Electronic Supplementary Material (ESI) for Journal of Materials Chemistry

Supporting Information

Preparation and folic acid conjugation of fluorescent polymer nanoparticles for cancer cell targeting

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NMR spctral of sythesized dyes.

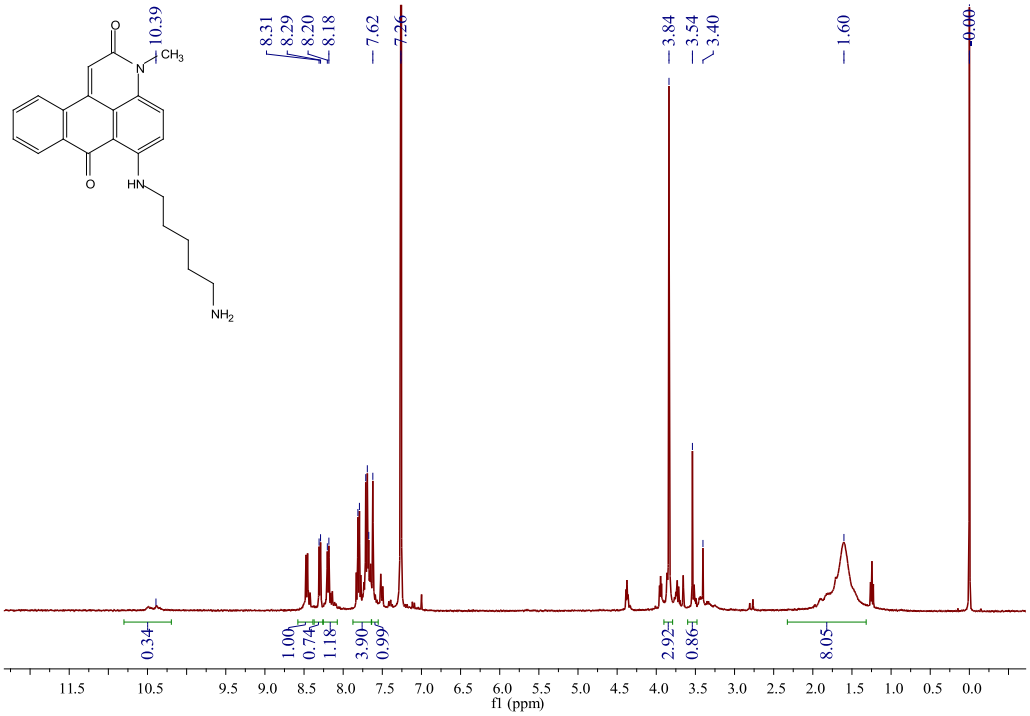
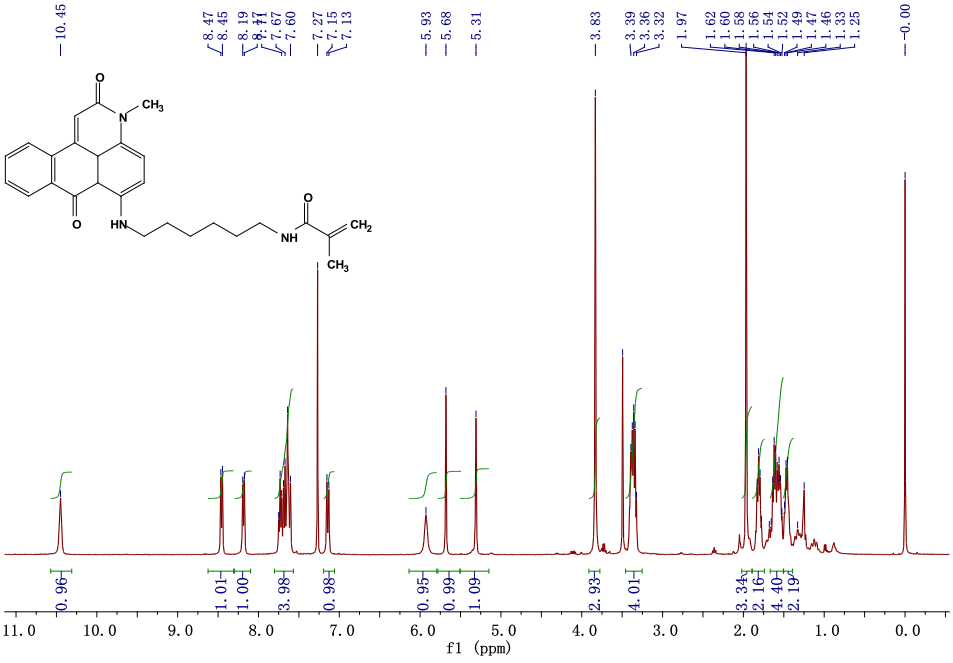


