Supporting Information

Stabilization of Poly(b-amino ester) Nanoparticles for the Efficient Intracellular Delivery of PiggyBac Transposon

Tina Rodgers, Nicolas Muzzio, Caleb Watson and Gabriela Romero*

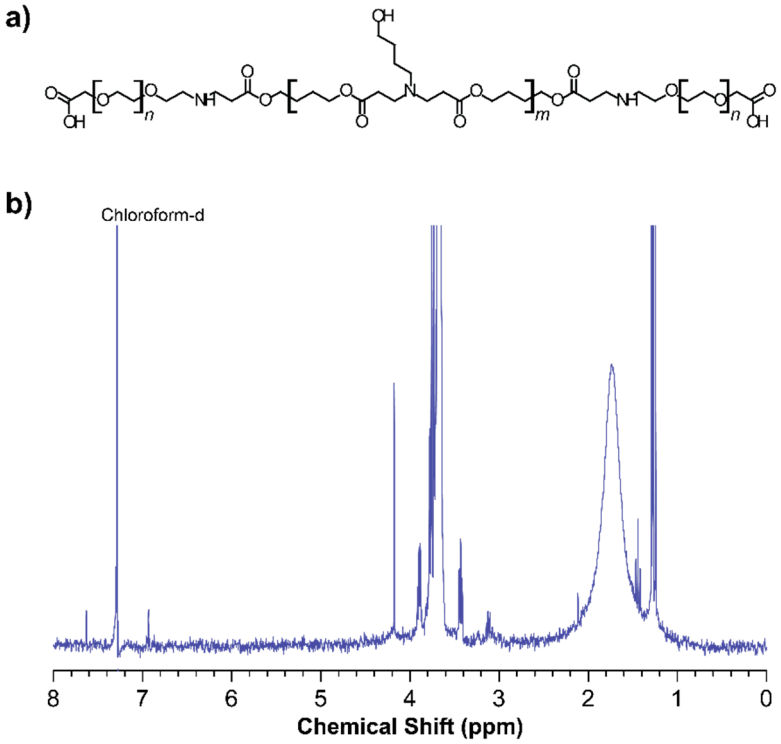

Figure S1. PEG-PDHA block co-polymer. a) Chemical structure of PEG-PDHA, and b) PEG-PDHA ^{1}H-NMR spectrum in deuterated chloroform.

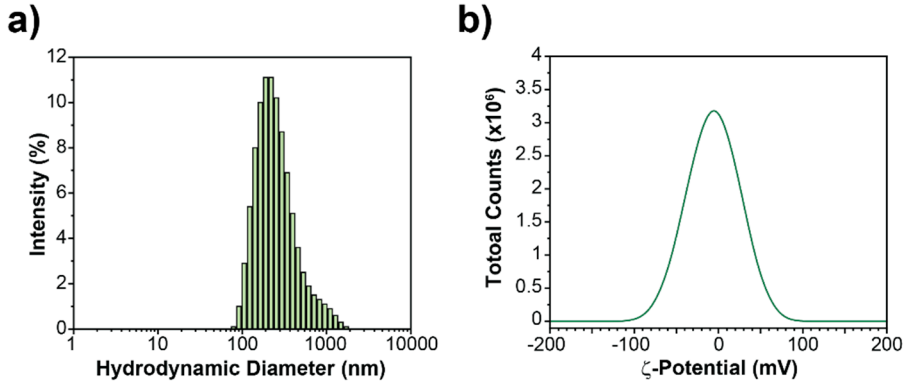

Figure S2. PEG-PDHA NPs encapsulating PBCAG at a polymer/plasmid molar ratio of 0.36. a) Hydrodynamic size distribution, and b) z-potential.

