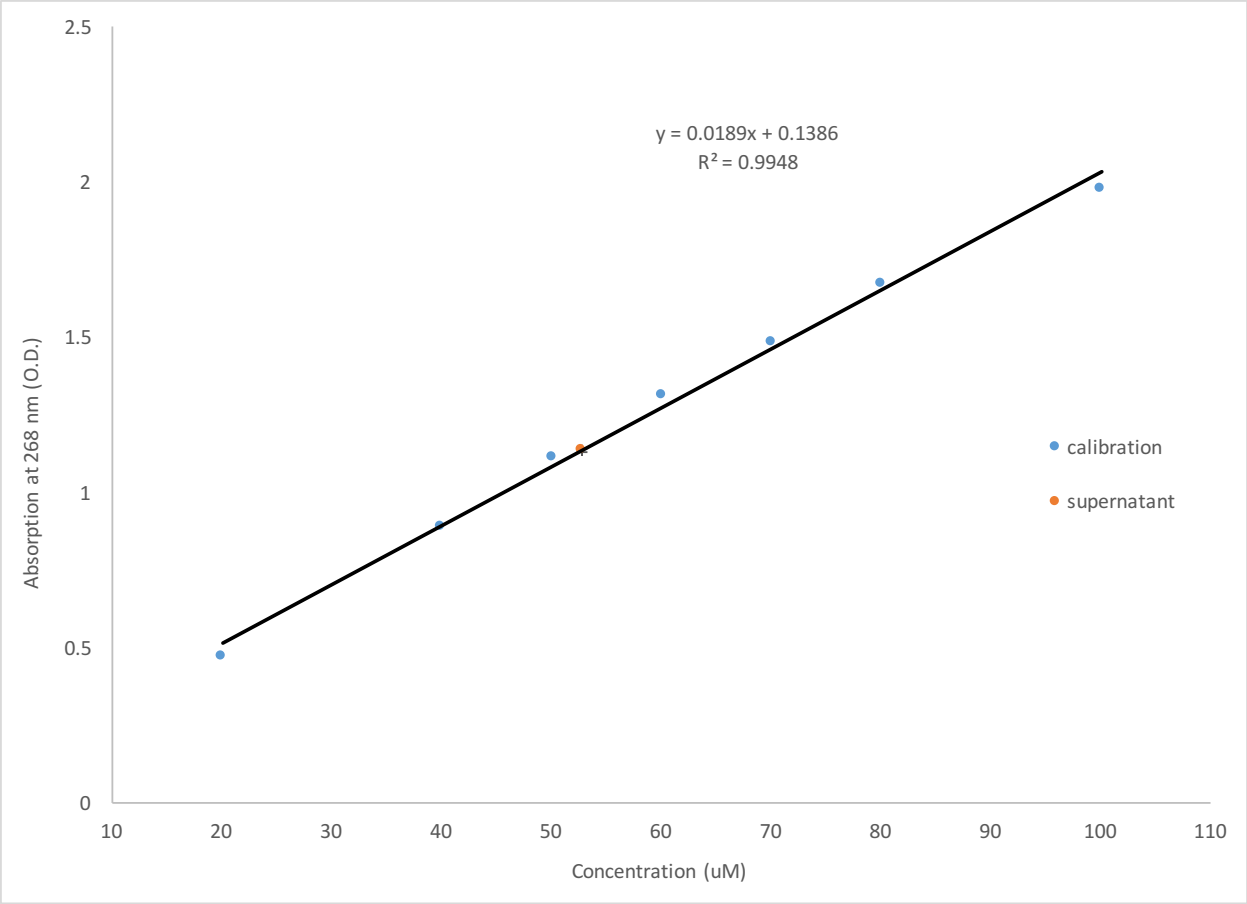

Figure S2. Calibration curve for the quantitation of FA-PEG conjugated to the theranostic nanoparticles. After the conjugation reaction, the particles were spun down by centrifugation, the supernatant was collected, diluted 10x, and measured on a UV/Vis spectrophotometer. The FA absorption at 268 nm was used to quantify the remaining FA-PEG in the supernatant. Of the initial 58.8 μM FA-PEG, 52.8 ± 0.2 μM remained in the supernatant after conjugation. This corresponds to 0.204 ± 0.007 mg of the initial 2 mg incorporated onto the particles.