Fig. **S1** ^{1}H-NMR spectra of dye **2**.

a)



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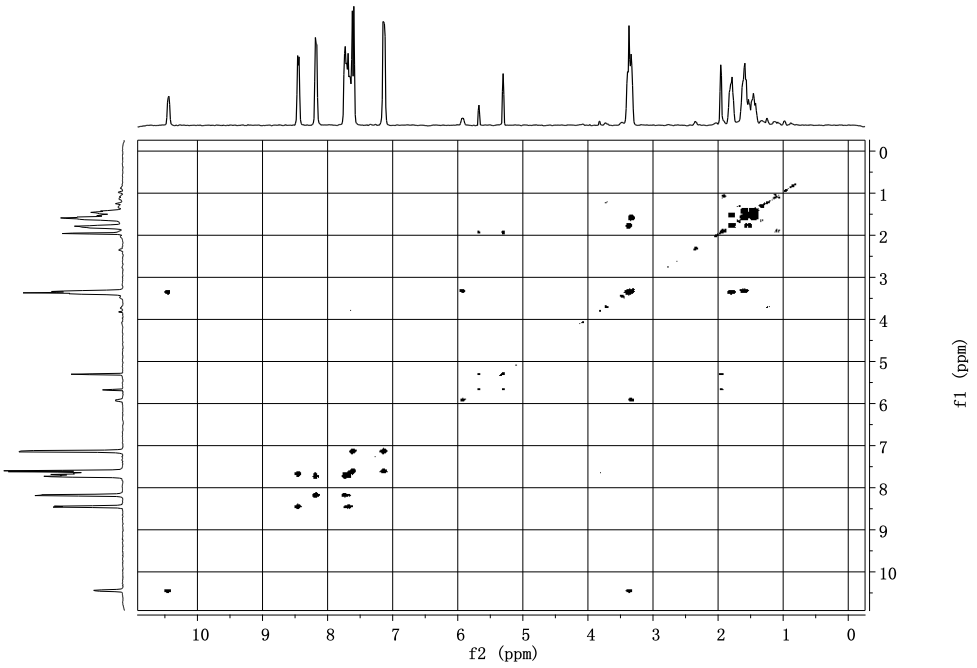
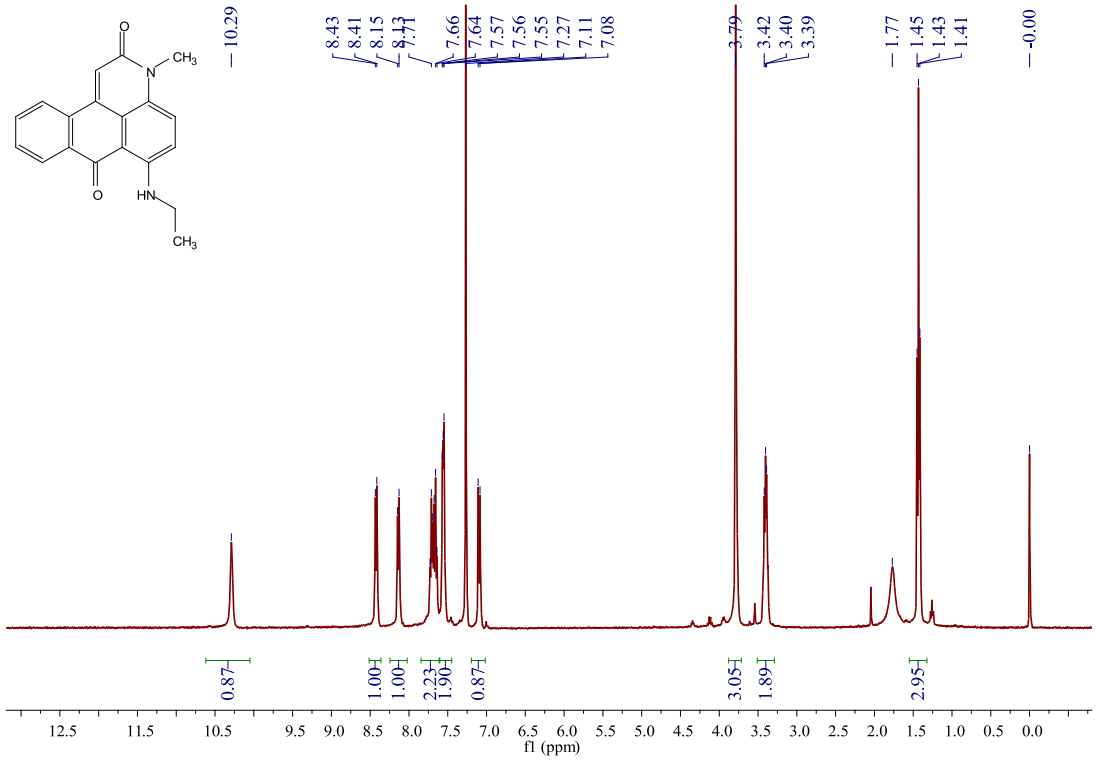


