Electronic Supplementary Information

A mitochondria-targeting ratiometric fluorescent probe for the detection of hypochlorite based on FRET strategy

Shi-Li Shen,[a,*] Xiao-Fan Zhang,[b] Yan-Qing Ge,[a] Yan Zhu[a] and Xiao-Qun Cao[a,*]

[a] *School of Chemistry and Pharmaceutical Engineering, Taishan Medical University, Taian 271016, P. R. China*

[b] *Taian Center For Food and Drug Control, Taian 271000, P. R. China*

Table of Contents

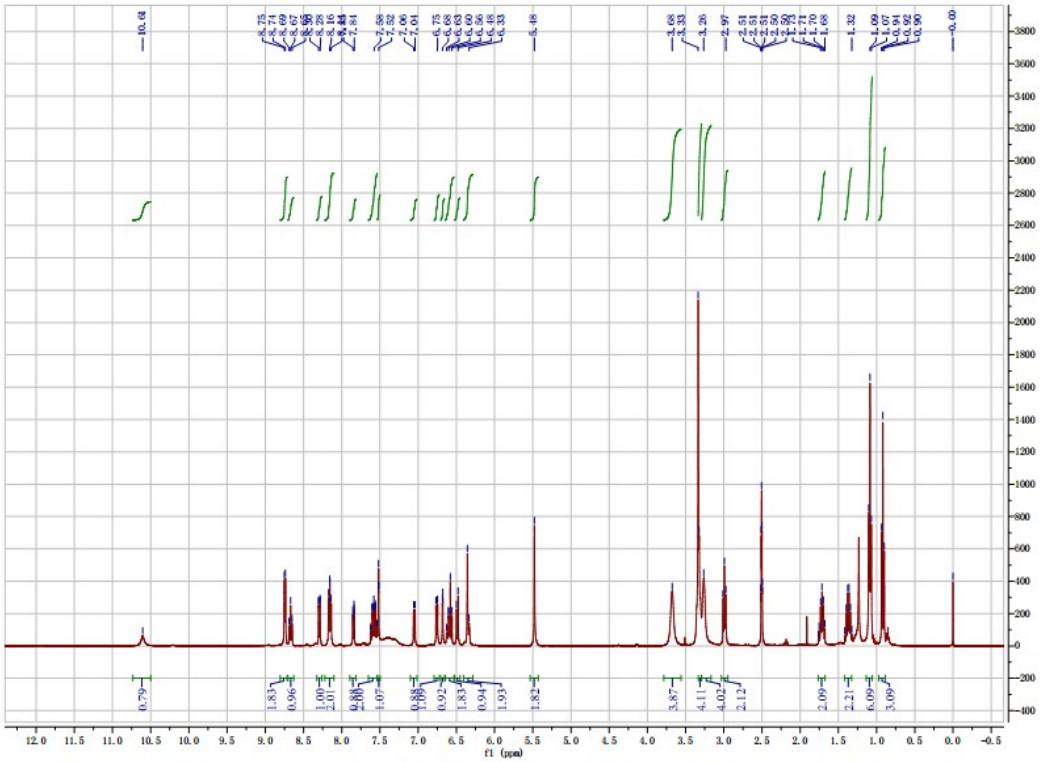

Fig. S1 ^{1}H NMR spectrum of **IRP**.

