

Supporting Information

Developing a Chitosan Supported Imidazole Schiff-base for High-Efficiency Gene Delivery

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- Figure S1.** Calibration curve of imidazole groups at the wavelength of 257 nm.
- Figure S2.** UV absorption of the synthesized CISB polymers.
- Figure S3.** Comparison on the FTIR spectra of chitosan and CISBs.
- Figure S4.** The $^1\text{H-NMR}$ of the CISB-2 in D_2O .
- Figure S5.** SEM image of CISB-2/pDNA polyplexes at the mixing weight ratios of 10 (polymer to pDNA).
- Figure S6.** Gene transfection efficiency of the CISB-2 against the 293 cells measured by flow cytometer at the pDNA concentration of $1\ \mu\text{g}/\text{well}$ in a 24-well plate using naked DNA as a negative control, chitosan and lipofectamine2000 as the positive control.
- Figure S7.** Comparison on the buffer capacity of various polymers.
- Figure S8.** Gene transfection efficiency of the CISB-2 against the 293T cells measured by flow cytometer at the pDNA concentrations of 0.5, 2.0 and $5.0\ \mu\text{g}/\text{well}$ in 24-well plates.

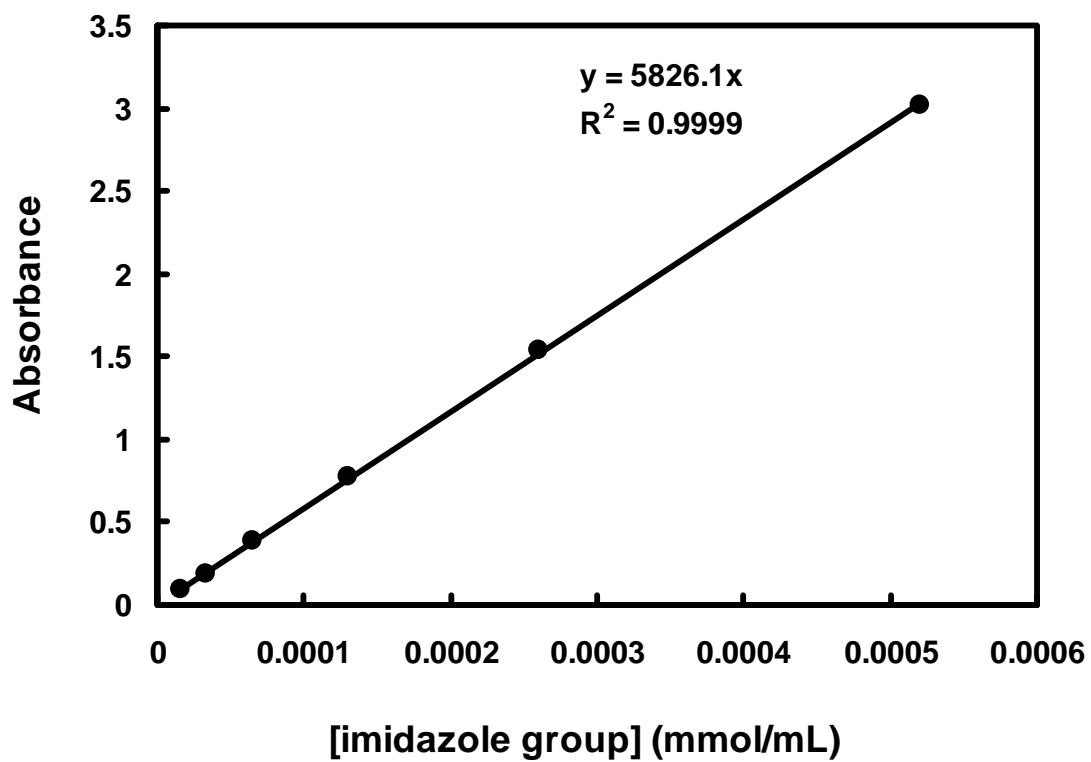


Figure S1. Calibration curve of imidazole groups at the wavelength of 257 nm.

