

Electronic Supplementary Information

Low molecular weight PEI-based biodegradable lipopolymers as gene delivery vectors

Miao-Miao Xun¹, Xue-Chao Zhang¹, Ji Zhang^{*}, Qian-Qian Jiang, Wen-Jing Yi, Wen Zhu^{*} and
Xiao-Qi, Yu^{*}

*Key Laboratory of Green Chemistry and Technology (Ministry of Education), College of Chemistry, and
State Key Laboratory of Biotherapy, West China Hospital, Sichuan University, Chengdu 610064, People's
Republic of China.*

* Corresponding author. Tel.: +86 28 8541 8580, +86 28 8516 4063; fax: +86 28 8541 8580

E-mail address: ji_zhang@163.com (J. Zhang), xqyu@scu.edu.cn (X.-Q. Yu), zhuwen@scu.edu.cn (W.
Zhu).

¹ These authors contributed equally to this work.

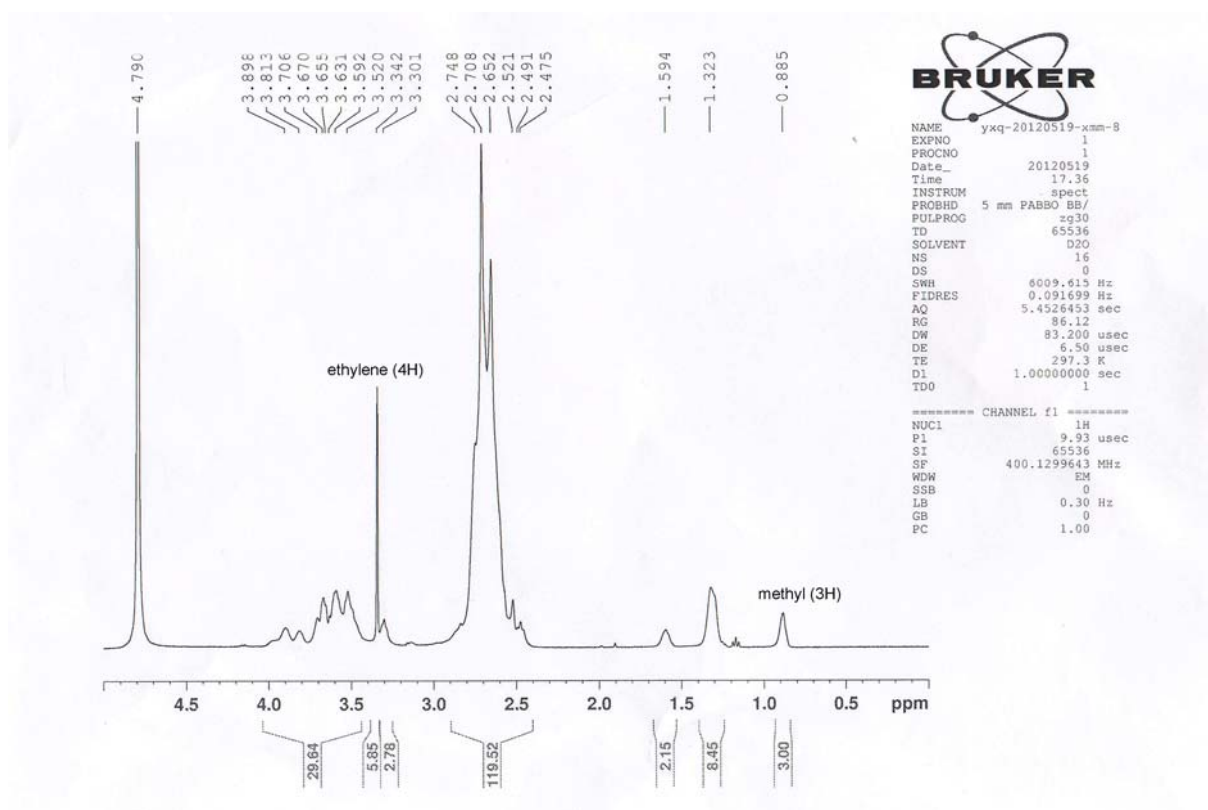


Figure S1. ^1H NMR spectrum of LP2.

