

## SUPPORTING INFORMATION

### Degradation of Liposomal Subcompartments in PEGylated Capsosomes

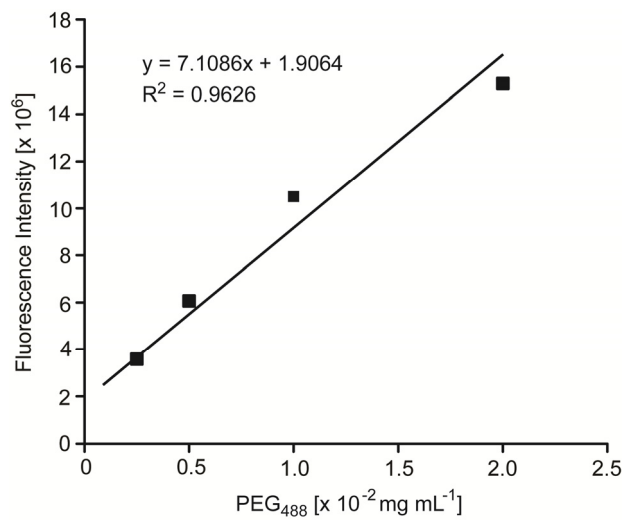
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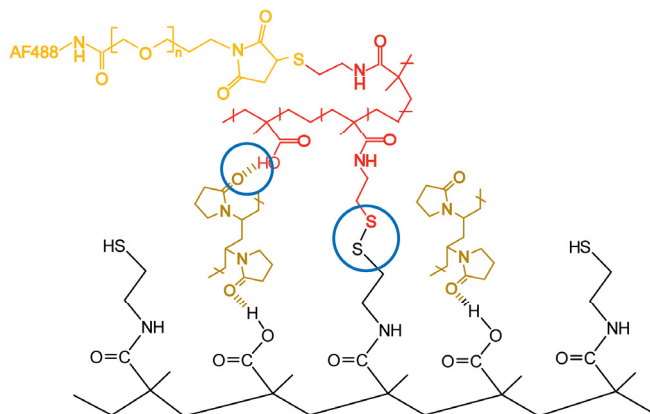
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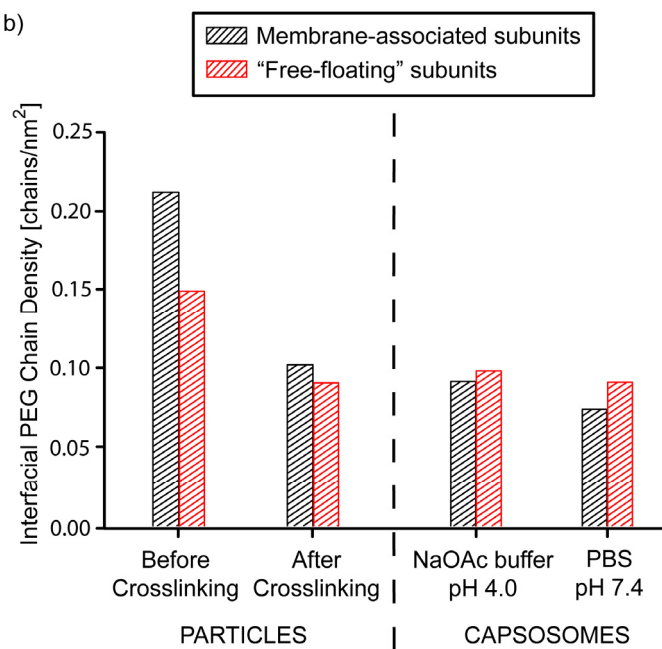


**Figure S1.** Fluorescence calibration curve for PEG<sub>488</sub>.

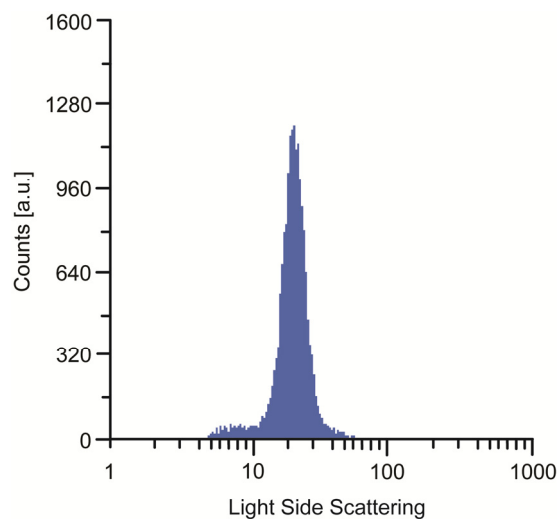
a) PEGylation with PMA<sub>PD</sub>-PEG<sub>488</sub> via reaction method



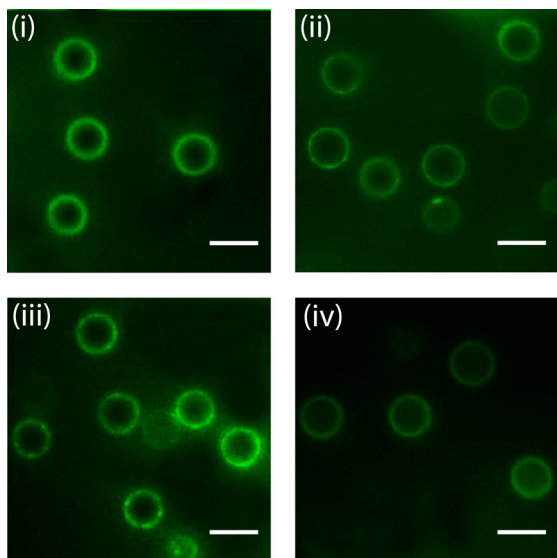
b)



**Figure S2.** a) PEG surface functionalization via reaction where the PMA<sub>PD</sub>-PEG copolymer reacts with the thiol groups of the PMA<sub>SH</sub> chains via thiol-disulfide exchange. b) Interfacial PEG chain density on coated silica particles or capsosomes by the immobilization of PMA-PEG copolymers on the membrane of the carrier via reaction. This approach yielded a PEG density of  $\sim 0.08$  chains/nm<sup>2</sup>.



**Figure S3.** Light side scattering histogram of PEGylated capsosomes incubated in cell medium for 48 h, showing that the analyzed capsosomes are singlets, hence no aggregation is observed in the presence of serum.



**Figure S4.** Fluorescence microscopy images of PEGylated capsosomes in PBS (i, ii) or in cell media (iii, iv) before and after exposure to PLA<sub>2</sub> for 48 h at 37 °C, respectively. Scale bars are 5 μm.