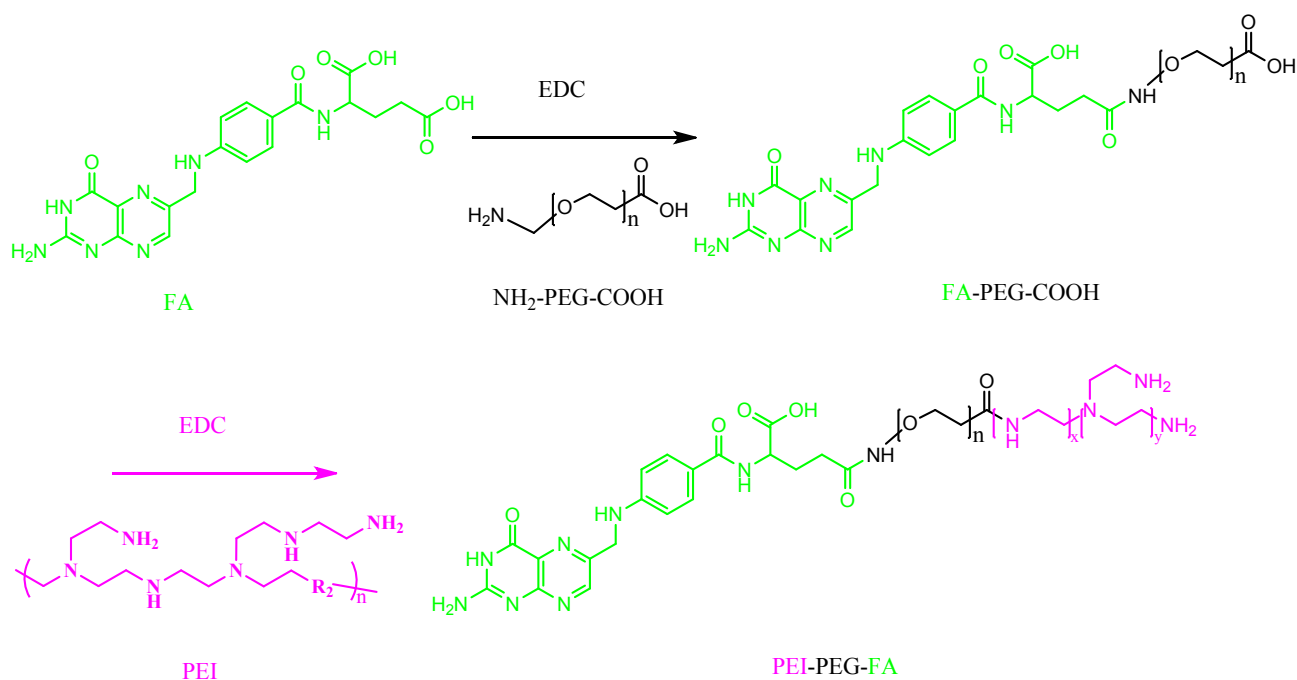


## Electronic Supplementary Information

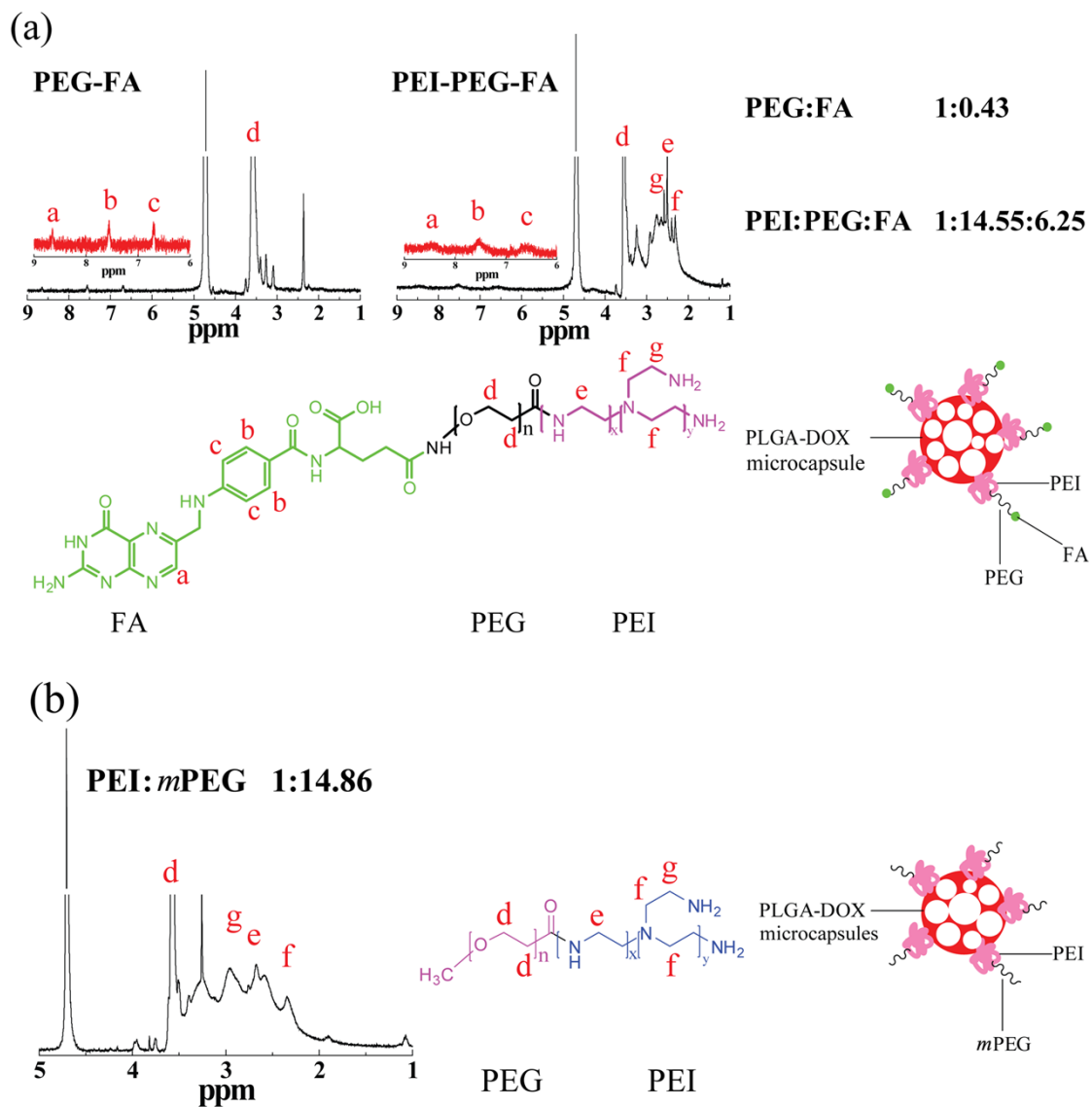
### Doxorubicin-loaded poly(lactic-co-glycolic acid) hollow microcapsules for targeted drug delivery to cancer cells†

Weina