Responsive hetero-organelle partition conferred fluorogenic sensing of mitochondrial depolarization

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Outline

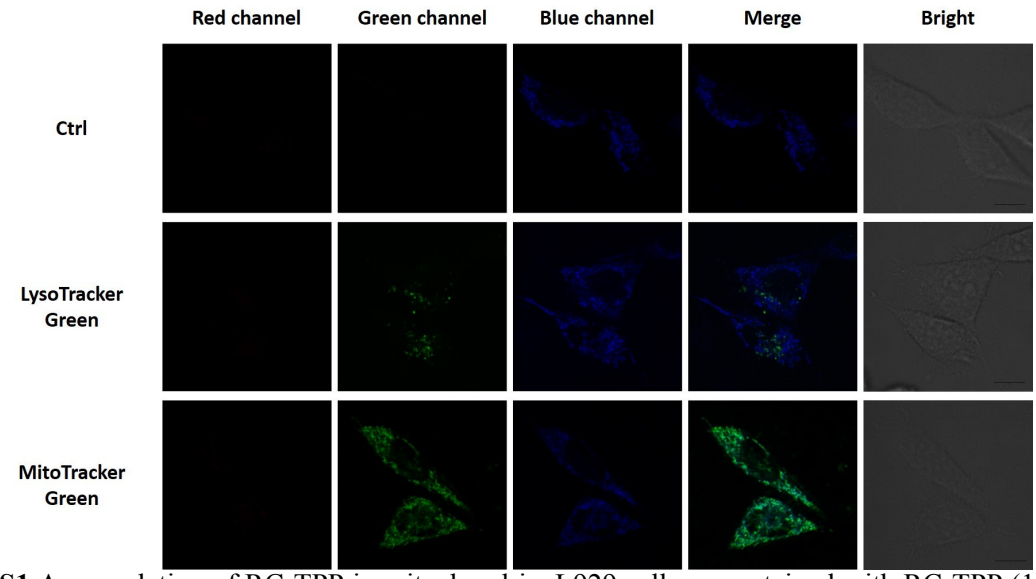

Fig. S1 Accumulation of RC-TPP in mitochondria. L929 cells were stained with RC-TPP (1 μM) in the presence of Lysotracker green (2 μM) or Mitotracker green (1 μM), and then probed by confocal microscopy. Colocalization of coumarin signal with green fluorescence is shown in cyan.

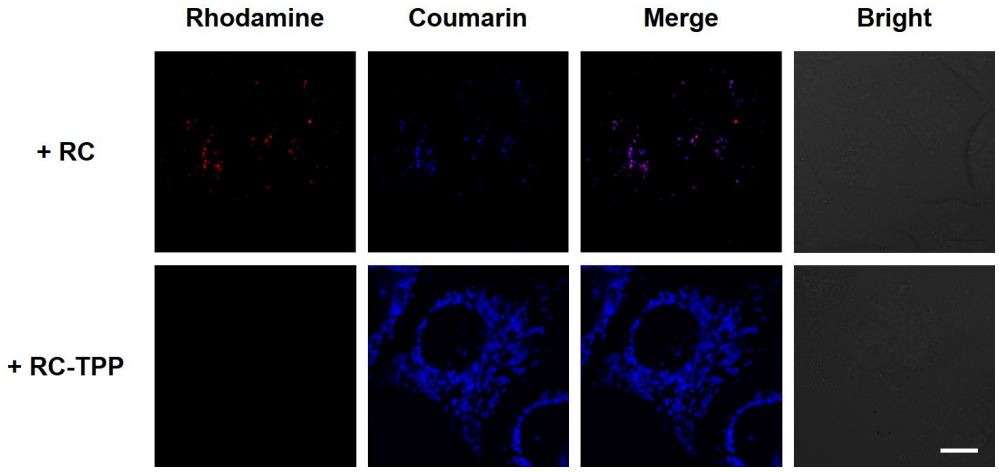

Fig. S2 Intracellular distributions of RC as compared to RC-TPP. HeLa cells were cultured in DMEM spiked with RC-TPP (1 μM) or RC (1 μM), and then analyzed with a confocal fluorescence microscope. Overlay of rhodamine signal with coumarin signal was shown in cyan. Bar, 10 μm.

