

Supplementary Information

Self-assembling Janus dendritic polymer for gene delivery with low cytotoxicity and high gene transfection efficiency

Sheng-Gang Ding,^{*a} Lei Yu,^b Long-Hai Wang,^{*b} Lin-Ding Wang,^{*c} Zhi-Qiang Yu,^d and Ye-Zi You^b

a. Department of Pediatrics, The First Affiliated Hospital of Anhui Medical University, Hefei, Anhui 230022, People's Republic of China. E-mail: dsg5312@163.com

b. Key Laboratory of Soft Matter Chemistry, Chinese Academy of Science, Department of Polymer Science and Engineering, University of Science and Technology of China, Hefei, Anhui 230026, China. E-mail: hiwang@mail.ustc.edu.cn

c. Department of Microbiology, Anhui Medical University, Hefei, Anhui 230022, People's Republic of China. E-mail: wanglinding@ahmu.edu.cn

d. School of Chemical Engineering and Pharmacy, Henan University of Science and Technology, Luoyang 471032, Henan, China.

*Corresponding author: hiwang@mail.ustc.edu.cn, dsg5312@163.com, and wanglinding@ahmu.edu.cn

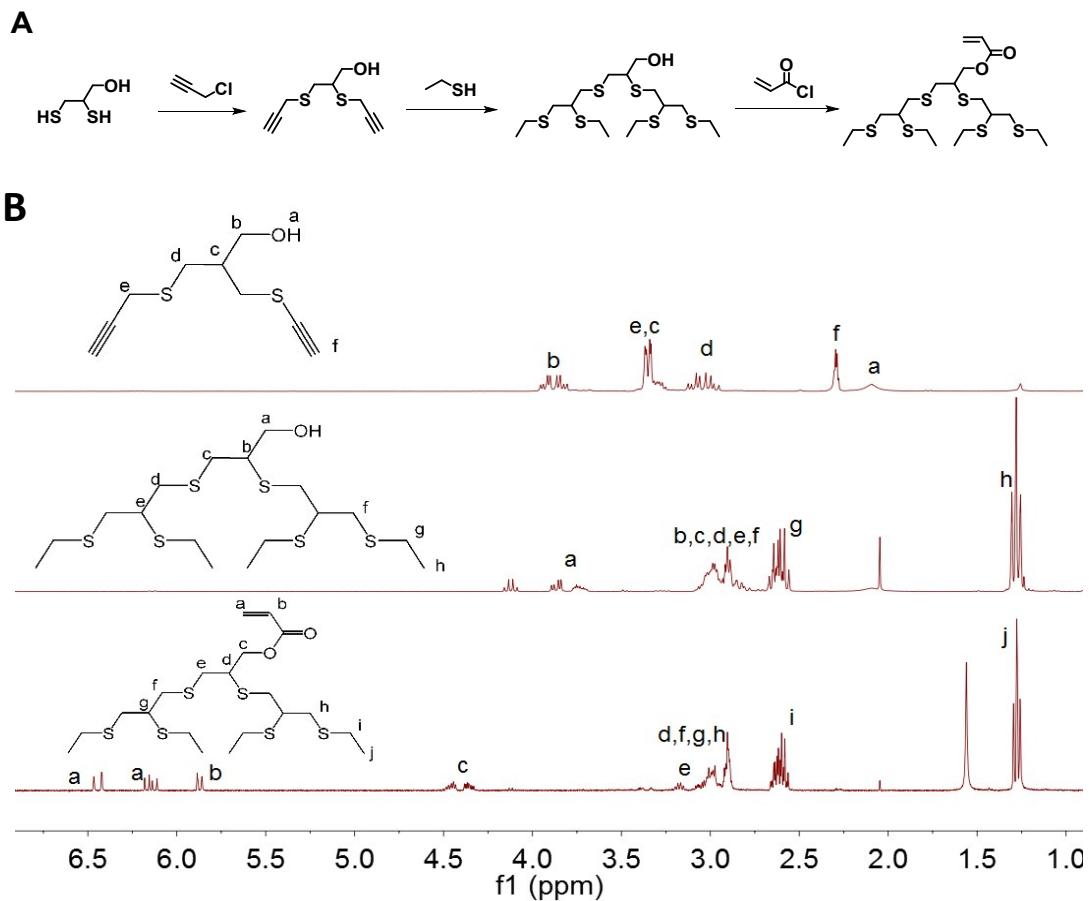


Figure S1. (A) Synthesis of dendritic polythioether. (B) Corresponding ^1H NMR spectra of products.