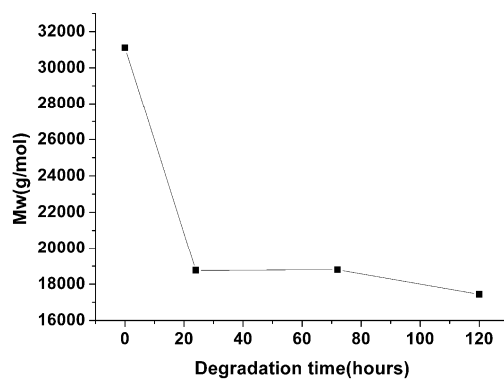


Figure S2. Change of molecular weight of LP2 ($M_w = 31109$ Da) with degradation time in PBS (pH = 7.4).

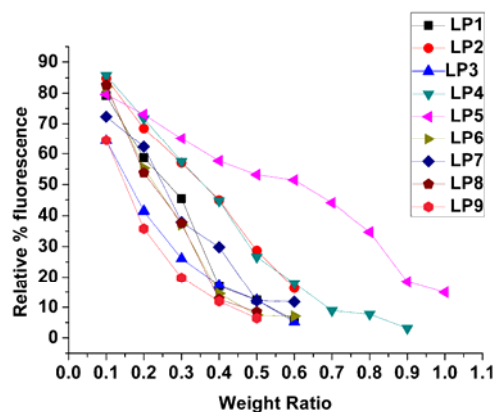


Figure S3. Change of relative fluorescence of EB bound to DNA by the addition of **LP1-LP9** to different weight ratios. All the samples were excited at 497 nm and the emission was measured at 600 nm. DNA concentration was 10 mg mL^{-1} in HEPES solution.

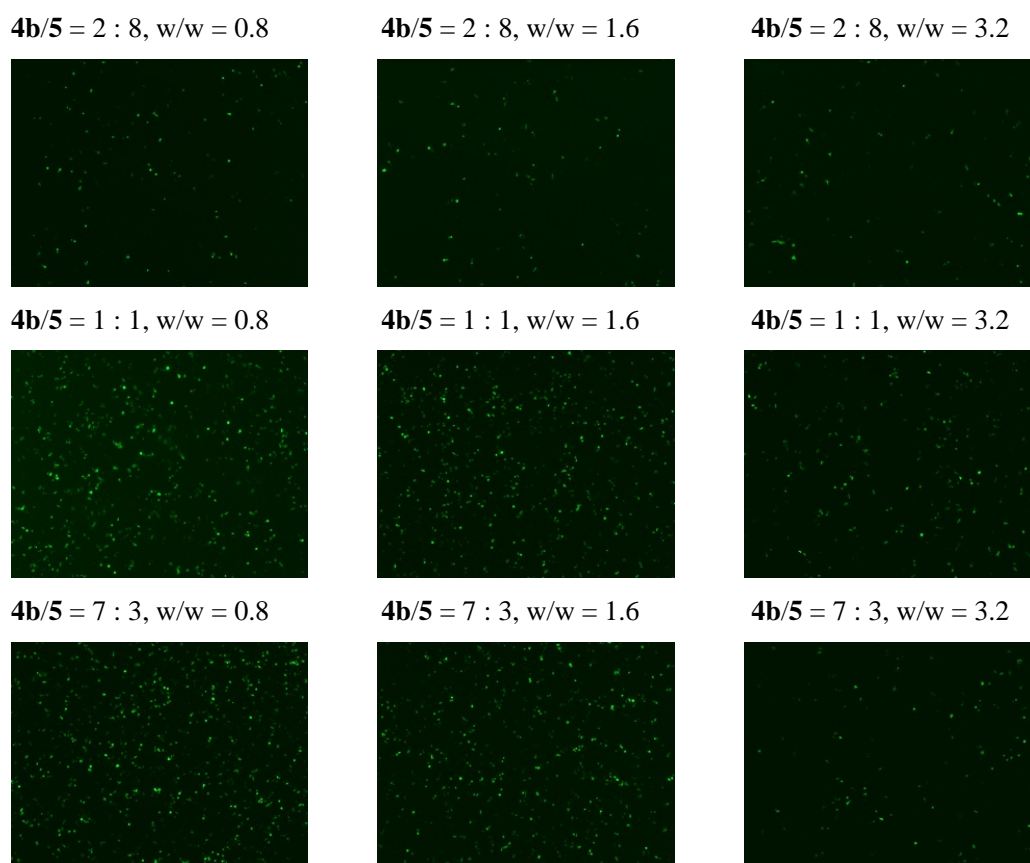


Figure S4. Fluorescent microscope images of pEGFP-transfected in A549 cells mediated by **LP2**, which were synthesized from different ratio of the linkers **4b** and **5** (the ratios were marked above each image).