Supporting Information

Conjugation dependent interaction of folic acid with folate binding protein

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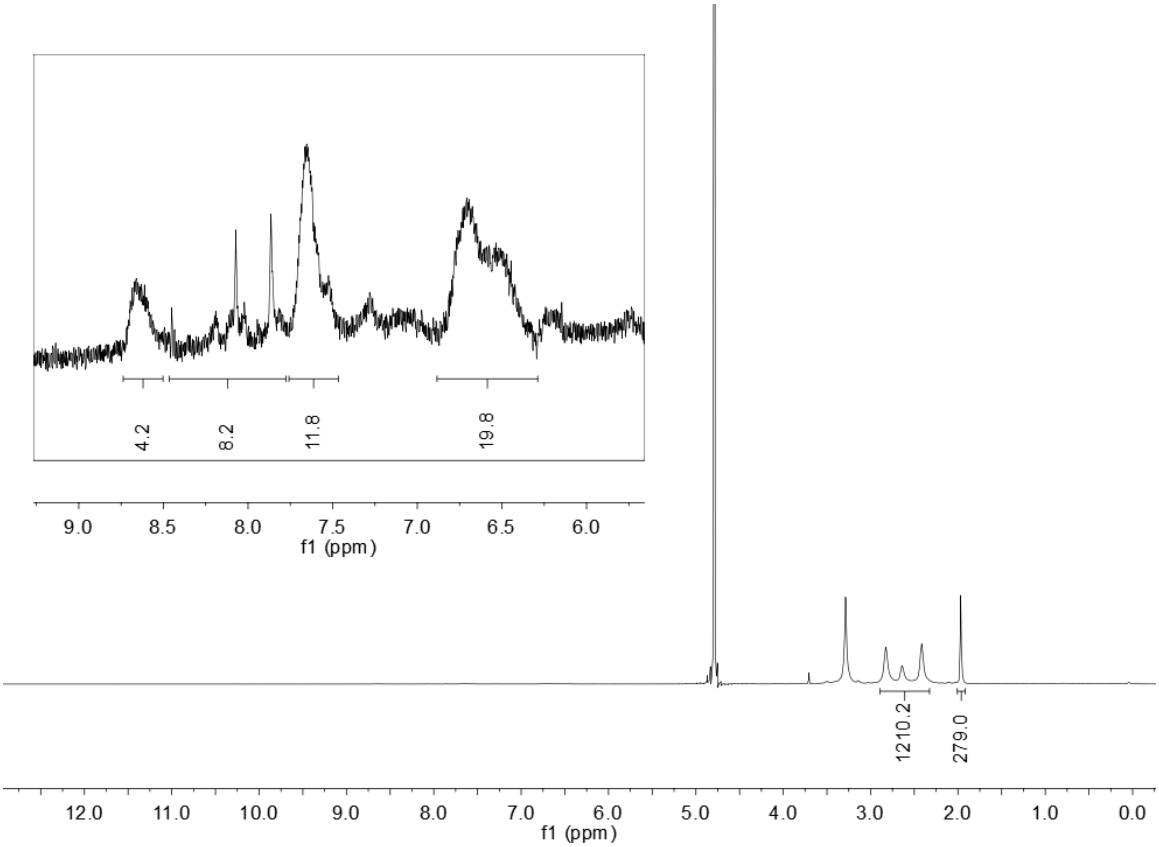


Figure S1. ^{1}H NMR spectrum (D_2O) of $G5_{Ac}$-$FA_{4(avg)}$-$FITC_2$ ($G5_{Ac}$-$FA_{4(avg)}$). The singlet at 1.97 ppm corresponds to the terminal acetyl groups on the dendrimer. The broad singlet at 8.7 corresponds to 1 FA proton, indicating an average of ~4 FA per dendrimer. The broad signal with a max at 6.7 ppm includes 2 FA protons and 5 FITC, leading to an average of ~2 FITC per dendrimer.