Fig. **S2** NMR spectra of dye **3** a) ^{1}H-NMR; b)^{1}H-^{1}H COSY.

a)



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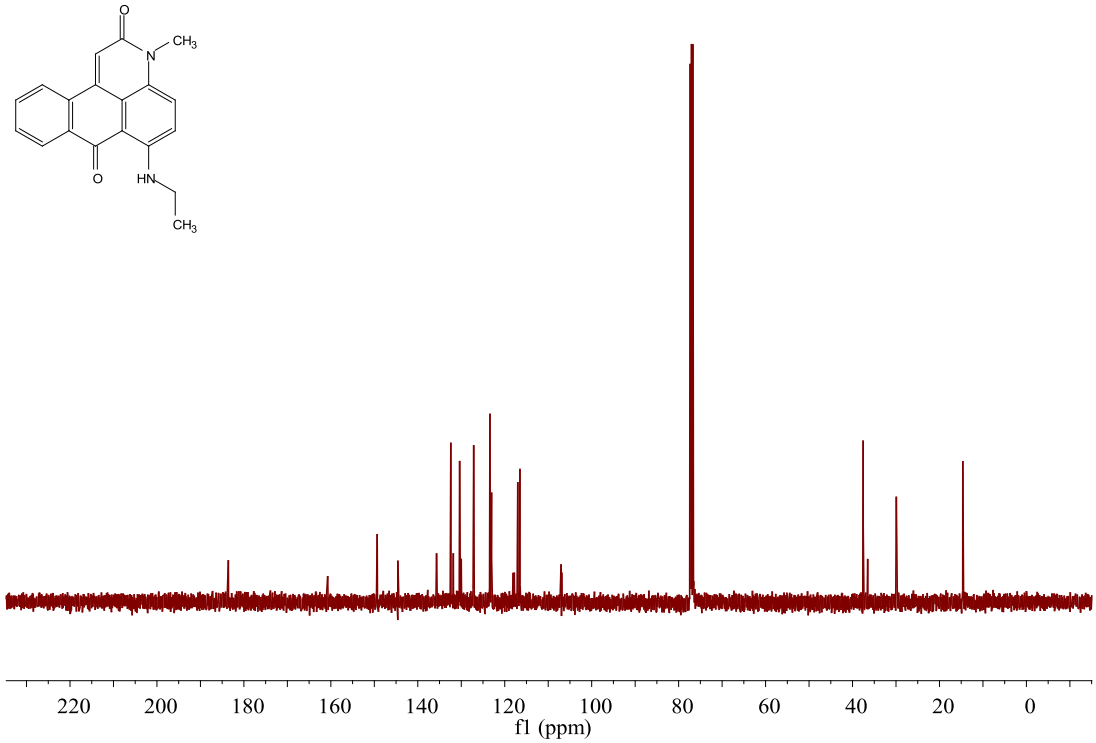

Fig. **S3** NMR spectra of dye 4 a) ^{1}H-NMR; b) ^{13}C-NMR.