Liu,<sup>‡</sup> Shihui Wen,<sup>‡</sup> Mingwu Shen, Xiangyang Shi\*

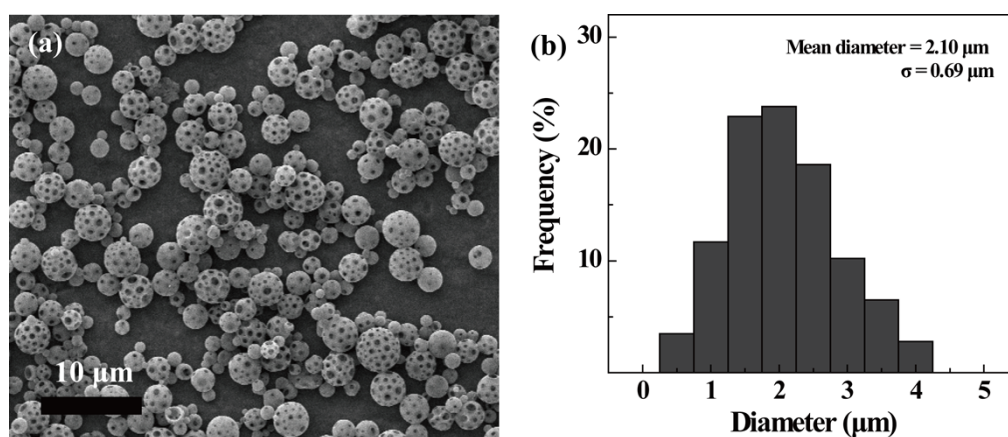
<sup>a</sup> College of Chemistry, Chemical Engineering and Biotechnology, Donghua University, Shanghai 201620, People's Republic of China