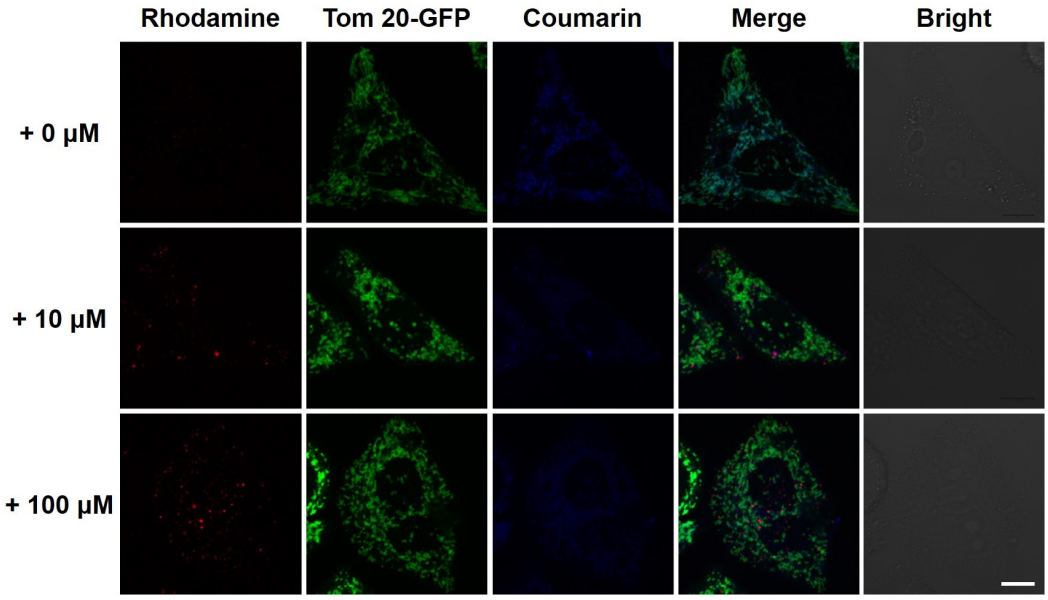

Fig. S3 Effects of CCCP on intracellular distribution of RC-TPP. Tom20-GFP expressing HeLa cells were incubated with RC-TPP (2 μM) for 1 h in the absence or presence of different dose of CCCP (0, 10, 100 μM). The cells were analyzed by confocal fluorescence microscopy to pinpoint the locations of RC-TPP as comapred to Tom20-GFP. Bar, 10 μm.

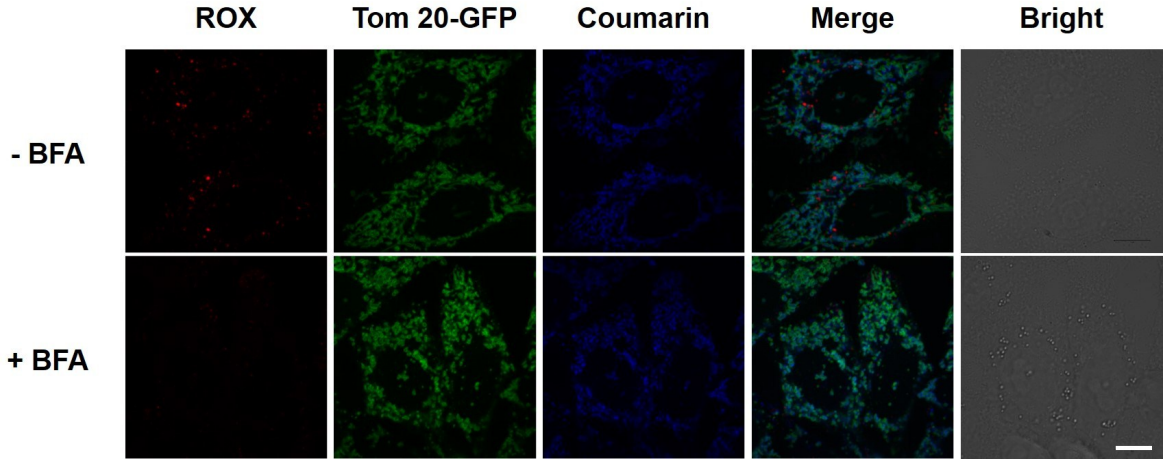

Fig. S4 Lysosomal acidity dependent rhodamine fluorescence of RC-TPP. Tom 20-GFP expressing HeLa cells were stained with RC-TPP (3 μM) for 30 min then incubated in DMEM with or without BFA (200 nM) for 1 h. The cells were analyzed with a confocol fluorescence microscope.