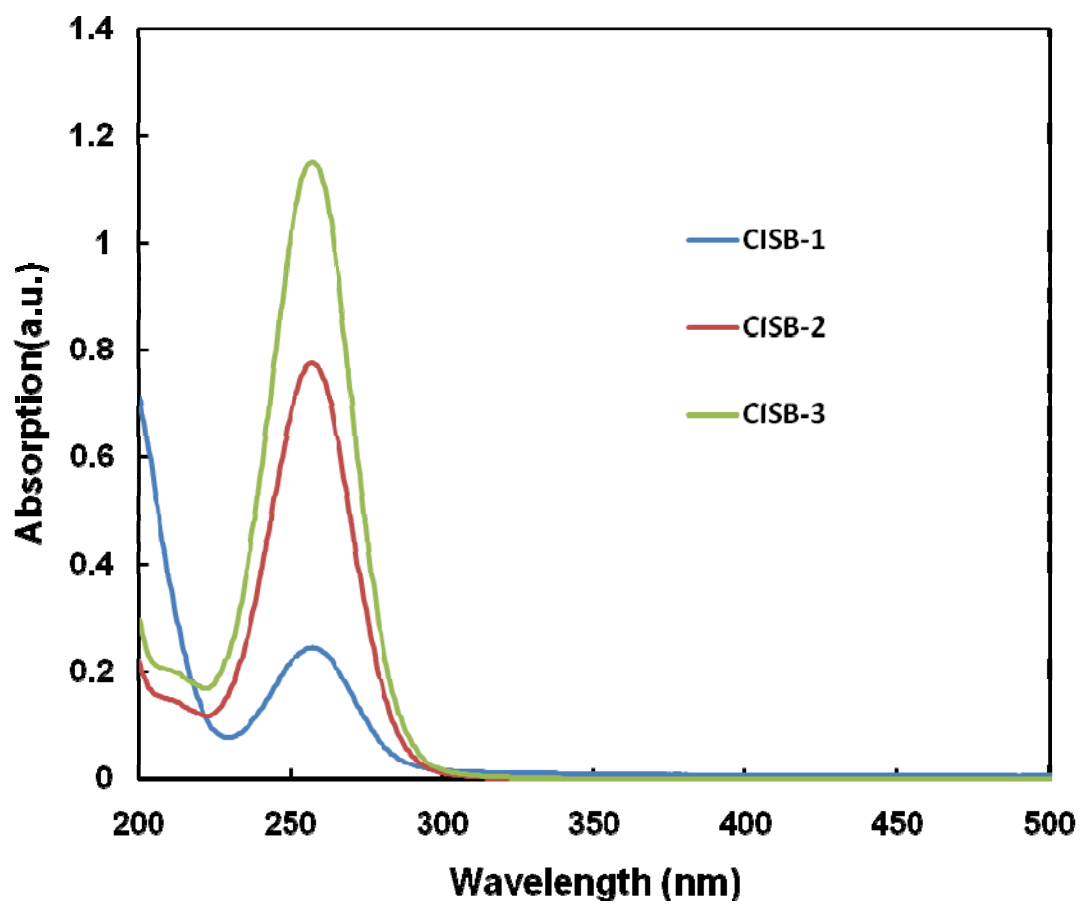


Figure S2. UV absorption of the synthesized CISB polymers.