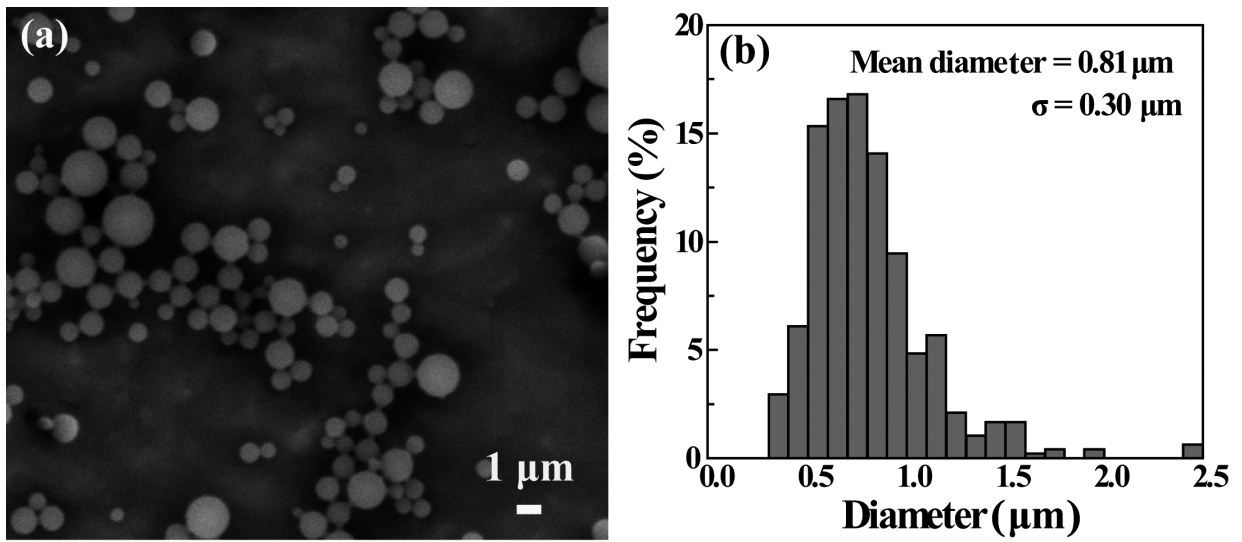
**Scheme S1.** Schematic illustration of the synthesis procedure of PEI-PEG-FA.



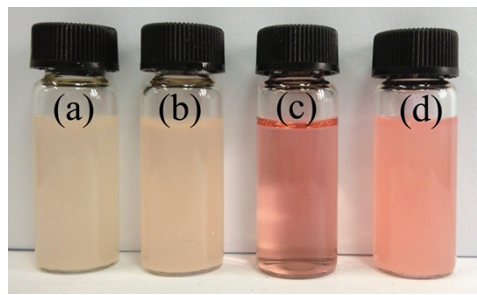
**Figure S1.**  $^1\text{H}$  NMR spectra of PEG-FA and PEI-PEG-FA (a). (b) shows the  $^1\text{H}$  NMR spectrum of PEI-*m*PEG.



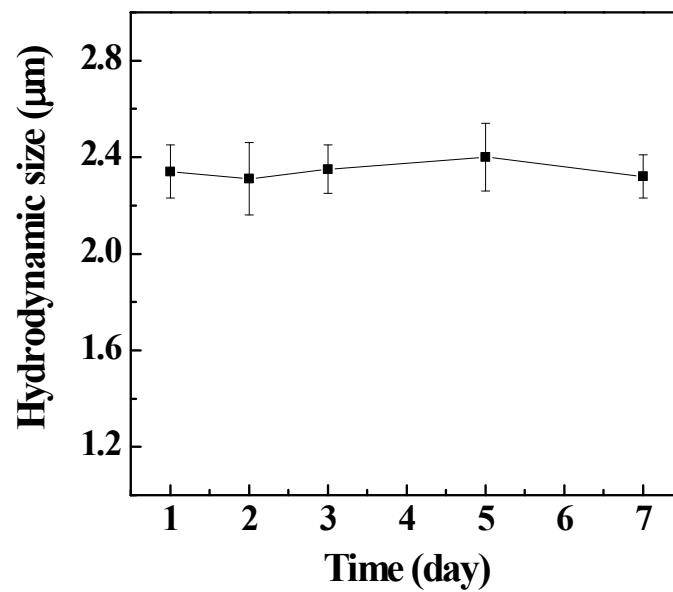
**Figure S2.** SEM image (a) and size distribution histogram (b) of PLGA HMs loaded with DOX.



