Supporting Information for:

Mixtures of Supported and Hybrid Lipid Membranes on Heterogeneously Modified Silica Nanoparticles

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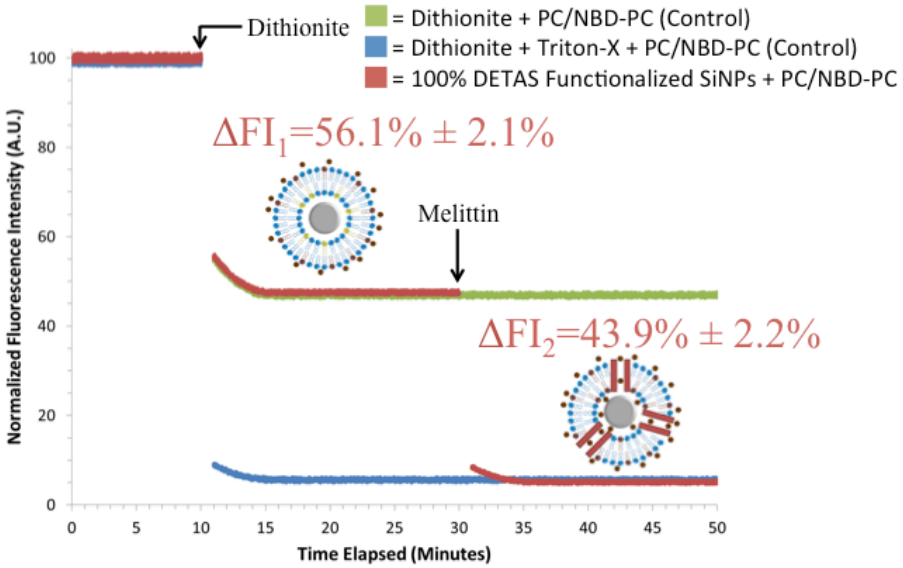

Figure S1. Dithionite quenching assay of PC/NBD-PC coated SiNPs, functionalized with 100% DETAS. Sodium dithionite control (green) was collected by adding 5 mM sodium dithionite to the PC-coated 100% DETAS functionalized SiNP. A complete fluorescence quenching control (blue) was achieved by adding 5 mM sodium dithionite and 0.5 mM Triton-X to the PC-coated functionalized SiNP simultaneously. In the final trial (red), the outer leaflet fluorescence was quenched by the addition of 5 mM sodium dithionite. Then, 1.3 µM melittin was added to allow the sodium dithionite quencher access to the inner leaflet.

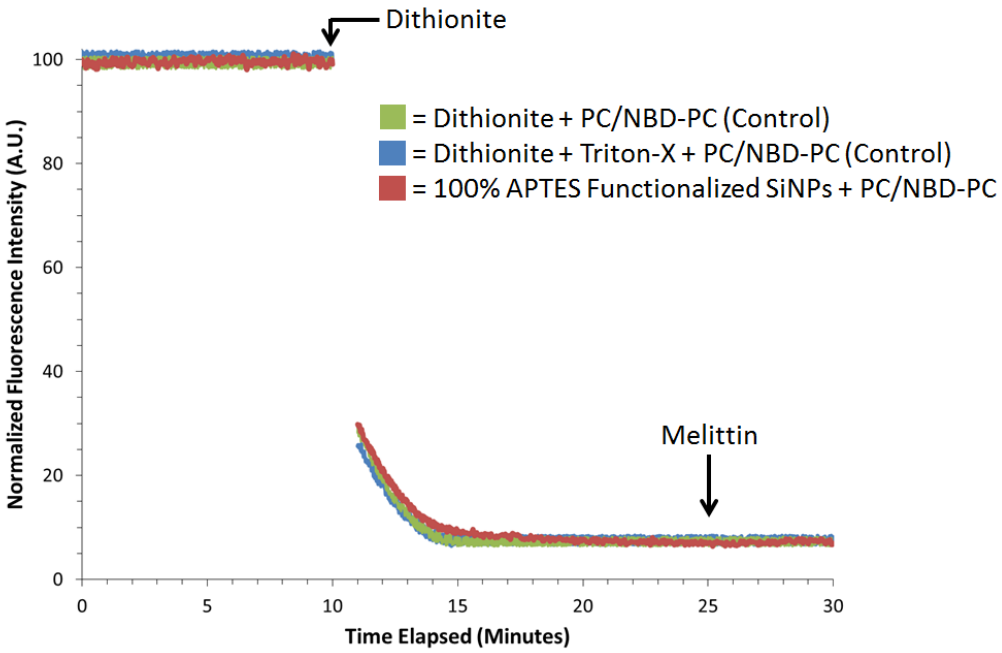

Figure S2. Dithionite quenching assay of PC/NBD-PC coated SiNPs, functionalized with 100% APTES. Sodium dithionite control (green) was collected by adding a final concentration of 5 mM sodium dithionite to the PC-coated 100% APTES functionalized SiNP. A control (blue) was performed by adding 5 mM sodium dithionite and 0.5 mM Triton-X simultaneously to the PC-coated functionalized SiNP. In the final trial (red), the outer leaflet fluorescence was quenched by the addition of 5 mM sodium dithionite and collected for 15 min. Then, a final concentration of 1.3 μM melittin was added.