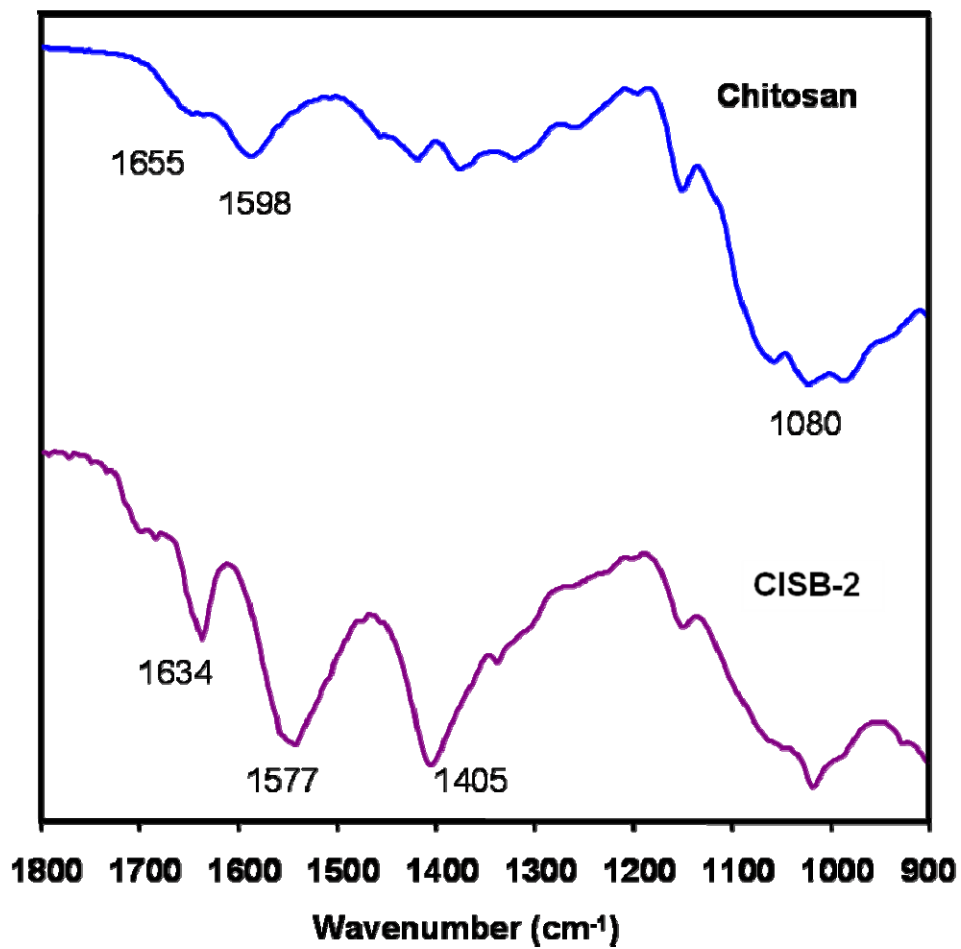


Figure S3. Comparison on the FTIR spectra of chitosan and CISBs.

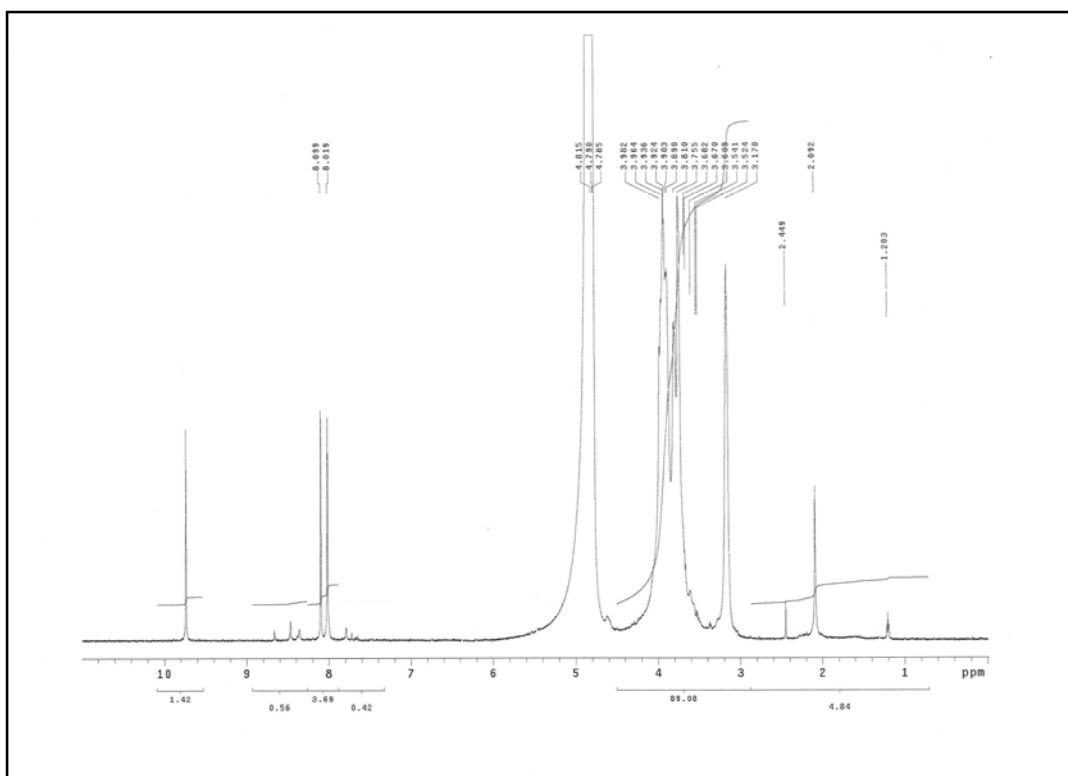


Figure S4. The $^1\text{H-NMR}$ of the CISB-2 in D_2O .