Optical spectral of dye 4

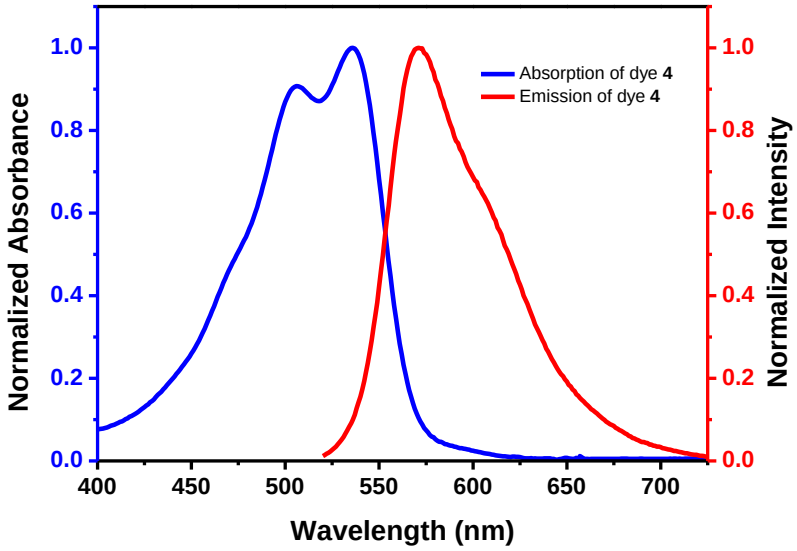

Fig. **S4** Normalized absorption and emission of dye **4** in ethanol.

Images of the fNPs emulsion

Fig. **S5** Images of the fNPs emulsion illuminated by a) sunlight; b) 365 nm of UV light.

FT-IR spectra of NPs

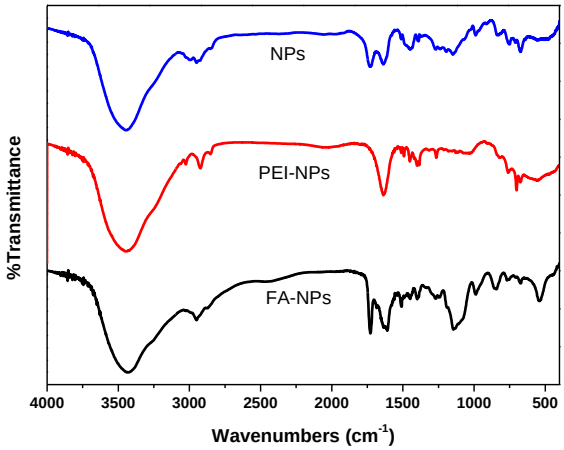

Fig. **S6** FT-IR spectra of NPs.

Zeta potential of NPs

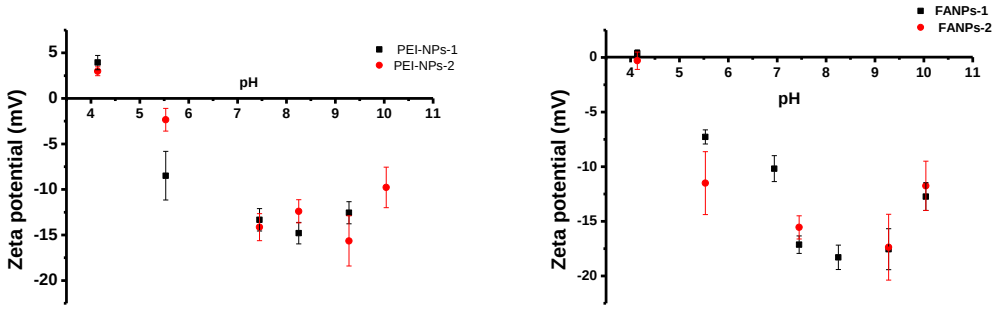

Fig. **S7** Zeta potential test of PEI-NPs (right) and FANPs (left) towards pH.

Cytotoxicity of FANPs

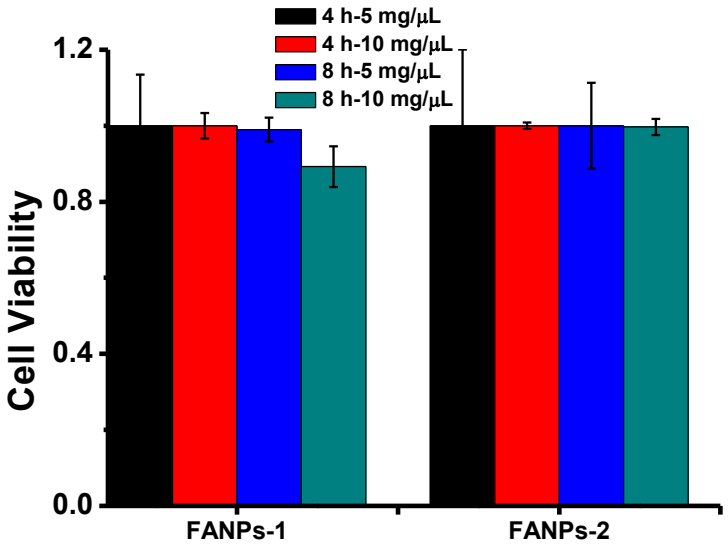

Fig. **S8** Cell viability of FANPs towards HeLa cells.

