



Conference Proceeding

Single Molecular Theranostics for Cancer Targeted Therapy

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Abstract

We report here a versatile small-molecule theranostic probe RhoSSCy using a stimuli-responsible linker and tunable functional group to realize dual-stimuli thiols/pH sensing. The results indicate that RhoSSCy is highly sensitive for quantitative analysis and imaging intracellular pH gradient and biothiols. Furthermore, RhoSSCy not only shows superb cancer targeted dual-modal imaging via near-infrared fluorescence (NIRF) and photoacoustic (PA), but also induce strongly reactive oxygen species for cancer photodynamic therapy (PDT) with robust antitumor activity in vivo. Such versatile small-molecule theranostic probe may be promising for cancer targeted imaging and precision therapy.

Keywords: Single molecular probe; Theranostics; Molecular imaging; Phototherapy; Cancer therapy

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