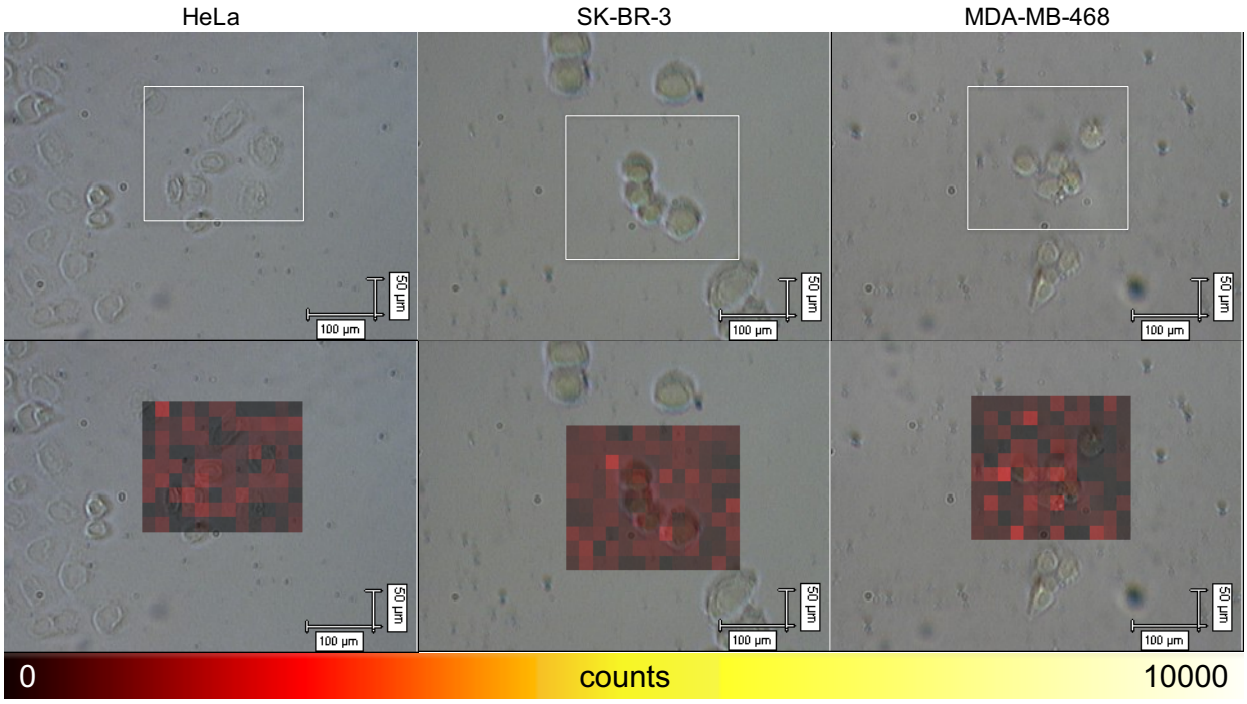

Figure S3. Raman mapping of the three different cell lines after 4 hr incubation with untargeted theranostic nanoparticles at 0.1 nM concentration. The sample was scanned in a grid pattern with 20 µm step size, taking a 1 s acquisition at each point. The Raman peak intensity at each point was then integrated to create the false-color map that is overlaid on the brightfield image. All cell lines show little to no Raman signal, indicating that cellular uptake of untargeted nanoparticles is minimal over the 4 hr incubation period.