Confocal images and flow cytometer measurement

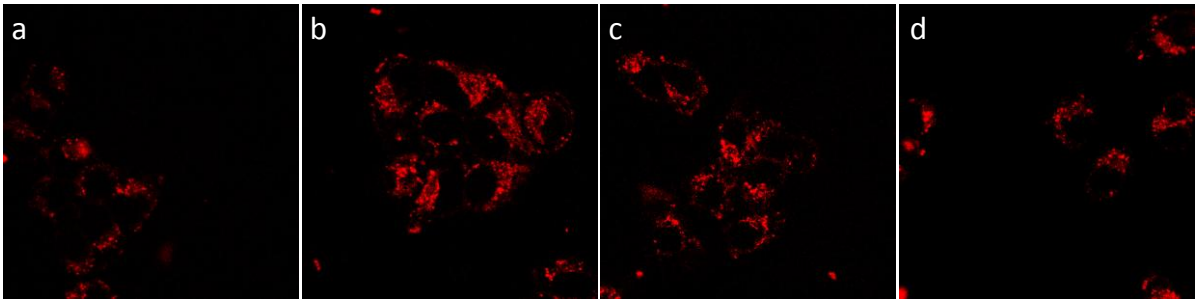

Fig. **S9** Confocal images of HeLa cells incubated with FANPs (FANPs-1, FANPs-2, FANPs-3, which prepared using 2% PEI solution of a) 0.1 mL; b) 0.2 mL; c) 0.5 mL respectively) and d) large NPs.

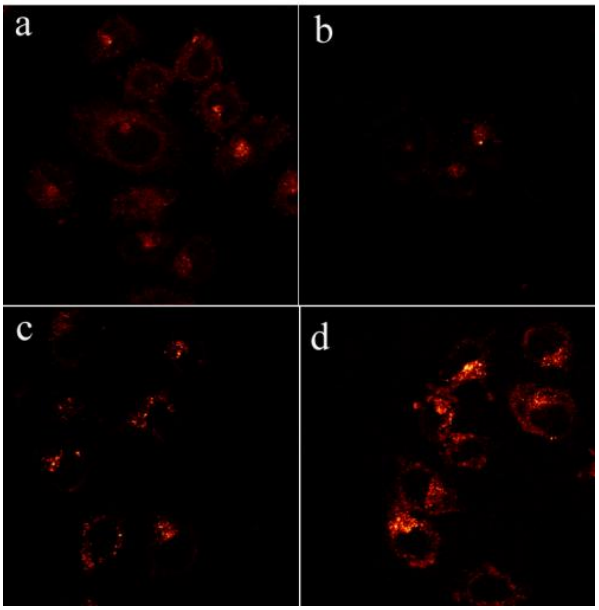

Fig. **S10** Confocal fluorescent microscopy of cancer cell lines following incubation with NPs. MCF-7 Cells were incubated with a) PEI-NPs and b) FANPs-2 for 4 h. HeLa cells were incubated with c) PEI-NPs and d) FANPs-2 for 4 h.

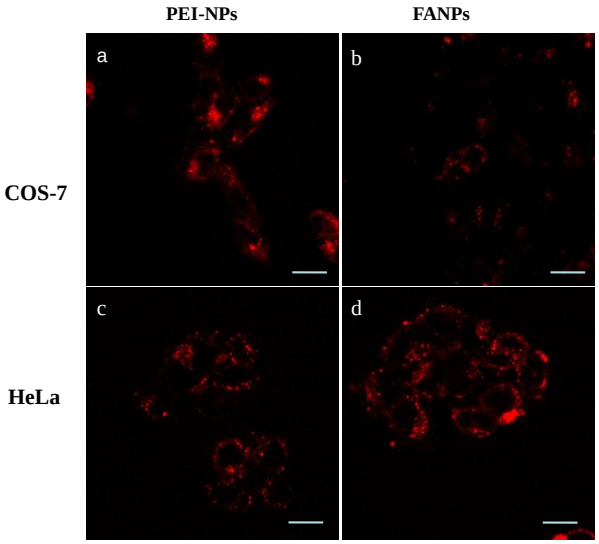

Fig. **S11** Confocal fluorescent microscopy of cancer cell lines following incubation with NPs. COS-7 Cells were incubated with a) PEI-NPs and b) FANPs-2 for 4 h. HeLa cells were incubated with c) PEI-NPs and d) FANPs-2 for 4 h. Scale bar is 20 μm.