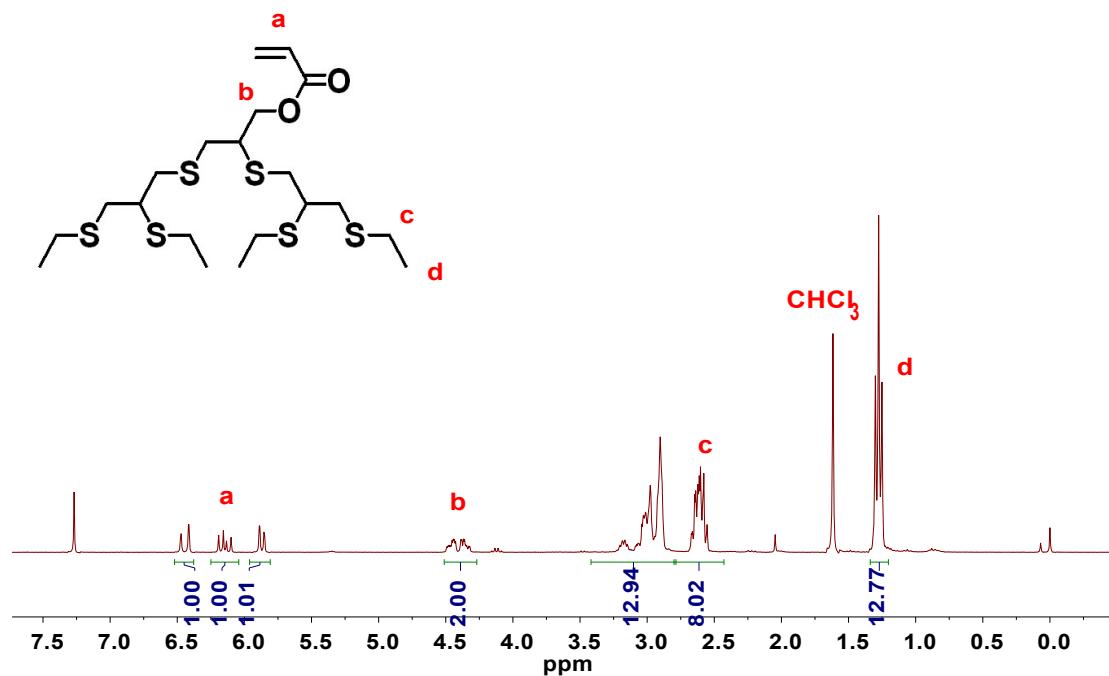


Figure S2. ^1H NMR spectrum of dendritic polythioether in CDCl_3 .

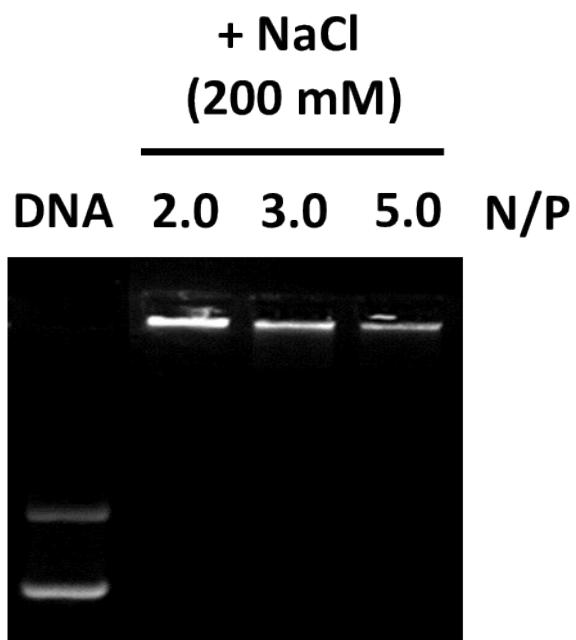


Figure S3. The agarose gel electrophoresis result of PEI-Dendron nanomicelles/DNA polyplexes treated 200 mM NaCl for 4 h.

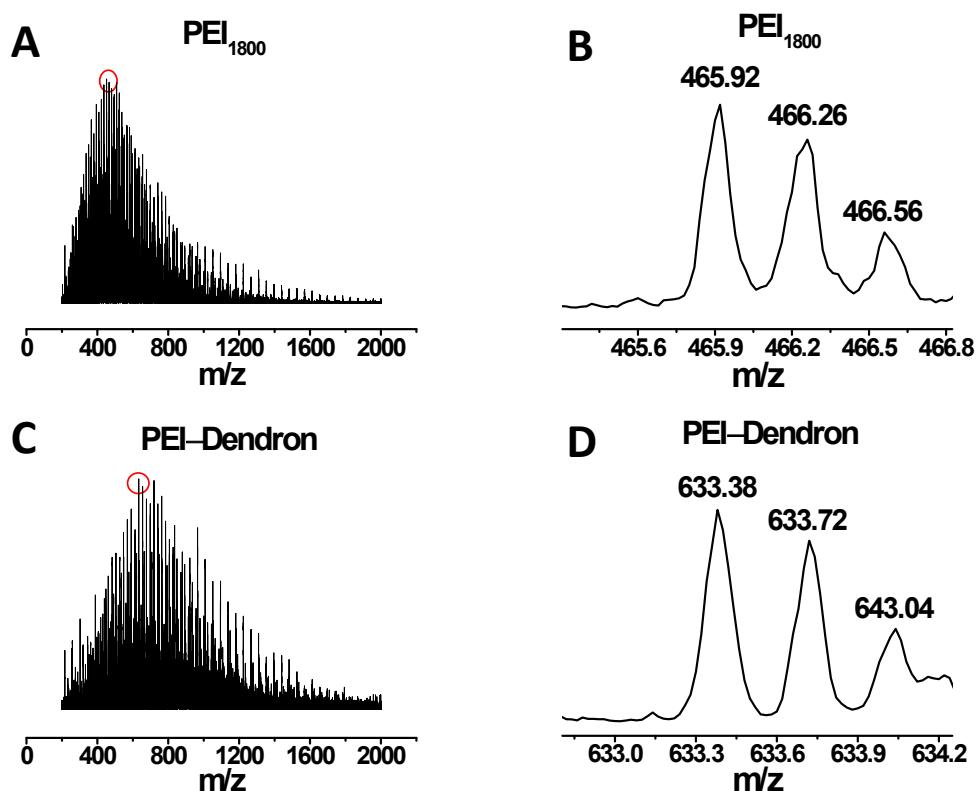


Figure S4. (A) ESI-MS spectrum of unmodified branched PEI₁₈₀₀. (B) The peaks of PEI₁₈₀₀ around the range of highest relative abundance ($m/z = 465.92$, with + 3 charges, $M = 1394.76$ Da). (C) ESI-MS

spectrum of PEI-dendron. (D) The peaks of PEI-dendron around the range of highest relative abundance ($m/z = 633.38$, with + 3 charges, $M = 1897.14$ Da).