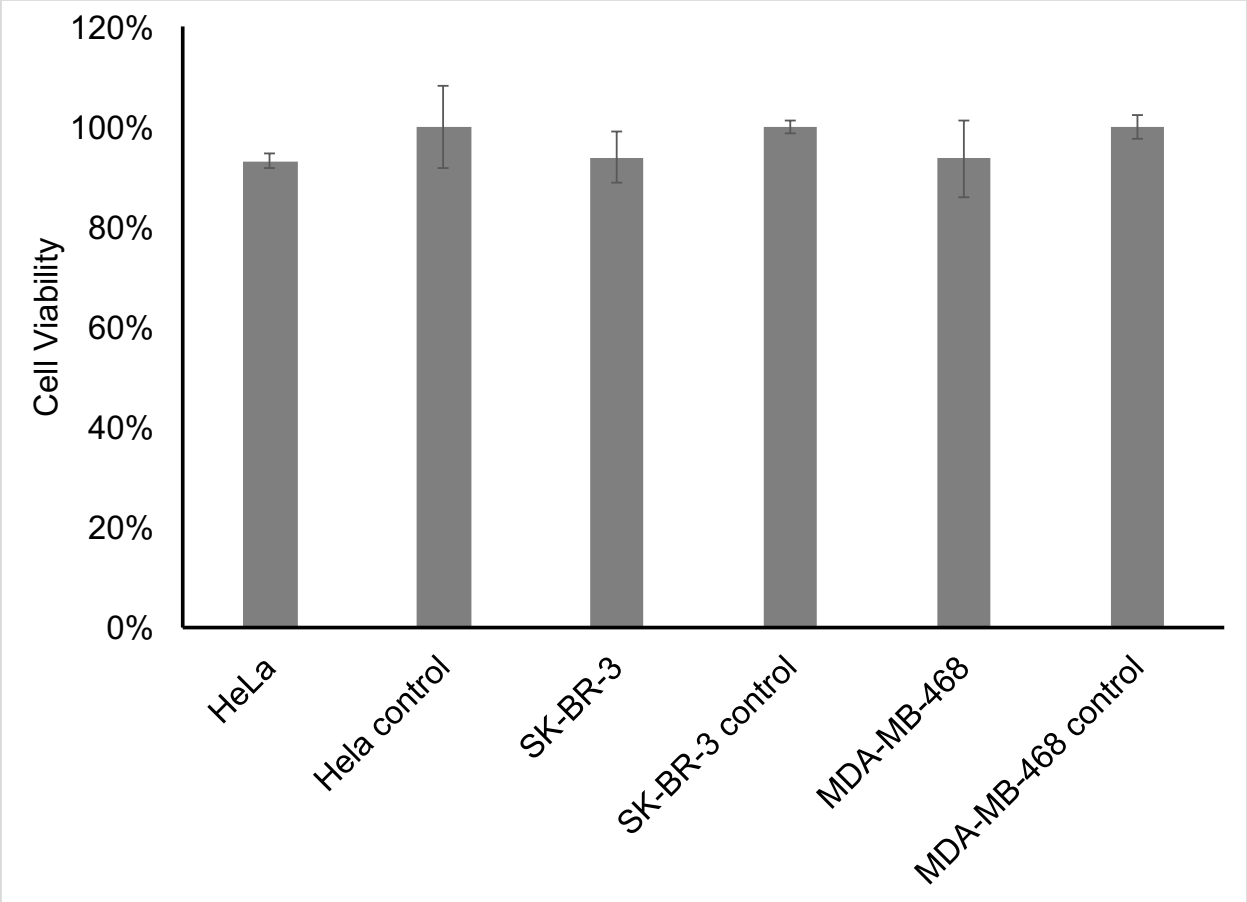

Figure S4. Resazurin-based cell viability assay of the three cell lines after 4 hr incubation with the theranostic nanoparticles. There is a slight decrease in viability observed after particle incubation, though none are statistically significant.