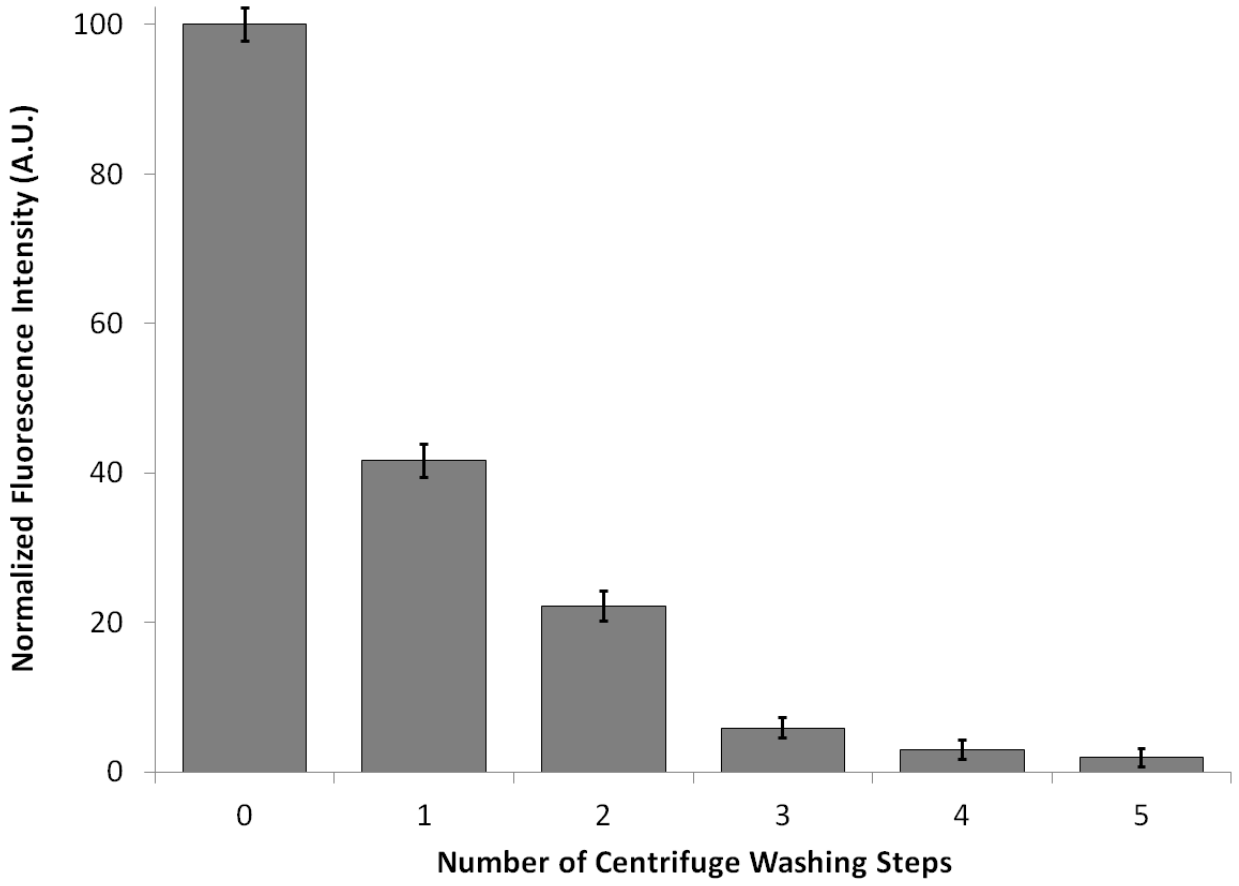

Figure S3. Normalized fluorescence intensity of a mixture of PC-coated nanoparticles mixed with 1% NBD-PC doped SoyPC liposomes demonstrating high purity after 5 washes. Fluorescence is plotted as a function of the number of washing steps via repeated centrifugation and re-suspension, n=3.