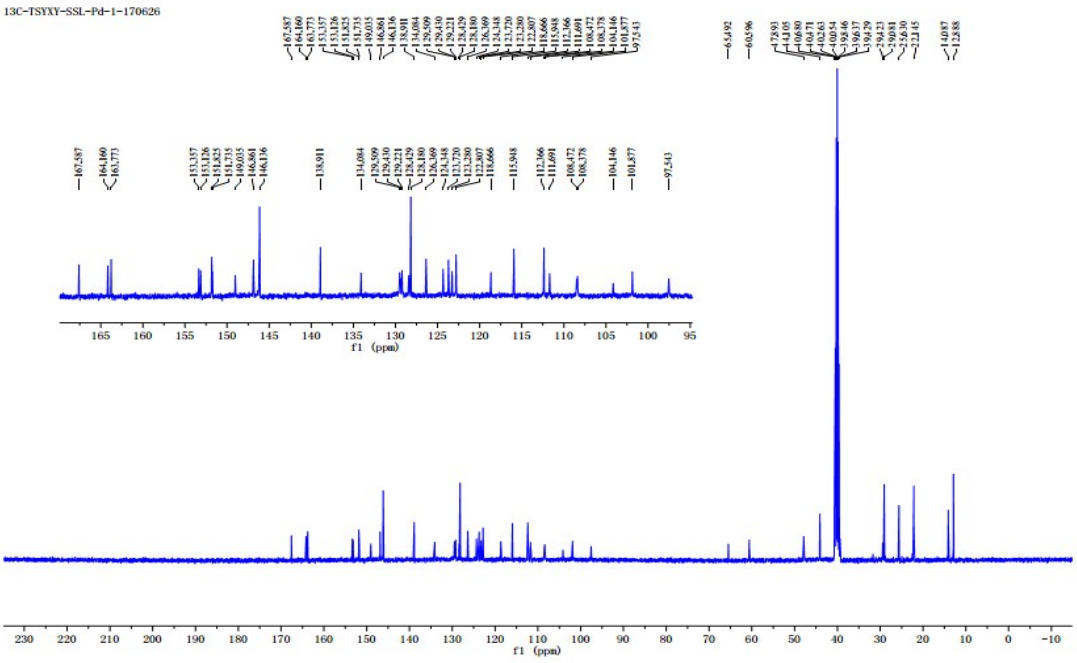

Fig. S2 ^{13}C NMR spectrum of **IRP**.

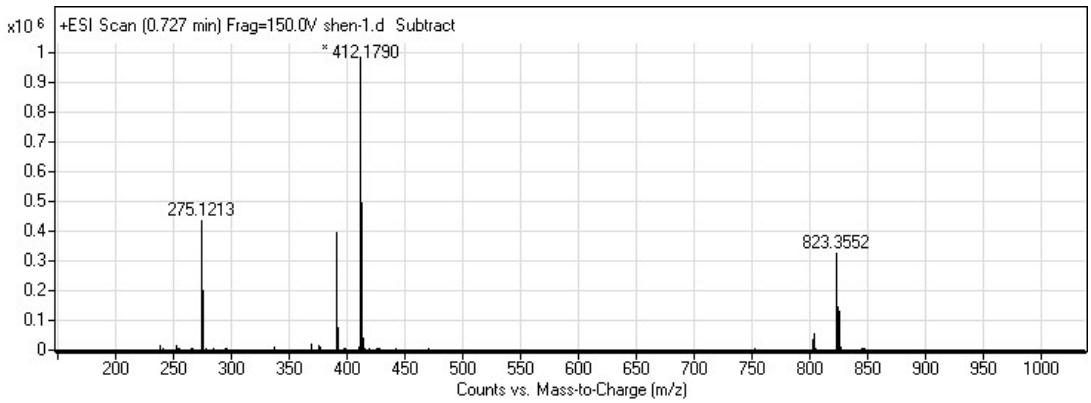

Fig. S3 HRMS spectrum of **IRP**.

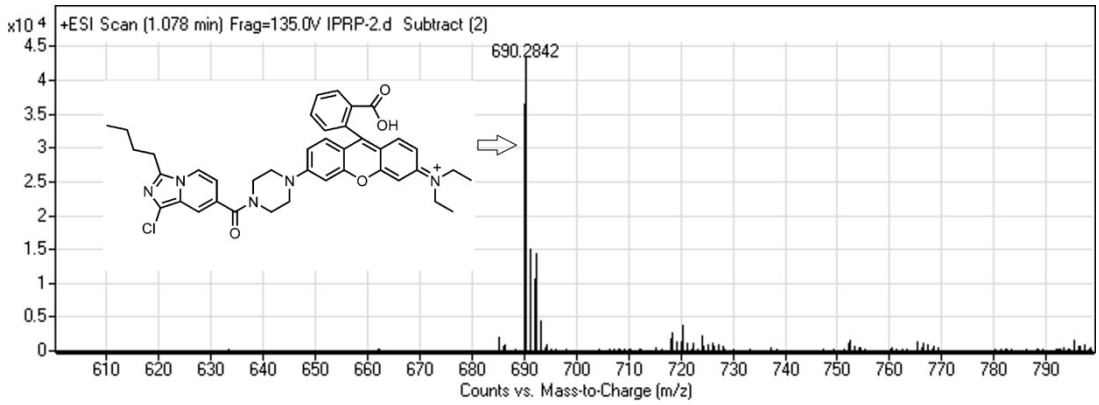

Fig. S4 The HRMS spectra of the reaction mixture of **IRP** with $^{-}$OCl.