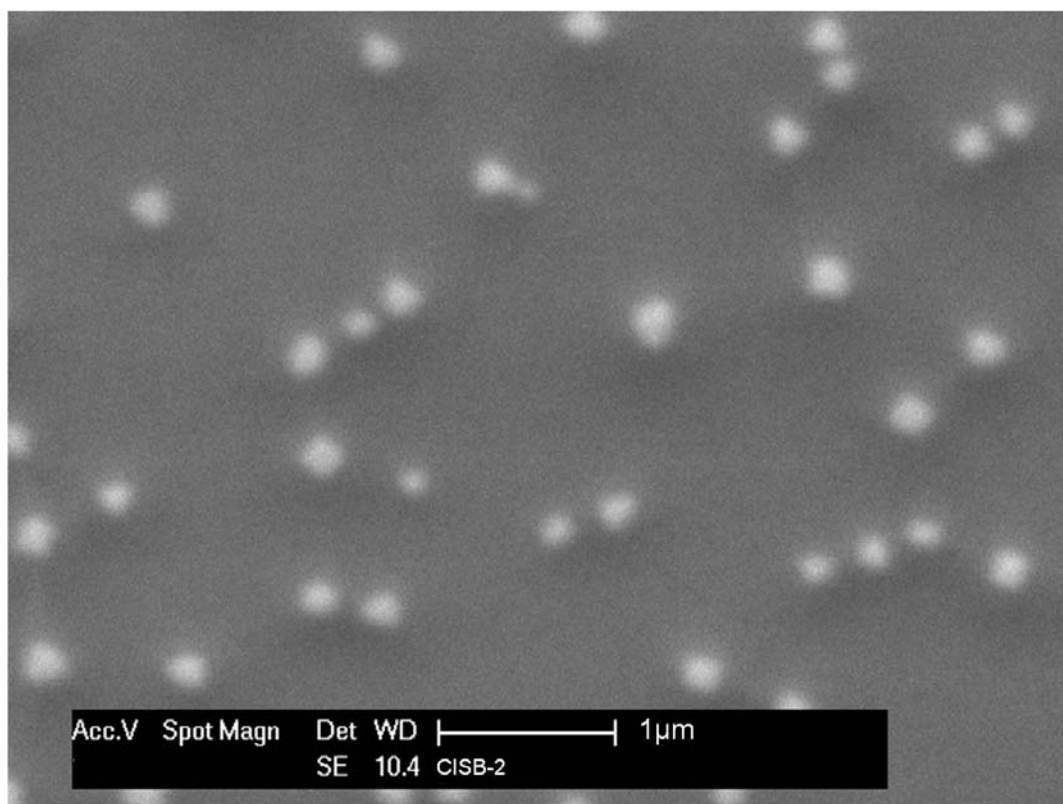


Figure S5. SEM image of CISB-2/pDNA polyplexes at the mixing weigh ratios of 10 (polymer to pDNA).