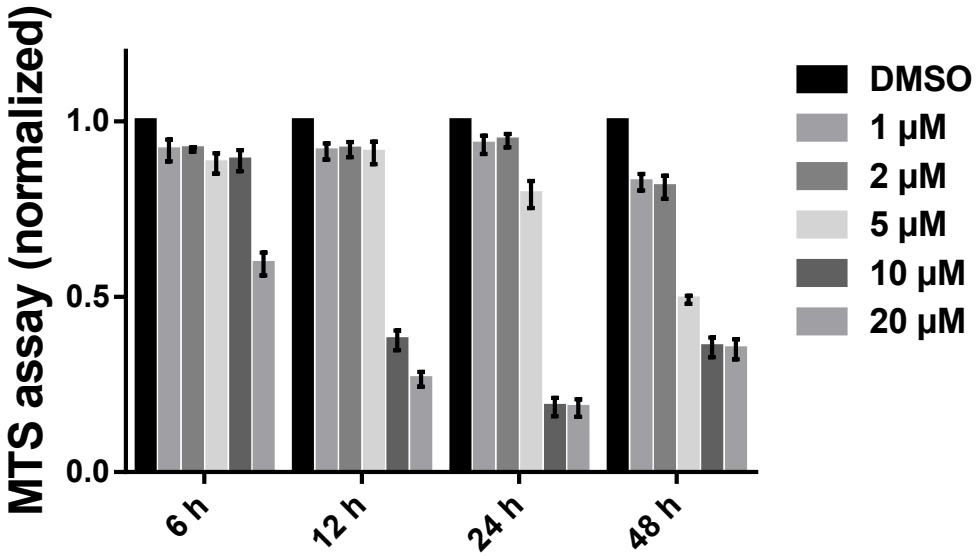

Fig. S5 Cytotoxicity of RC-TPP. HeLa cells were incubated with various doses of RC-TPP (0, 1, 2, 5, 10 and 20 μM) for 30 min and washed with PBS for 3 times then incubated with fresh medium for 6, 12, 24, 48 h. The cell number and cell viability were determined by MTS assay.