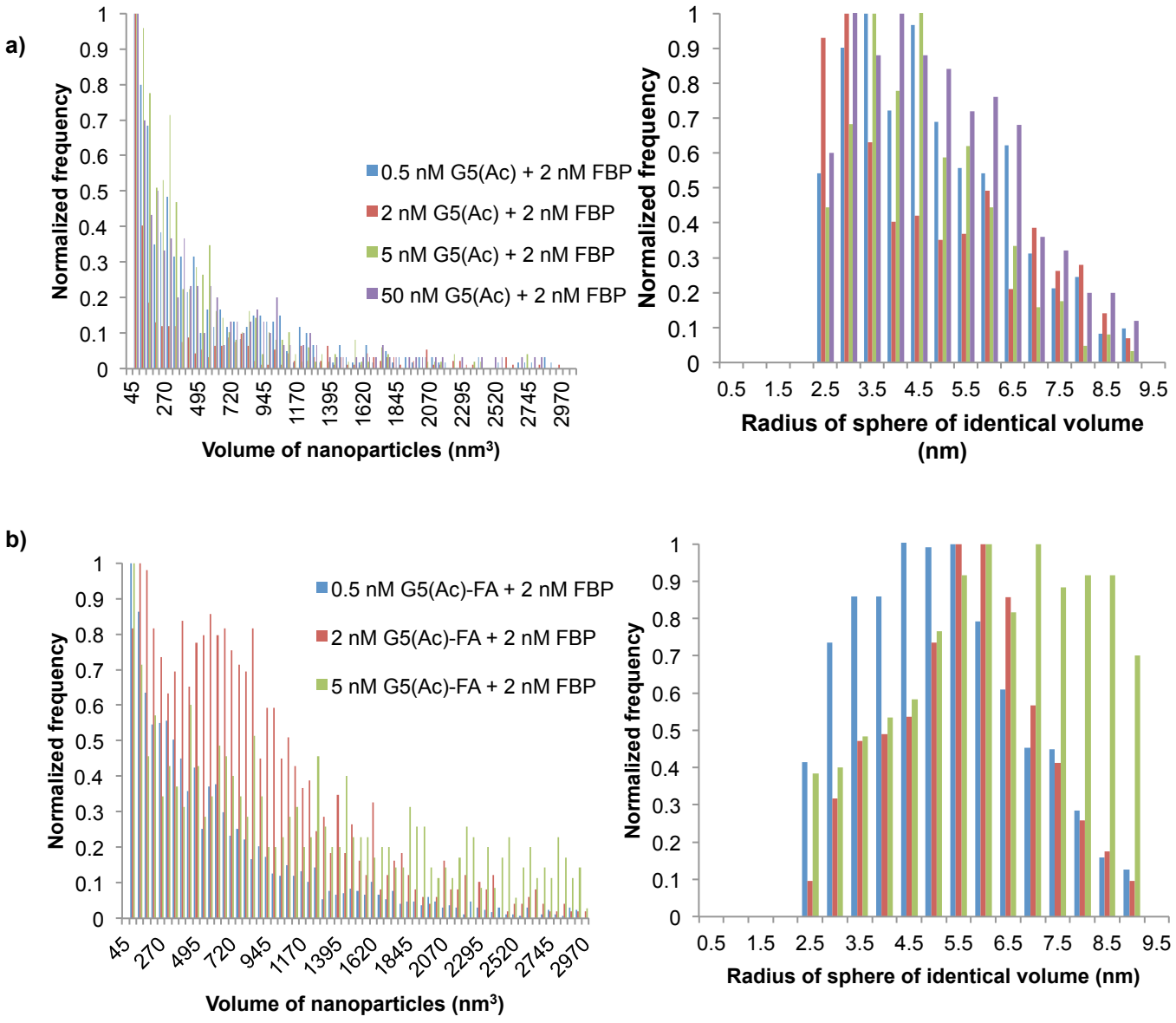
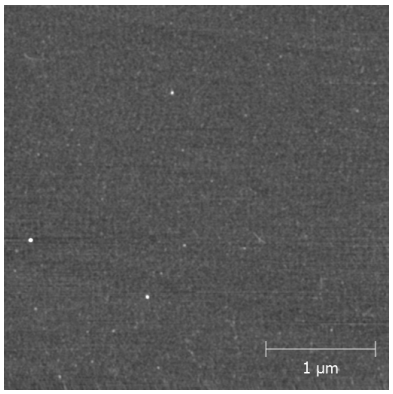
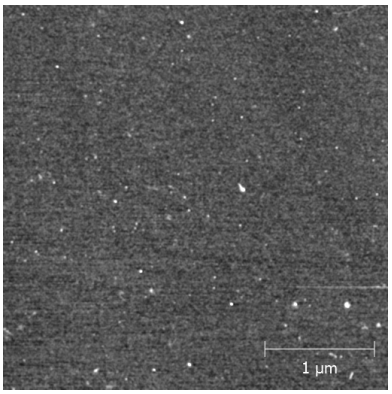


Figure S2. a) Histograms showing the volume (left) and extrapolated radii (right) distributions of FBP nanoparticles generated with $G5_{Ac}$; b) Histograms showing the volume (left) and extrapolated radii (right) distributions of FBP nanoparticles generated with $G5_{Ac}$-$FA_{4(avg)}$.

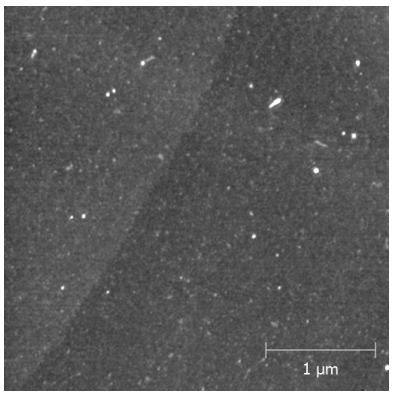
2 nM PEG(2kDa)-FA
2nM FBP



20 nM PEG(2kDa)-FA
2nM FBP



2 nM PEG(30kDa)-FA
2M FBP



20 nM PEG(30kDa)-FA
2nM FBP

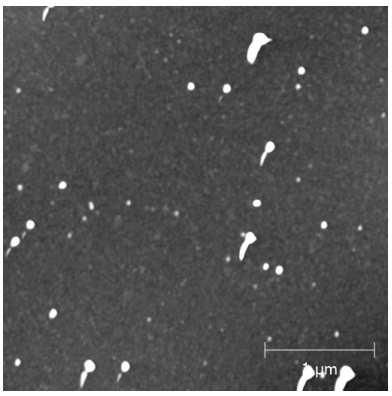


Figure S3. AFM images (3.5x3.5 µm) of mixtures of FBP + PEG-FA of varying polymer molecular weights at different concentrations. In all cases, PEG-FA was added to FBP (2 nM in 1x PBS). AFM images were captured by spin coating the solutions onto freshly-cleaved mica. The lack of nanoparticles indicates that PEG-FA disrupted already existing apo-FBPNP. Higher concentrations of PEG-FA were attempted, but multilayers of polymer were observed. This phenomenon is already evident in the PEG(30kDa)-FA samples.