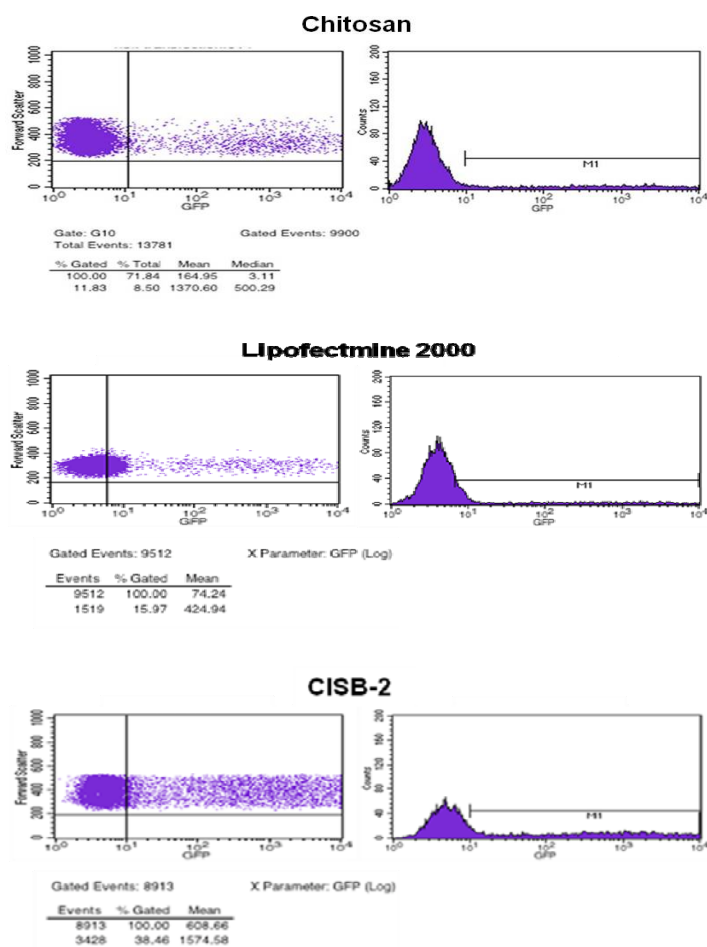


Figure S6. Gene transfection efficiency of the CISB-2 against the 293 cells measured by flow cytometer at the pDNA concentration of 1 μ g/well in a 24-well plate using naked DNA as a negative control, Chitosan and lipofectamine 2000 as the positive control.

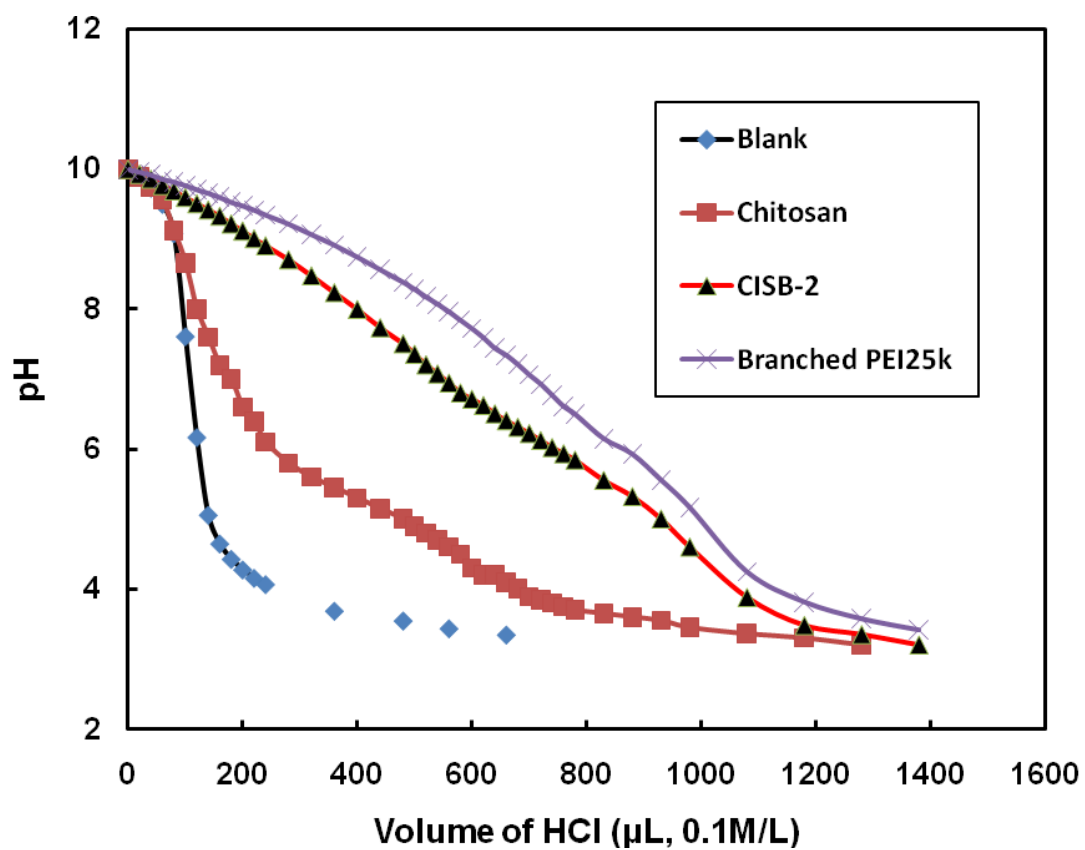


Figure S7. Comparison on the buffering capacity of various polymers.