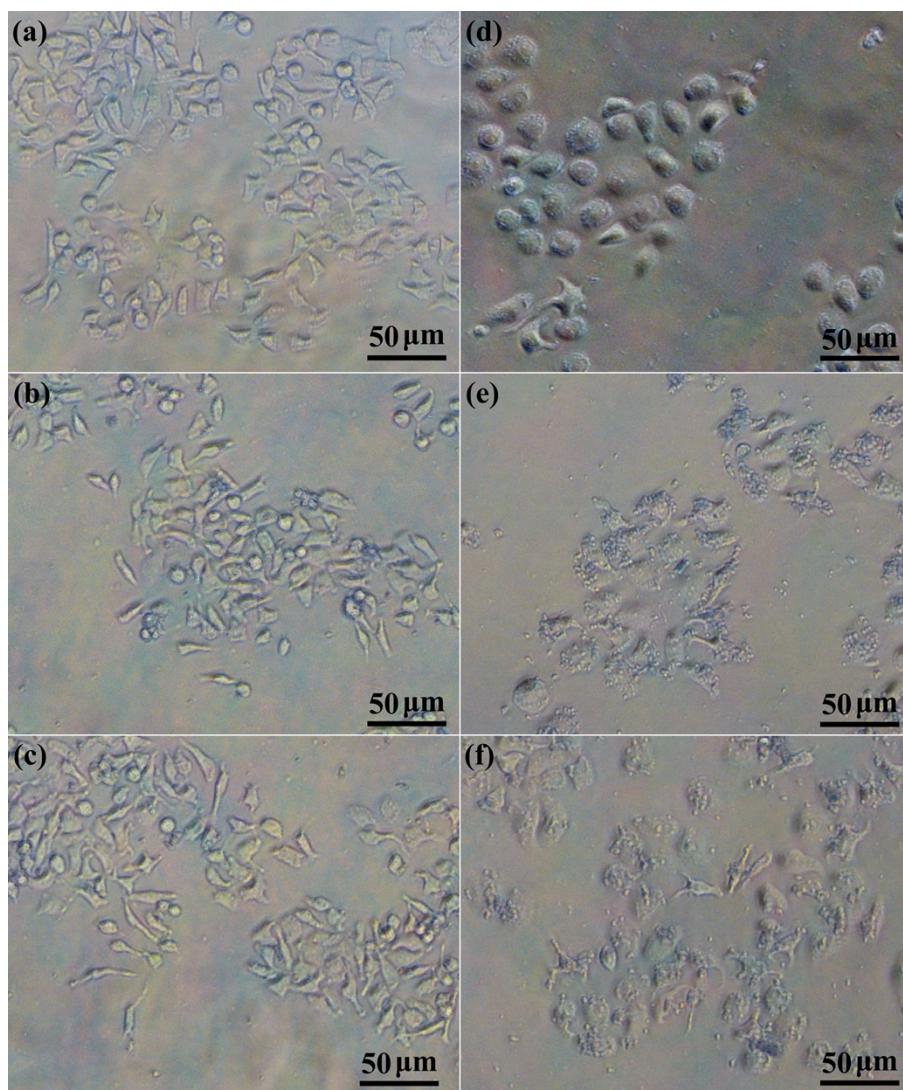
**Figure S3.** SEM image (a) and size distribution histogram (b) of PLGA microspheres without DOX loading.



**Figure S4.** Photograph of PLGA-DOX-PEI-PEG-FA HMs dispersed in water (a), PBS (b), and RPMI 1640 cell culture medium (d). (c) shows the blank RPMI 1640 cell culture medium.



**Figure S5.** Hydrodynamic size of the PLGA-DOX-PEI-PEG-FA HMs at different time points.



**Figure S6.** The micrographs of KB cells treated with PBS (a), PLGA-PEI-*m*PEG HMs (b), PLGA-PEI-PEG-FA HMs (c), free DOX (d), PLGA-DOX-PEI-*m*PEG HMs (e), and PLGA-DOX-PEI-PEG-FA HMs (f) with HM concentration of 12.5 mg/L for HMs with or without DOX loading and DOX concentration of 0.1 mg/L for DOX-loaded HMs, respectively for 24 h.