Table **S1** Uptake ratio of HeLa and HepG2 cells towards NPs measured by flow cytometer (incubated with NPs at concentration of 10 μg/mL for 4 h).

NPs	Cell lines	Uptake Ratio (%)

Control (no NPs)	HeLa	0.37
	HepG2	0.4
FANPs-1	HeLa	1.7
FANPs-2	HeLa	3.6
	HepG2	0.87
large NPs	HeLa	2.07

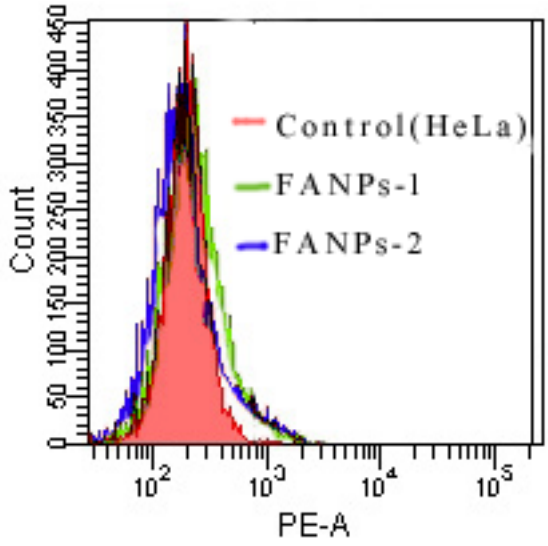

Fig. **S12** Flow cytometry data showed the relative cellular uptake of HeLa cells incubated with Control (no NPs), FANPs-1 and FANPs-2 (at concentration of 10 μg/mL for 4 h).

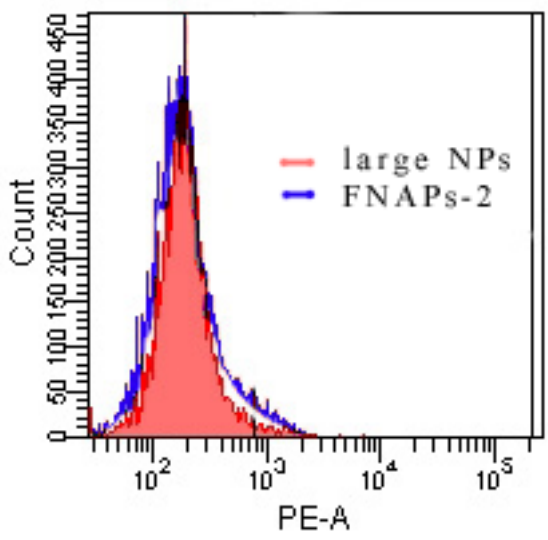

Fig. **S13** Flow cytometry data showed the relative cellular uptake of HeLa cells incubated with large NPs and FANPs-2 (at concentration of 10 μg/mL for 4 h).

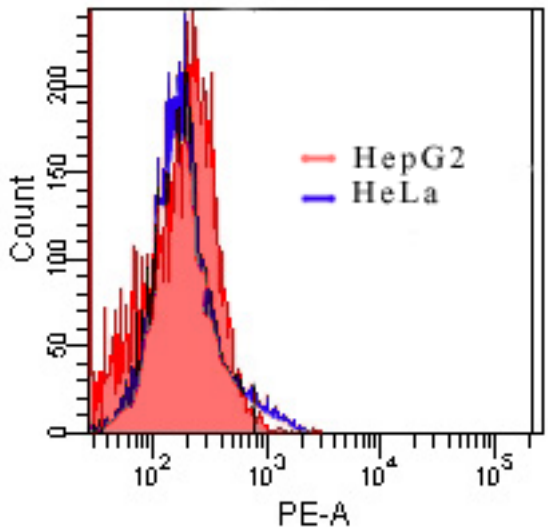

Fig. **S14** Flow cytometry data showed the relative cellular uptake of HeLa and HepG2 cells incubated with FANPs-2 (at concentration of 10 μg/mL for 4 h).