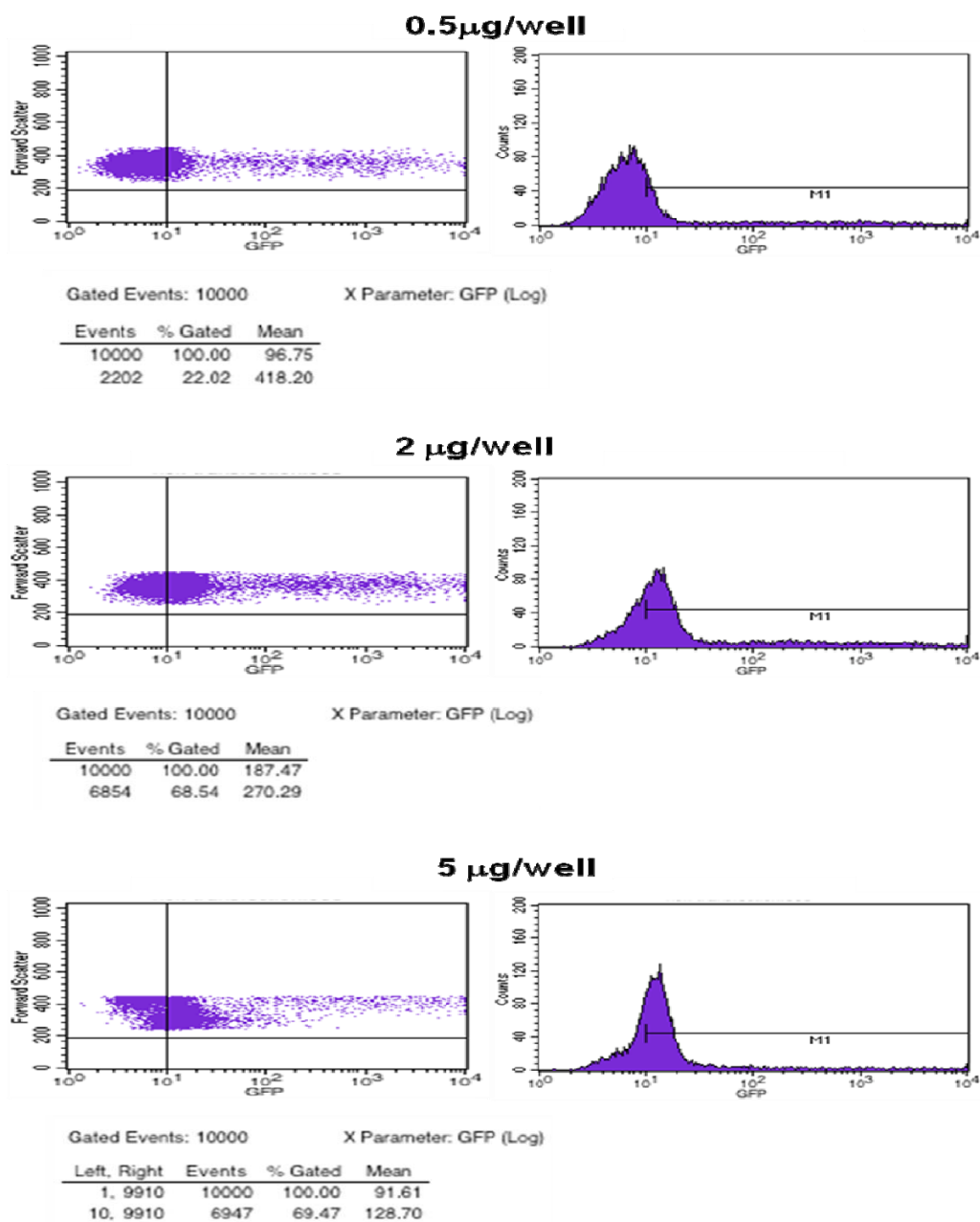


Figure S8. Gene transfection efficiency of the CISB-2 against the 293T cells measured by flow cytometer at the pDNA concentrations of 0.5, 2.0 and 5.0 $\mu\text{g}/\text{well}$ in 24-well plates.