

Addition of ‘Charge-Shifting’ Side Chains to Linear Poly(ethyleneimine) Enhances Cell Transfection Efficiency

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Supporting Information

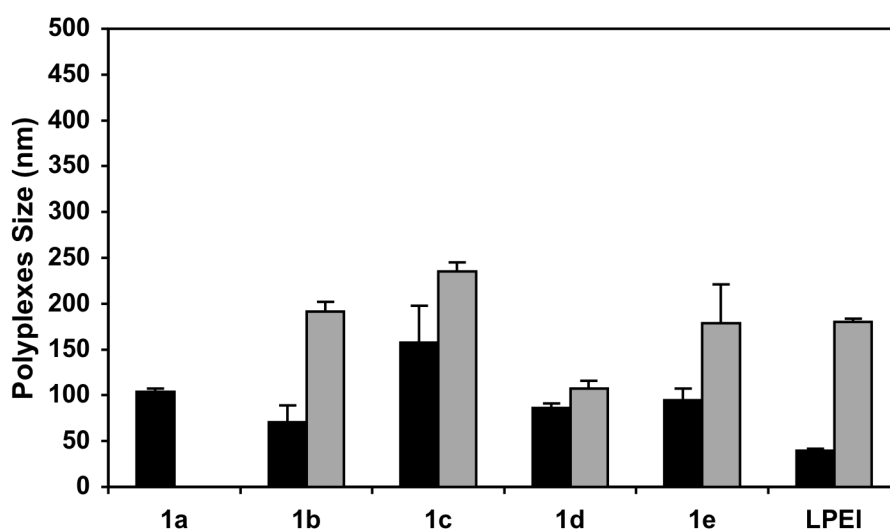


Figure S1: Intensity-averaged diameters of polyplexes formed using plasmid DNA and either polymers **1a-e** or LPEI determined by dynamic light scattering. Black bars correspond to sizes determined for polyplexes immediately after addition of polyplexes to HEPES buffer (20 mM, pH = 7.2) at 37 °C. Grey bars correspond to sizes determined for polyplexes immediately after addition to HEPES buffer (20 mM, pH = 7.2, adjusted to 150 mM NaCl) at 37 °C. Polyplexes used in each experiment were formed at the DNA/polymer ratios (w/w) determined to mediate the highest levels of transfection for each polymer (see Figures 1 and 2 and main text) and correspond to ratios of 1:1 (for polymers **1a**, **1c**, **1e**, and LPEI), 1:9 (for polymer **1b**), and 1:7 (for polymer **1d**). See Materials and Methods for details related to experimental conditions and calculation of average sizes.

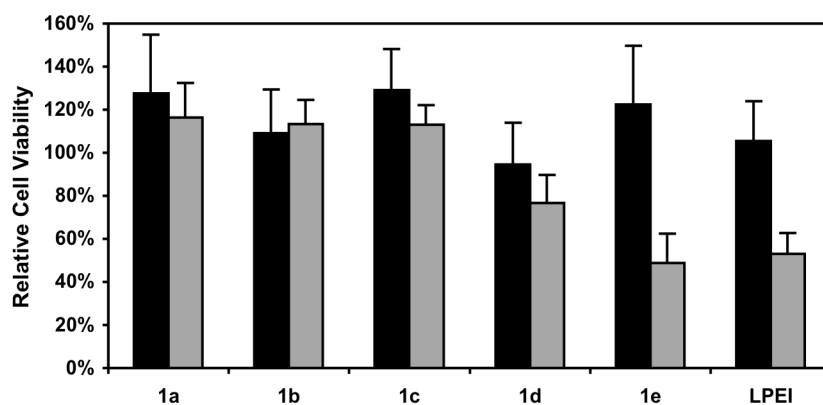


Figure S2: Cytotoxicity of polyplexes formed using plasmid DNA and either polymers **1a-e** or LPEI determined using an MTT assay and COS-7 cells. Data correspond to values determined four hours (grey bars) or 48 hours (black bars) after initial exposure of cells to polyplexes. Polyplexes used in each experiment were formed at the DNA/polymer ratios (w/w) determined to mediate the highest levels of transfection for each polymer (see Figures 1 and 2 and main text) and correspond to ratios of 1:1 (for polymers **1a**, **1c**, **1e**, and LPEI), 1:9 (for polymer **1b**), and 1:7 (for polymer **1d**). See Materials and Methods for details related to the formation of polyplexes and cell culture and cytotoxicity experiments.