Supplementary Data

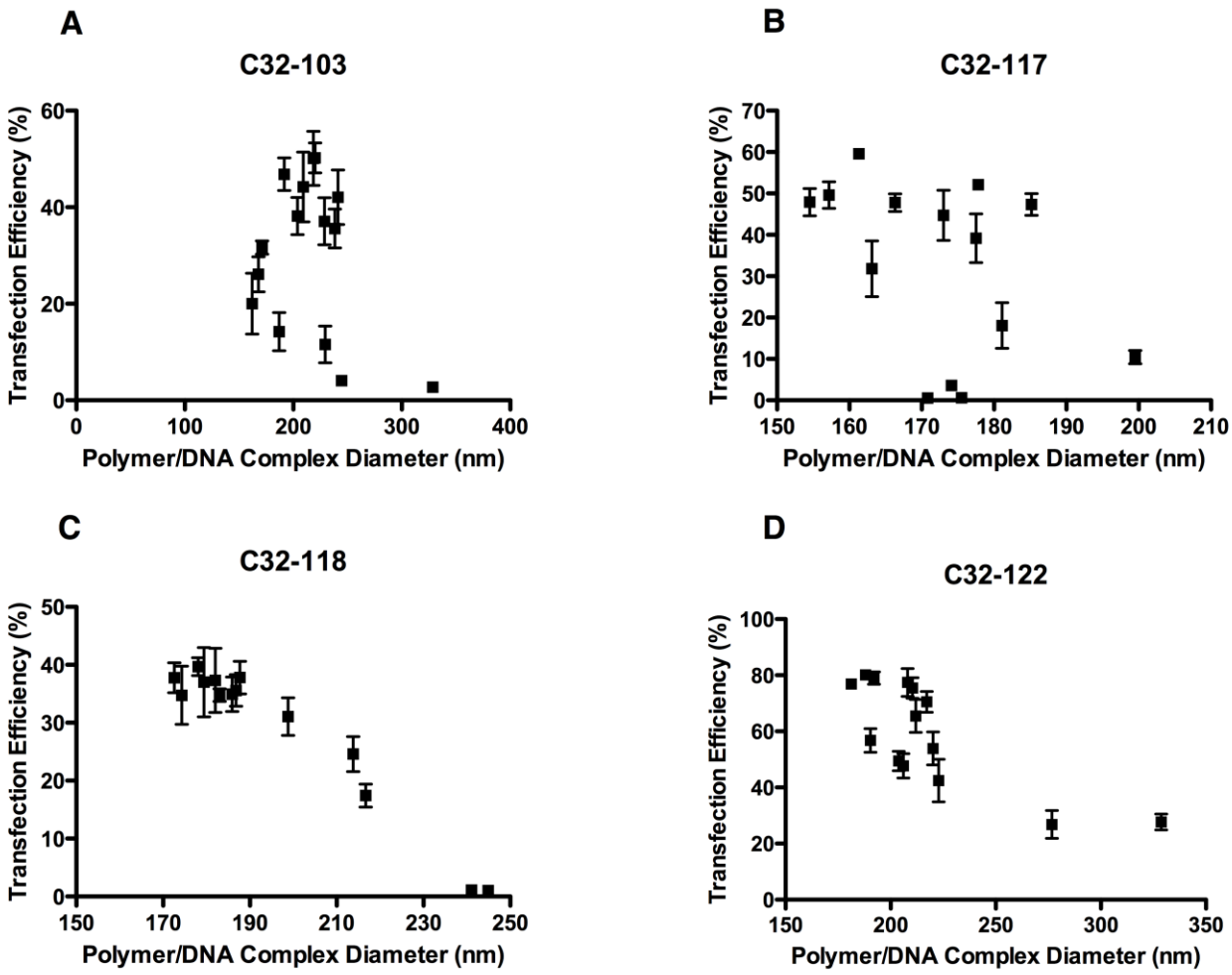

Figure S1: Correlation between transfection efficiency (mean ± SD, *n* = 4) in HeLa cells and the mean diameters of complexes formed from DNA and stoichiometric variants of C32-103 (A), C32-117 (B), C32-118 (C), and C32-122 (D) at a polymer:DNA w/w ratio of 40:1. Polyplexes were formed in sodium acetate buffer at pH 5.2 and then diluted in serum-containing medium immediately prior to measurement.