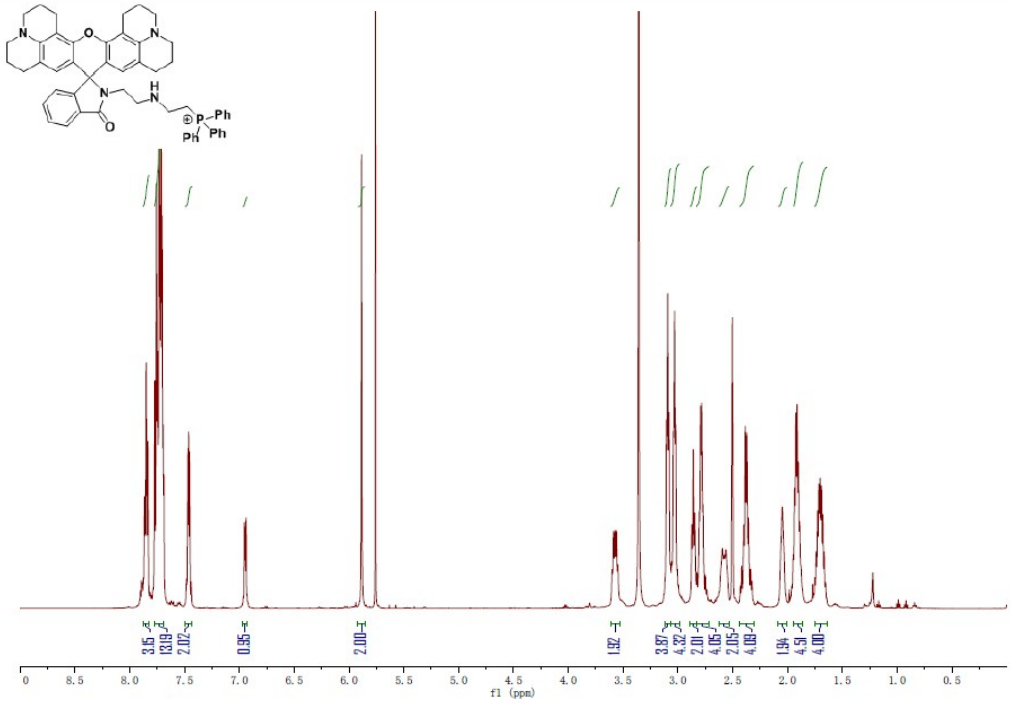

Fig. S6 [1]H-NMR Spectrum of ROX-EDA-TPP

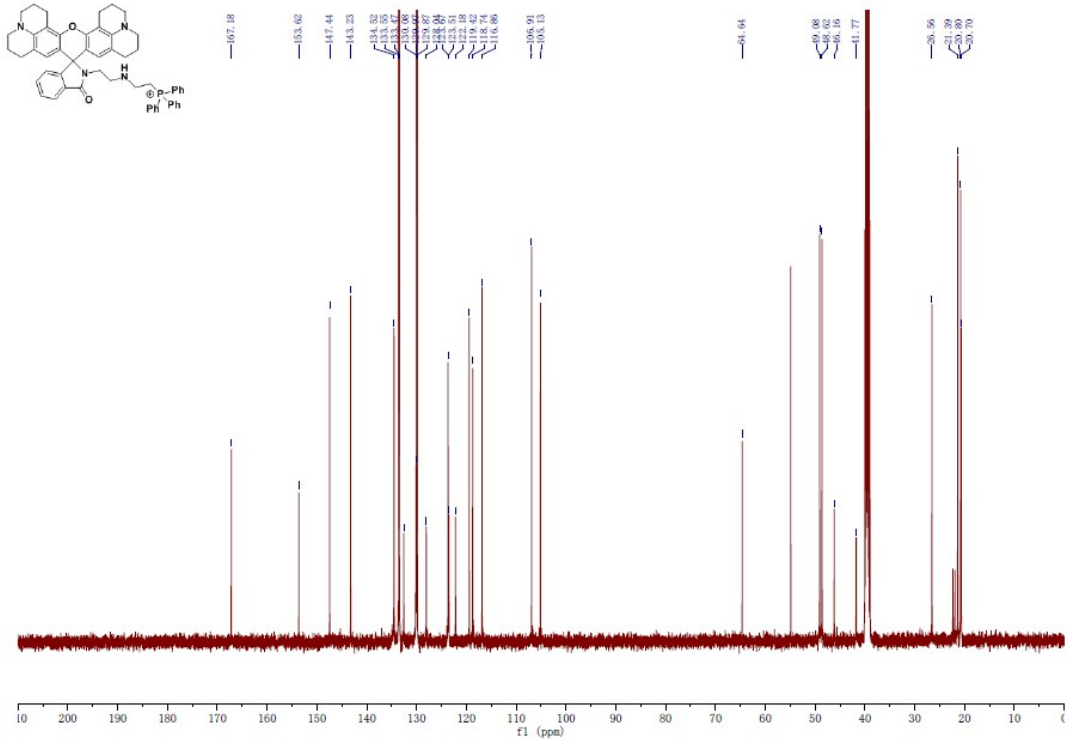

Fig. S7 ^{13}C-NMR Spectrum of ROX-EDA-TPP