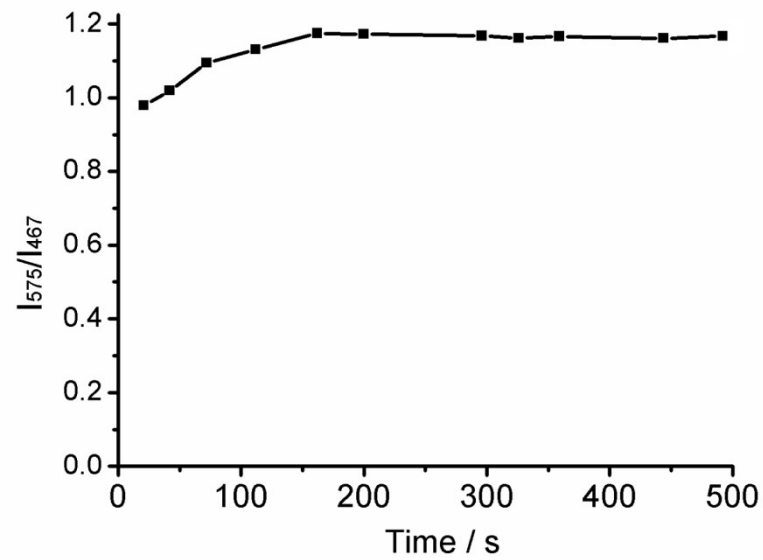

Fig. S5 Time courses of the fluorescence intensity ratios (I_{575}/I_{467}) of **IRP** (2 μM) in the presence of $^{-}$OCl (3 μM).

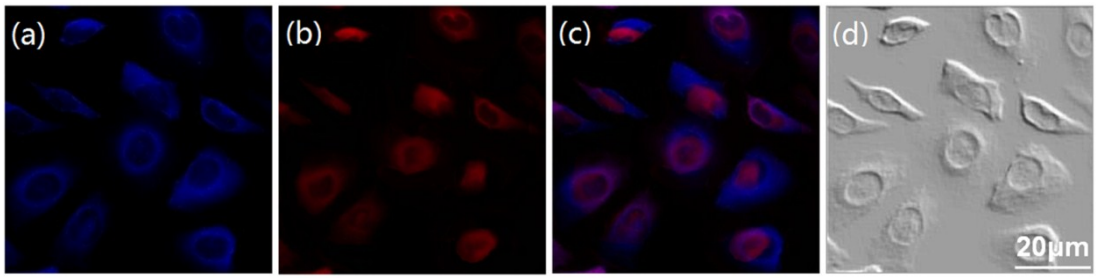

Fig. S6 Fluorescence images of RAW264.7 cells co-stained with **IRP** (1 μM) and Lyso Tracker Deep Red (0.2 μM). (a) Imidazo[1,5-a]pyridine fluorescence of **IRP**. (b) Fluorescence of Lyso Tracker Deep Red. (c) Overlay of (a) and (b). (d) Bright field images.