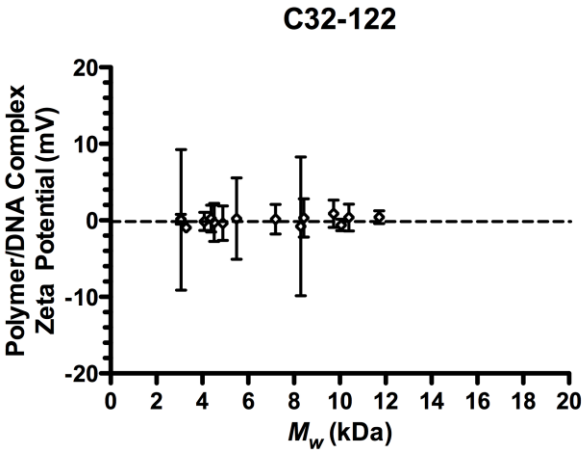

Figure S2: Correlation between polymer M_w and ζ-potential (mean ± SD, n = 3) of complexes formed from DNA and stoichiometric variants of C32-122 at a polymer:DNA w/w ratio of 40:1. Polyplexes were formed and measured in sodium acetate buffer at pH 5.2.

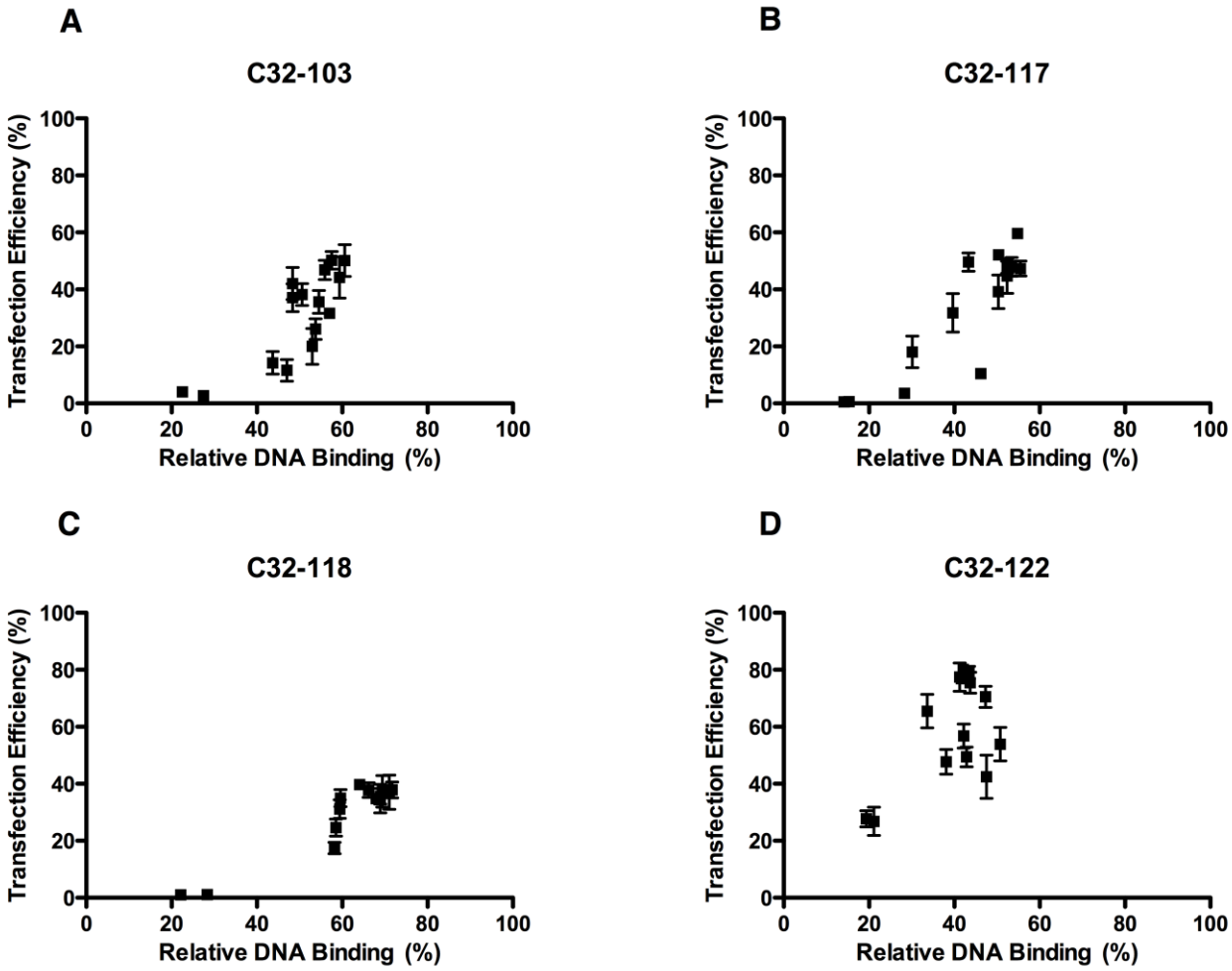

Figure S3: Correlation between transfection efficiency (mean ± SD, *n* = 4) in HeLa cells and relative DNA binding efficiency of stoichiometric variants of C32-103 (A), C32-117 (B), C32-118 (C), and C32-122 (D) at a polymer:DNA w/w ratio of 40:1.