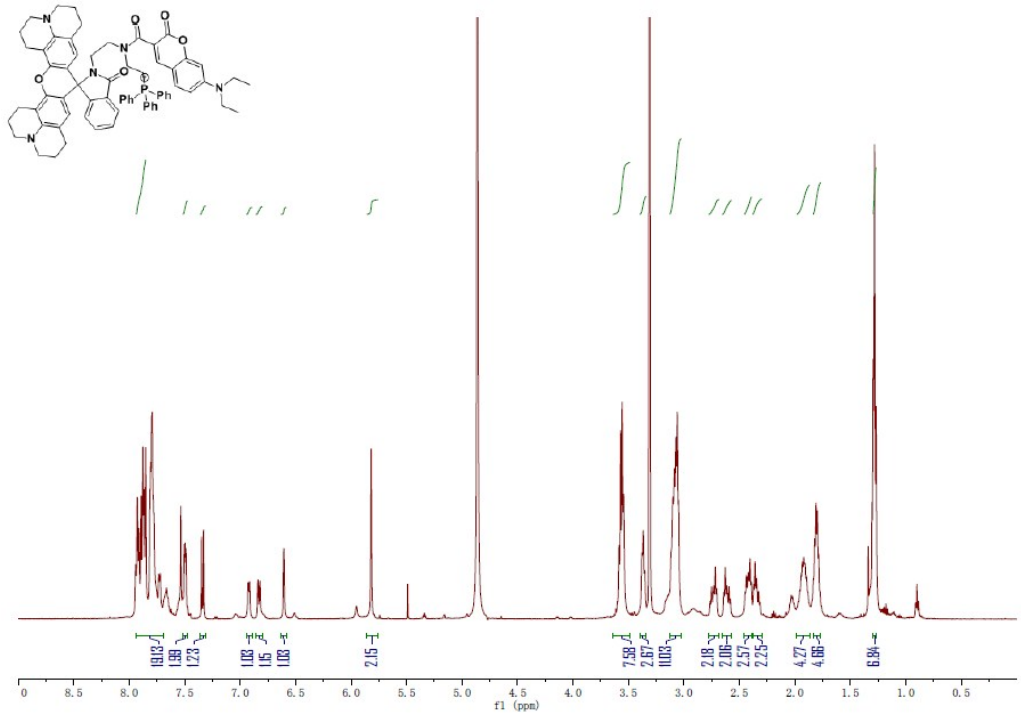

Fig. S8 ^{1}H-NMR Spectrum of RC-TPP

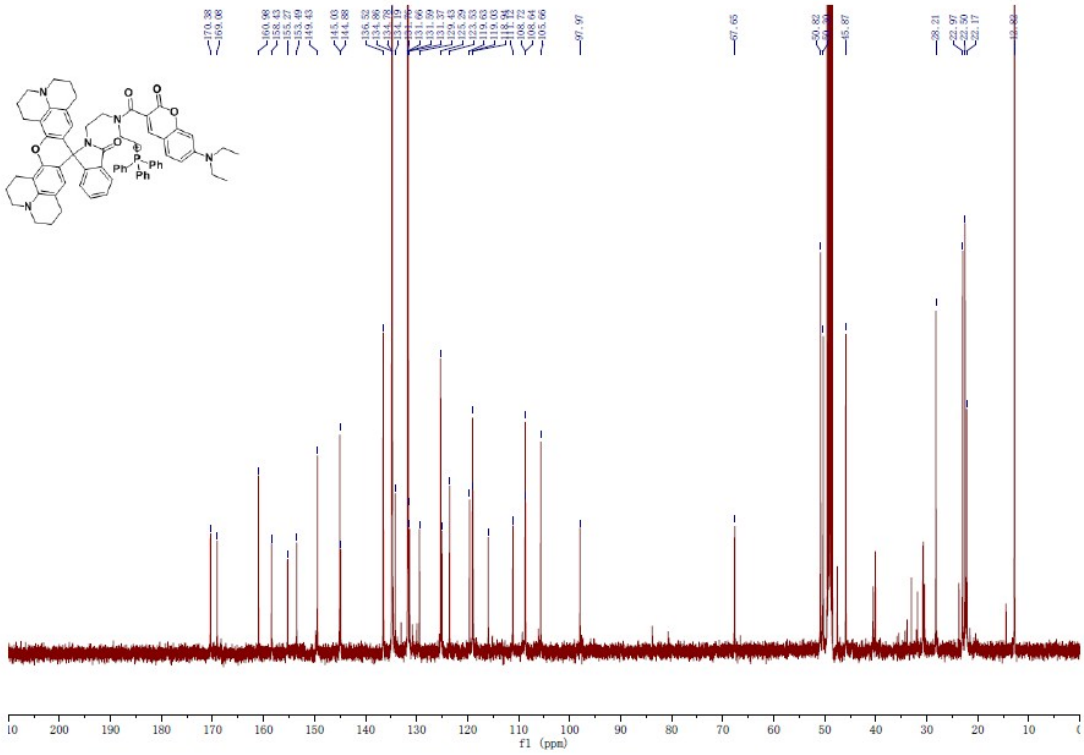

Fig. S9 ^{13}C-NMR Spectrum of RC-TPP

