



Figure S2. 4-4-6 and PEI DNA dose optimization in HEK and CHO cells. In HEK cells, PEI was used at a 2:1 polymer:DNA w/w ratio, whereas in CHO cells, PEI was used at a 3:1 polymer:DNA w/w ratio. All PBAEs were used at a 60:1 polymer:DNA w/w ratio in both cell lines. (A) DNA dose optimization in HEK and CHO cells over 5-day time courses. Cells were transfected with varying amounts of mCherry DNA and fluorescence was assessed via plate reader on each day ($n=1$). (B) Viability was assessed via MTS assay 24 h following transfection with 2 $\mu\text{g/mL}$ mCherry DNA for HEK cells or 4 $\mu\text{g/mL}$ mCherry DNA for CHO cells using 4-4-6 or PEI nanoparticles ($n=5$). Error bars represent SD. (C) mCherry transfection efficiency determined via flow cytometry 5 days following transfection with 2 $\mu\text{g/mL}$ mCherry DNA for HEK cells or 4 $\mu\text{g/mL}$ mCherry DNA for CHO cells using PBAE or PEI nanoparticles. mCherry⁺ cells were gated on live cells. Representative plots are presented ($n=5$). (D) Representative fluorescence microscopy images ($n=5$) of HEK and CHO cells 5 days following transfection with 2 $\mu\text{g/mL}$ mCherry DNA for HEK cells or 4 $\mu\text{g/mL}$ mCherry DNA for CHO cells using PBAE or PEI nanoparticles. Scale bars are 200 μm .