

Electronic Supplementary Information

A highly selective and sensitive fluorescence probe for rapid detection of hypochlorite in tap water and cancer cells

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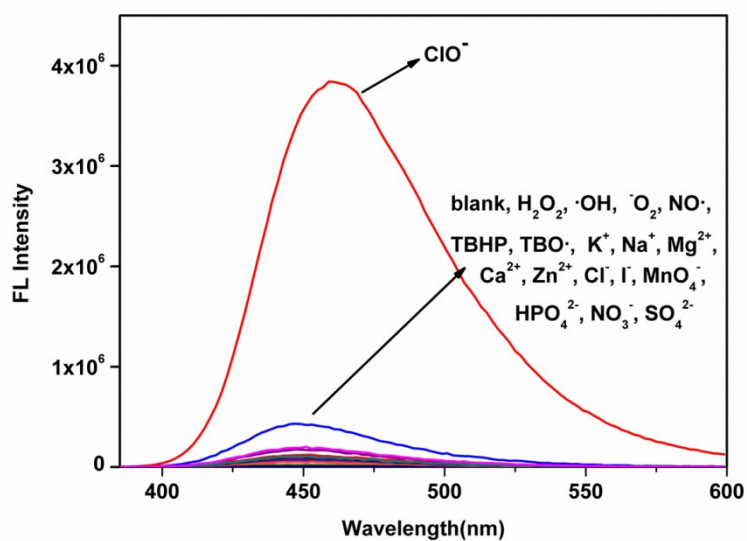


Fig. S1. Fluorescence spectra of the probe (10 μM , $\lambda_{\text{ex}}=370$ nm) in the presence of ClO^- and other relevant analytes in $\text{C}_2\text{H}_5\text{OH}:\text{H}_2\text{O}$ (v/v=1/1) solution.

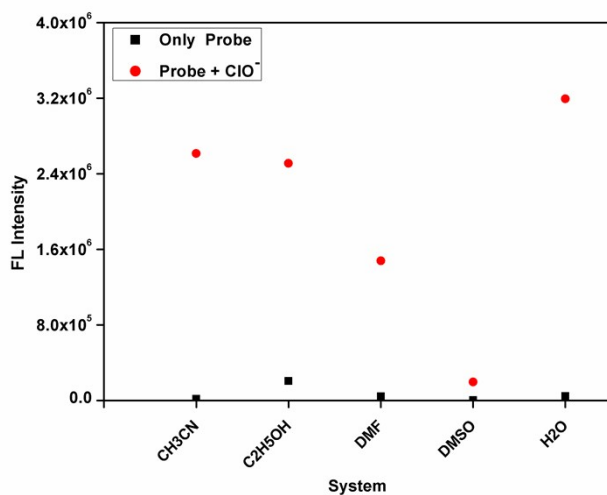


Fig. S2. The fluorescence intensity of the free probe and the probe- ClO^- at different system solutions. ($\lambda_{\text{ex}}=370$ nm, slit width: 2 nm/2 nm);

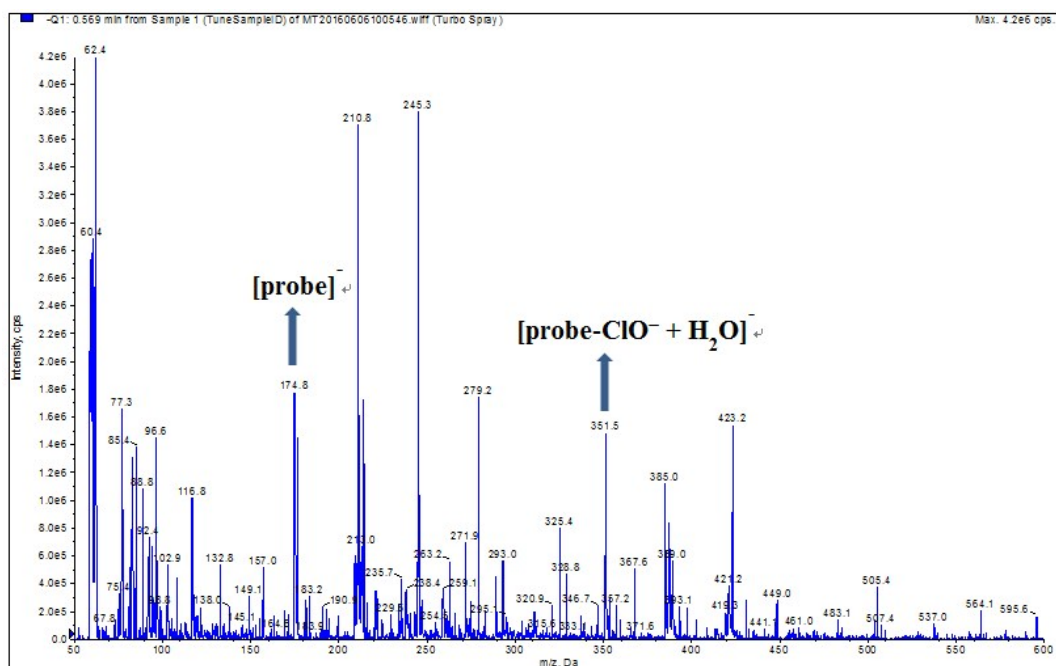


Fig. S3. The ESI-MS of the reaction mixture of the probe with ClO^- . m/z : 174.8, $[\text{probe}]^-$; m/z : 351.5, $[\text{probe-ClO}^- + \text{H}_2\text{O}]^-$.