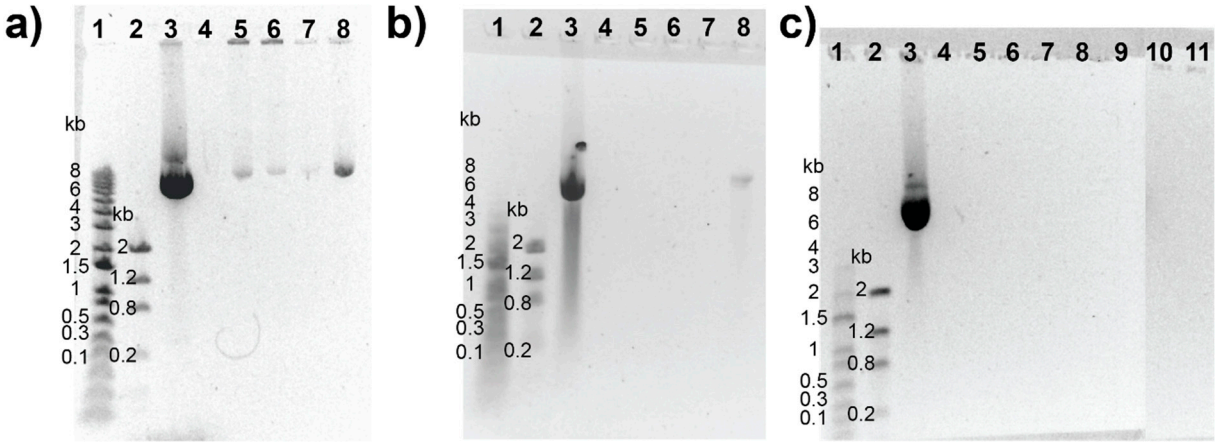

Figure S3. Representative gel electrophoresis for the release of PBCAG at pH 4 from: a) unmodified PEG-PDHA NPs, b) layer-by-layer engineered PEG-PDHA NPs, and c) crosslinked PEG-PDHA NPs. Well 1: 1 kb DNA ladder, well 2: low DNA mass ladder, well 3: PBCAG, well 4-11: PEG-PDHA NPs encapsulating PBCAG after 0, 0.5, 1, 3, 24, 48, 72, and 240 hours incubation at 37 °C respectively.

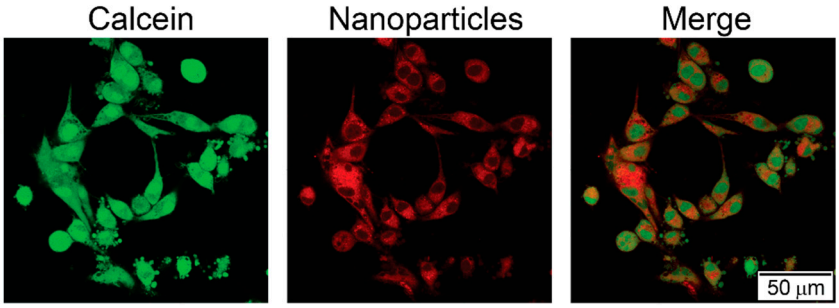

Figure S4. Representative confocal microscopy images of U87MG cells co-cultured with PEG-PDHA NPs. Live cells were stained with Calcein (green), and NPs were labeled with Rhodamine B (red).

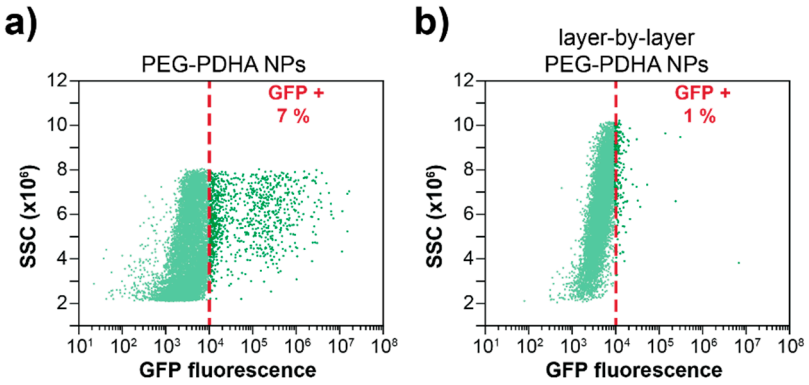

Figure S5. GFP expression on U87MG cells as an indicator of PBCAG transfection. GFP expression on U87MG cells quantified by flow cytometry for: a) unmodified PEG-PDHA NPs and b) PEG-PDHA NPs modified by layer-by-layer assembly.