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Figure S1. NMR spectra of (A) CSMA in deuterium water, and (B) iBuBr-SS-iBuBr in chloroform-d.



Figure S2. GPC profiles of PDMAEMA-SS-PDMAEMA and HS-PDMAEMA using THF as an eluent.



Figure S3. Acid/base titration profiles of cationic polymers with 0.1N HCl. Each 20-mg sample was added to 20 mL of 150 mM NaCl, and the pH was adjusted to 9.5 using 0.1N NaOH. The titration was done at $25.0 \pm 0.1^{\circ}$ C by adding 0.1N HCl under an atmosphere of CO₂-free N₂.



Figure S4. Transmission electron microscope (TEM) images of polymers/pDNA polyplexes.



Concentration (µg/ml)

20

10

5

Control 1

Figure S5. MTT assay of the cytotoxicity of polymers against (A) 3T3 cells and (B) U87 cells as a function of polymer concentrations (n=8, *p < 0.05)

50

100

200

(B)

control

naked

lipofec

control	CS-PDMAEMA/DNA (w/w 1)	CS-PEI/DNA (w/w 1)
naked	CS-PDMAEMA/DNA (w/w 3)	CS-PEL/DNA (w/av 3)
lipofectamine	CS-PDMAEMA/DNA (w/w 5)	CS-PEL/DNA (w/w 5)
PET25K	CS-PDMAEMA/DNA (w/w 7)	CS-PEI/DNA (xv/w 7)
	CS-PDMAEMA/DNA (w/w 9)	CS-PEI/DNA (w/w 9)
	CS-PDMAEMA/DNA (w/w 11)	CS-PEI/DNA (w/w 11)
	CS-PDMAEMA/DNA (w/w 15)	GS-PEI/DNA (w/w 15)
	CS-PDMAEMA/DNA (w/w 20)	CS-PEI/DNA (w/w 20)

	CS-PDMAEMA/DNA (w/w 1)	CS-PEI/DNA (w/w 1)
	CS-PDMAEMA/DNA (w/w 3)	CS-PEI/DNA (w/w.3)
mint	ĊS-PDMAÈMA/DNA (w/w 5)	CS-PEI/DNA (w/w 5)
	CS-PDMAEMA/DNA (w/w 7)	CS-PEI/DNA (w/w 7)
	CS-PDMAEMA/DNA (w/w 9)	CS-PEI/DNA (w/w 9)
	CS-PDMAEMA/DNA (w/w 11)	CS-PEI/DNA (w/w 11)
	CS-PDMAEMA/DNA (w/w 11) CS-PDMAEMA/DNA (w/w 15)	CS-PEI/DNA (w/w 11) CS-PEI/DNA (w/w 15)

(C)	(D)					
control	CS-PDMAEMA/DNA (w/w 1)	CS-PEI/DNA (w/w 1)	control	CS-PDMAEMA/DNA (w/w 1)	CS-PEI/DNA (w/w 1)	
naked	CS-PDMAEMA/DNA (w/w 3)	CS-PEI/DNA (w/w 3)	naked	CS-PDMAEMA/DNA (w/w 3)	CS-PEI/DNA (w/w.3)	
lipofectamine	CS-PDMAEMA/DNA (w/w 5)	CS-PEI/DNA (w/w 5)	lipofectamine	CS-PDMAEMA/DNA (w/w 5)	CS-PEI/DNA (w/w 5)	
PEI 25K	CS-PDMAEMA/DNA (w/w 7)	CS-PEI/DNA (w/w 7)	PEI 25K	CS-PDMAEMA/DNA (w/w 7)	CS-PEI/DNA (w/w 7)	
	CS-PDMAEMA/DNA (w/w 9)	CS-PEI/DNA (w/w 9)		CS-PDMAEMA/DNA (w/w 9)	CS-PEI/DNA (w/w 9)	
	CS-PDMAEMA/DNA (w/w 11)	CS-PEI/DNA (w/w 11)		CS-PDMAEMA/DNA (w/w 11)	CS-PEI/DNA (w/w 11)	
	CS-PDMAEMA/DNA (w/w 15)	CS-PEI/DNA (w/w 15)		CS-PDMAEMA/DNA (w/w 15)	CS-PEI/DNA (w/w 15)	
	CS-PDMAEMA/DNA (w/w 20)	CS-PEI/DNA (w/w 20)		CS-PDMAEMA/DNA (w/w 20)	CS-PEI/DNA (w/w 20)	

Figure S6. Images of green fluorescence pEGFP-C1 expression containing 10% FBS in (A, B) 3T3 cells and (C, D) U87 cells as a function of polymers/pDNA weight ratios for (A, C) 2 h and (B, D) 4 h of incubation followed by 72 h of post-transfection.



Figure S7. Cell viabilities of different inhibitors at different concentrations in (A) 3T3 cells and (B) U87 cells. (n=8)



Figure S8. The inhibition effect of pGL3-Control expression at a single concentration of a reagent in (A, B) 3T3 cells and (C, D) U87 cells at the weight ratio of 7 of (A, C) CS-PDMAEMA/pDNA and (B, D) CS-PEI/pDNA (n=3).



Figure S9. A flow cytometric diagram of (A) 3T3 cells and (B) U87 cells treated with FITC-linked CD44 antibody for 30 min. Red: 3T3 cells or U87 cells as a control; Green: CD44 antibody-treated 3T3 or U87 cells.