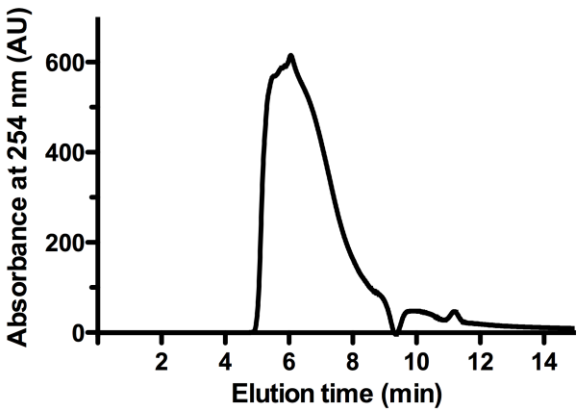

Figure S4: An example chromatogram showing the elution of C32-122 polymer from the SEC column. Polymer fractions were collected at 0.2 min intervals between 5 and 9 min.

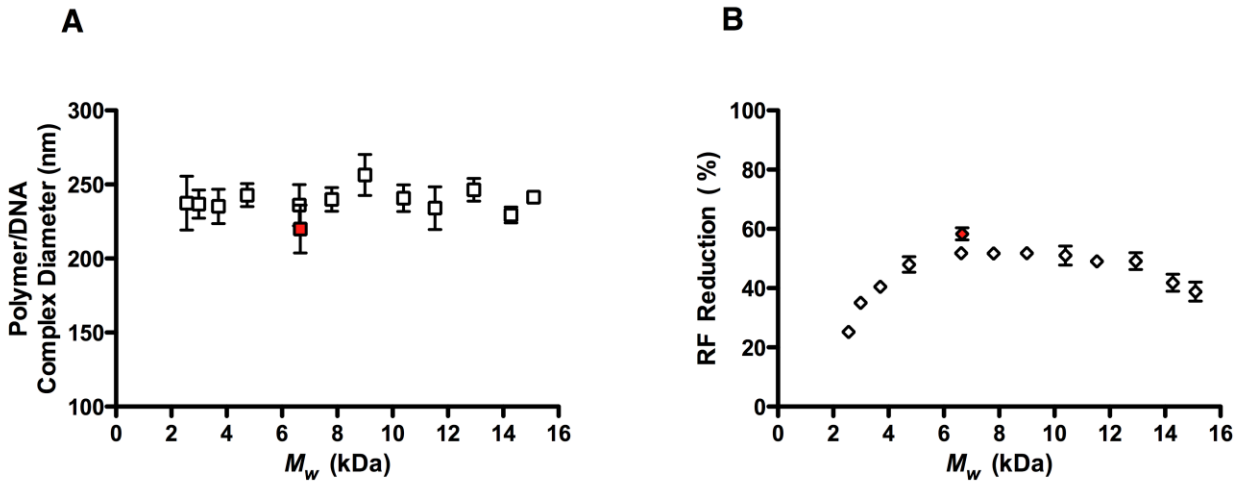

Figure S5: Effective diameters (A) and relative DNA binding efficiencies (B) of nanoparticles formed from size-fractionated C32-122 at a polymer:DNA w/w ratio of 40:1 in serum-containing medium. The filled (red) symbols represent the values for the crude polymer.

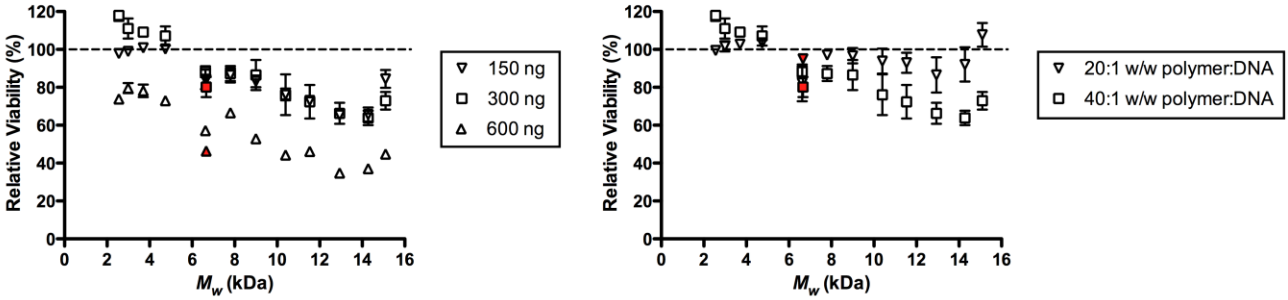

Figure S6: Correlation between M_w of C32-122 polymer fractions isolated by SEC and the relative viability (mean ± SD, n = 4) of HeLa cells 48 h after transfection. In the left plot (A), the DNA dose per well of a 96-well plate is varied as indicated as the polymer:DNA w/w ratio is held at 40:1. In the right plot (B), the polymer:DNA w/w ratio is varied as the DNA dose is held at 300 ng/well. The filled (red) symbols represent the activity of the crude polymer sample.