Electronic Supplementary Information for

A functional ruthenium(II) complex for imaging biothiols in living body

Zhiqiang Ye, Quankun Gao, Xin An, Bo Song and Jingli Yuan*

State Key Laboratory of Fine Chemicals, School of Chemistry, Dalian University of Technology, Dalian 116024, P. R. China.

*Corresponding authors. Tel/Fax: +86-411-84986042. E-mail: jlyuan@dlut.edu.cn

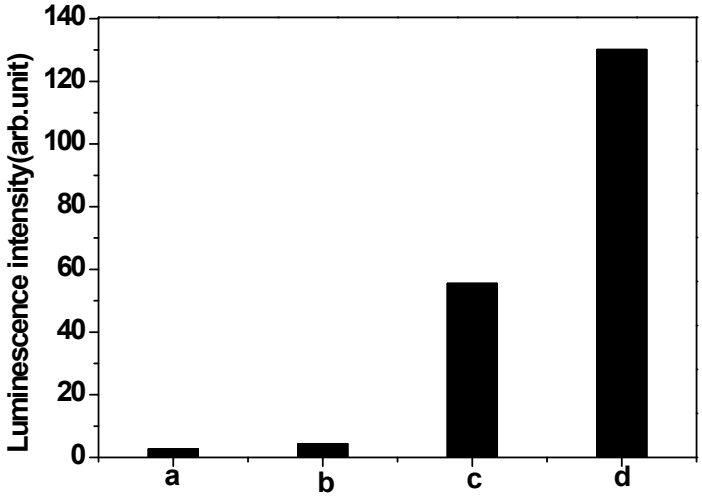

Fig. S1. Luminescence intensities of $[Ru(bpy)_2(DNS\text{-}bpy)](PF_6)_2$ (10 μM) upon addition of various species (500 μM) in 1:4 ethanol-50 mM HEPES buffer of pH 7.2. (a) blank; (b) H_2S; (c) Cys; (d) N-acetylcysteine.

MTT Assay. NCl-H1688 cells were cultured in RPMI-1640 medium (Sigma-Aldrich, Inc.), supplemented with 10 % fetal bovine serum (Corning Incorporated), 1 % penicillin (Gibco), and 1 % streptomycin (Gibco) at a density of 10^5 cells/mL in a tissue culture plate. After $[Ru(bpy)_2(DNS\text{-}bpy)](PF_6)_2$ (final concentration: 0, 50, 100, 150, 200 μM) was added to the medium, the cells were incubated at 37 °C in a 5 % CO_2/95 % air incubator for 4 h, and then the culture medium was removed. The cells were further incubated for 4 h in the culture medium containing 20 μL of a PBS solution of 3-(4,5-dimethyl-2-thiazoyl)-2,5-diphenyltetrazolium bromide (MTT, Sigma, final concentration: 833 μg/mL). After the supernatants were removed, the cells were dissolved in 80 μL DMSO and then the absorbance at 540 nm was measured in a Infinite M200 Pro Microplate Reader.

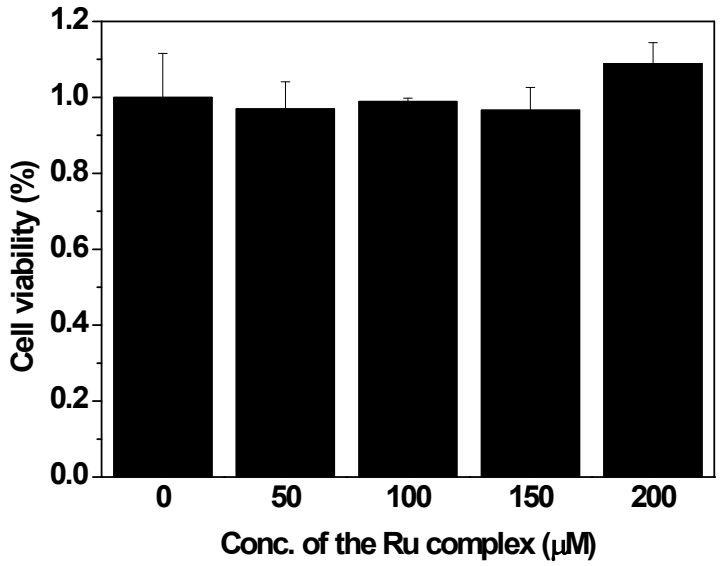

Fig. S2. Viabilities of the NCl-H1688 cells after incubated with different concentrations of $[Ru(bpy)_2(DNS\text{-}bpy)](PF_6)_2$ for 4 h.