Supporting Information


Figure S1. Schematic synthesis routs of mPEG-g-PEI (PP)

b


PEI-g-PEG-Maleimide

## c



Figure S2. Synthesis of $\mathrm{E}[\mathrm{c}(\mathrm{RGDyK})]_{2}$-PEG- $g$-PEI (RPP) (a) Modify $\mathrm{E}[\mathrm{c}(\mathrm{RGDyK})]_{2}$ to form terminal sulfhydryl group (b) Bind NHS-PEG-MAL to branched PEI (c) Obtain the final product by mixing (a) and (b)intermediates.


Figure S3. The tumor-to-kidney, tumor-to-liver, tumor-to-heart(blood pool) ratios for ${ }^{99 \mathrm{~m}} \mathrm{Tc}$ PP10/D in female BALB/c nude mice bearing subcutaneous Hela tumors.


Figure S4. The tumor-to-kidney, tumor-to-liver, tumor-to-heart(blood pool) ratios for ${ }^{99 \mathrm{~m}} \mathrm{Tc}$ RPP10/D in female BALB/c nude mice bearing subcutaneous Hela tumors.