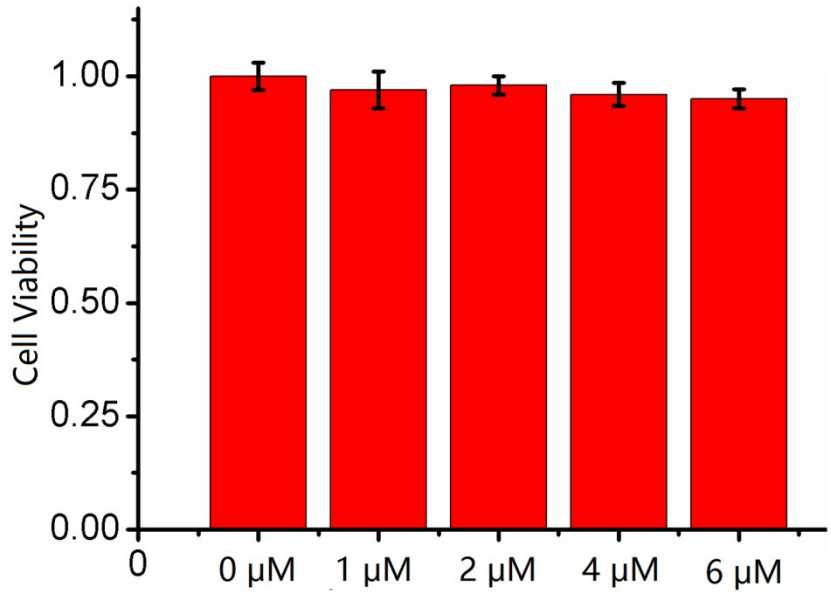

Fig. S7 Effect of **IRP** on the cell viability of RAW264.7 cells. Cells were incubated with diverse concentrations (1, 2, 4, 6 μM) of **IRP** for 12 h, followed by a standard SRB assay.

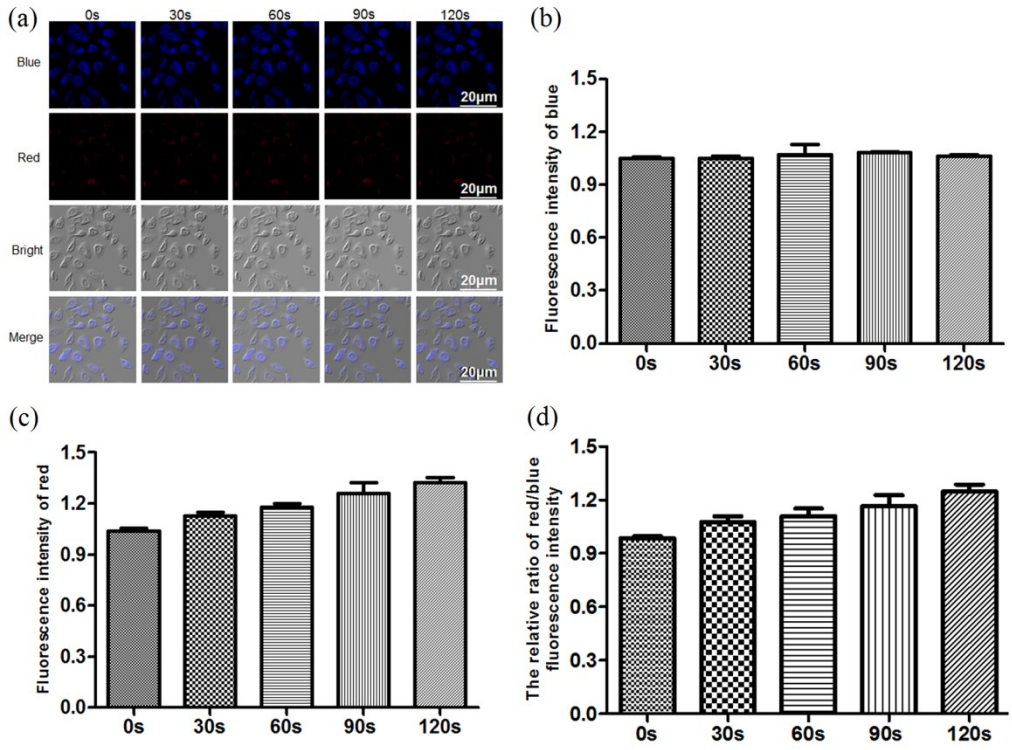

Fig. S8 Photostability of **IRP** (1 μM) in RAW264.7 cells at different periods of time. (a) Fluorescence images of RAW264.7 cells after 0, 30, 60, 90 and 120 s of continuous irradiation. First line: fluorescence images at blue channel (410-520 nm), second line: fluorescence images at red channel (560-700nm), third line: bright field images, fourth line: merge images of first, second and third line. (b) Relative ratio of blue fluorescence intensity (imidazo[1,5-a]pyridine moiety). (c) Relative ratio of red fluorescence intensity (rhodamine moiety). (d) Corresponding relative ratio of red/blue fluorescence intensity [the initial red/blue fluorescence intensity ratio (i.e., at about 0 s) was defined as 1.0]. Fluorescence intensity quantitation was analyzed by the Image J. The results were presented as means ± SE with replicates n = 3.