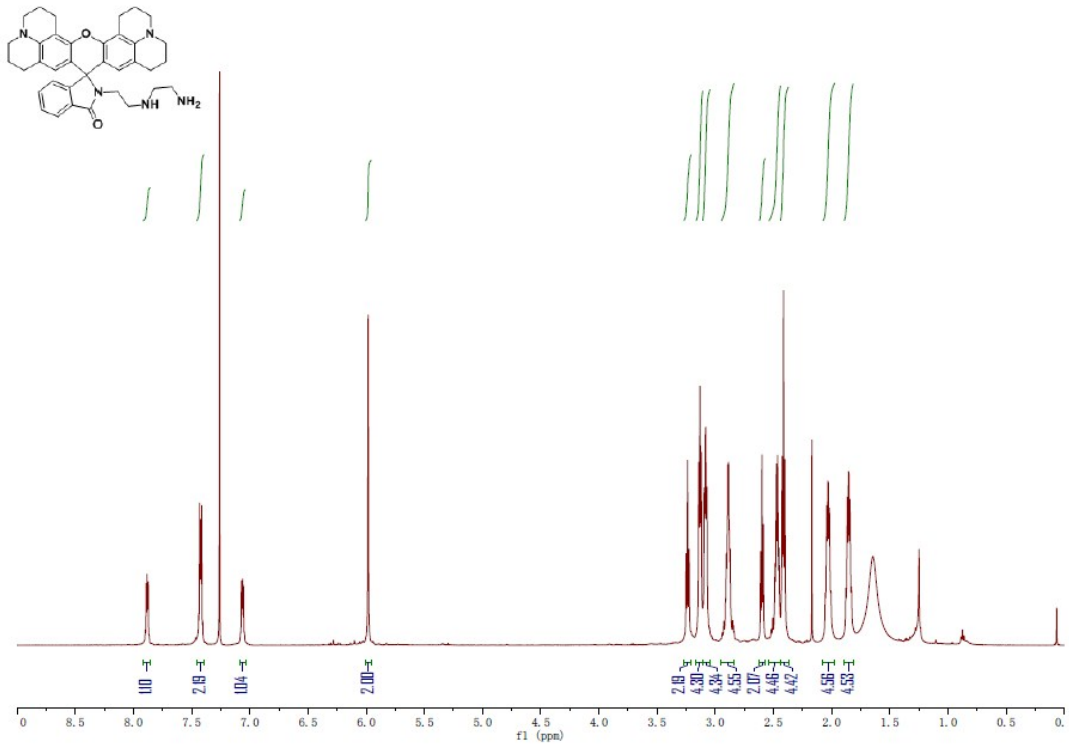

Fig. S10 ^{1}H-NMR Spectrum of ROX-ETA

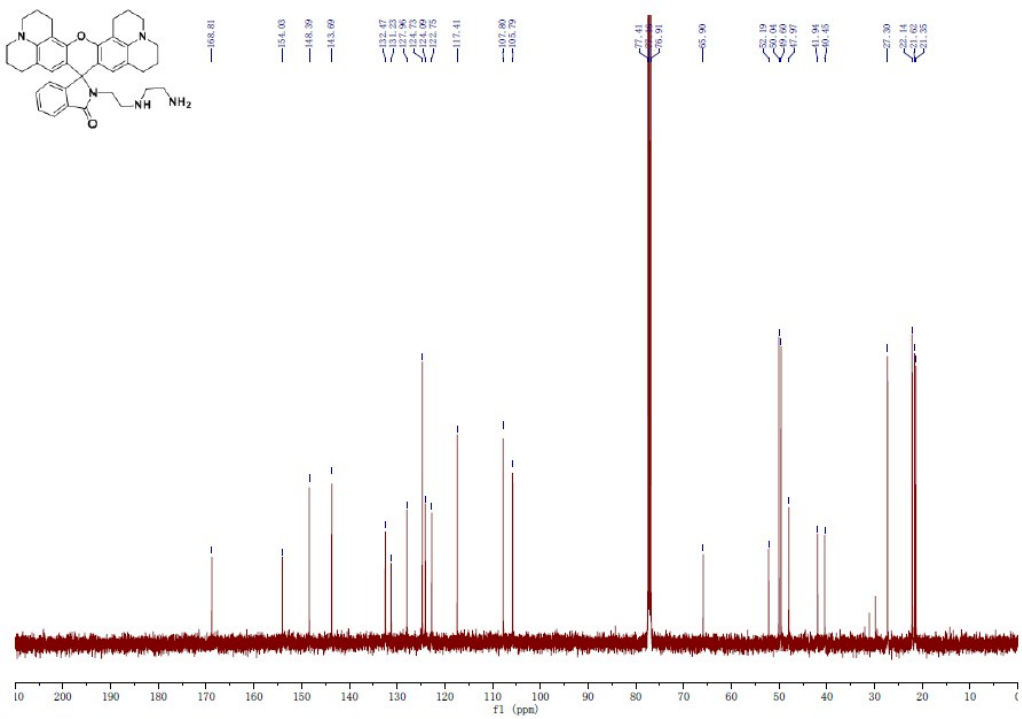

Fig. S11 ^{13}C-NMR Spectrum of ROX-ETA