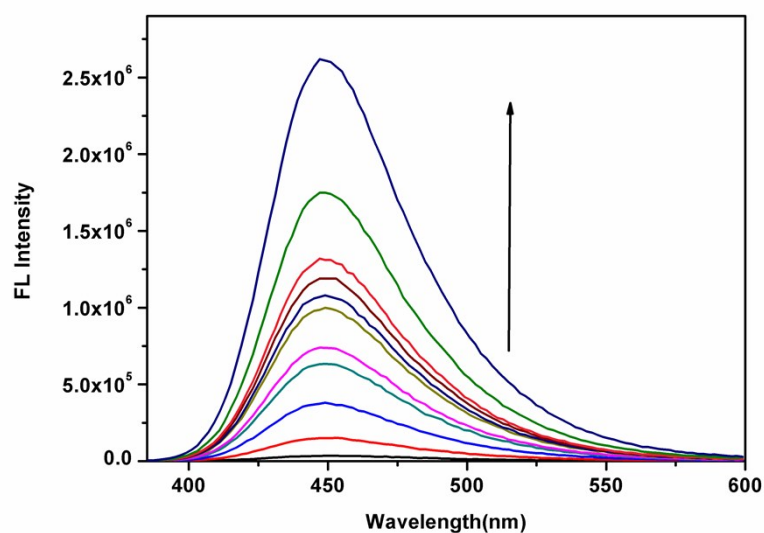


Fig. S4. Fluorescence spectra of the probe (10 μM) in the presence of different quantity of tap water (0-900 μL) in $\text{C}_2\text{H}_5\text{OH}:\text{H}_2\text{O}$ (v/v=1/1) solution. (λ_{ex} =370 nm, slit width: 2 nm/2 nm);

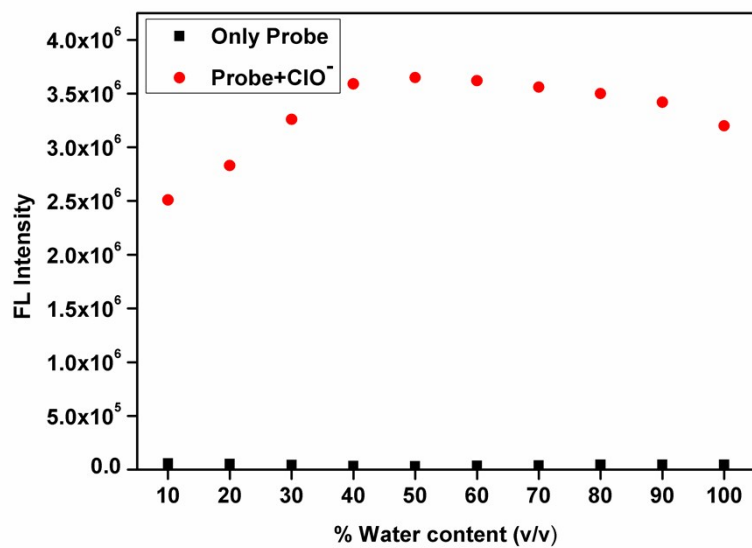


Fig. S5. The fluorescence intensity of the free probe and probe-ClO⁻ at different water volume fraction. ($\lambda_{\text{ex}}=370$ nm, slit width: 2 nm/2 nm);

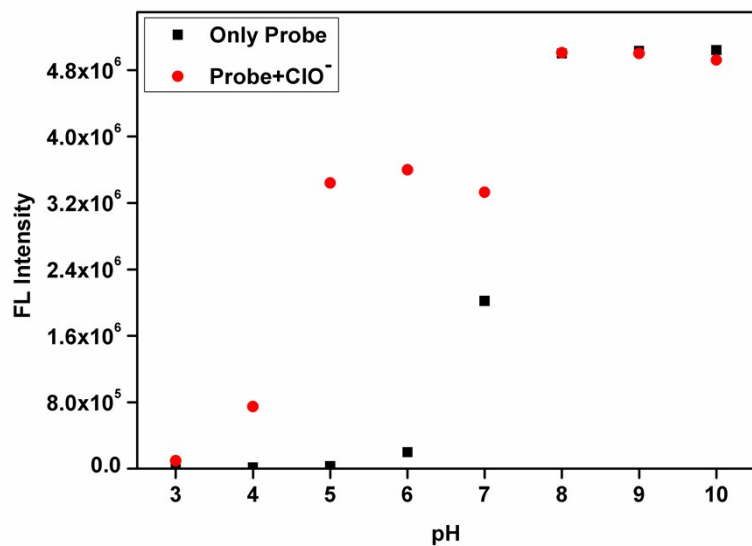


Fig. S6. The fluorescence intensity of the free probe and probe-ClO⁻ at different pH. ($\lambda_{\text{ex}}=370$ nm, slit width: 2 nm/2 nm);

Table S1. Comparisons of fluorescent probes for ClO⁻

Ref.	Linear range	Detection limit	Respond time	Application
5	0-9 μ M	0.70 μ M	3min	A549 cells
16	0.69-6 μ M	0.21 μ M	5min	Tap water
18	0-22 μ M	0.43 μ M	30s	RAW 264.7 cells
23	---	0.35 μ M	70min	Water samples RAW 264.7 cells
25	0-4 μ M	0.20 μ M	1min	RAW 264.7 cells
28	1-10 μ M	41.3nM	180s	RAW 264.7 cells
31	0-20 μ M	0.35 μ M	5min	HepG2 cells
40	0-70 μ M	0.81 μ M	6min	Tap water
this work	0-150 μ M	67nM	60s	Tap water A549 cells