Synthesis and bioapplication of a highly selective and sensitive fluorescent probe for HOCl based on a phenothiazine-dicyanoisophorone conjugate with large Stokes shift

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Figure S1 1H NMR of Dcp-EPtz (400 MHz, CDCl3).
**Figure S2** $^{13}$C NMR of Dcp-EPtz (100 MHz, CDCl$_3$).

**Figure S3** Emission (at 617 nm) of L at different concentrations of ClO$^-$A linear relationship between the fluorescence intensity and the ClO$^-$ concentration could be obtained in the 0-10.0 μM concentration range (R = 0.998). The detection limit was then calculated with the equation: detection limit = 3σbi/m, where σbi is the standard deviation of blank measurements (3σbi = 2.1113, derived from ten measurements), m is the slope between intensity versus sample concentration. The detection limit was measured to be $3.9 \times 10^{-8}$ M.
Figure S4  Change ratio $(F - F_0)/(F_{ClO^-} - F_0)$ of fluorescence intensity of $L$ (5 μM) upon the addition of 10.0 equiv. ClO\textsuperscript{-} in the presence of 10.0 equiv. other anions and ROS in PBS: ethanol=1:1 (10 mM, pH = 7.4, v/v). 1: AcO\textsuperscript{-}, 2: Br\textsuperscript{-}, 3: Cl\textsuperscript{-}, 4: ClO\textsuperscript{-}, 5: ClO\textsubscript{4}\textsuperscript{-}, 6: CO\textsubscript{3}\textsuperscript{2\textsuperscript{-}}, 7: F\textsuperscript{-}, 8: H\textsubscript{2}O\textsubscript{2}, 9: H\textsubscript{2}PO\textsubscript{4}\textsuperscript{-}, 10: HCO\textsubscript{3}\textsuperscript{-}, 11: HPO\textsubscript{4}\textsubscript{2\textsuperscript{-}}, 12: HS\textsubscript{2}O\textsubscript{8}\textsuperscript{-}, 13: NO, 14: NO\textsubscript{2}, 15: NO\textsubscript{3\textsuperscript{-}}, 16: O\textsubscript{2}, 17: ·OH, 18: ONOO\textsuperscript{-}, 19: PO\textsubscript{4}\textsubscript{3\textsuperscript{-}}, 20: SO\textsubscript{3}\textsubscript{2\textsuperscript{-}}, 21: SO\textsubscript{4}\textsubscript{2\textsuperscript{-}}, 22: TBHP, 23: O\textsubscript{2}.1

Figure S5  Fluorescence intensity of Dcp-EPtz (5 μM) in the absence and presence of NaClO (10.0 equiv.) at various pH values (from 4.0 to 10.0) in PBS: ethanol=1:1 (10 mM, pH = 7.4, v/v) at 617 nm. λ\textsubscript{ex} = 475 nm, slit: 5 nm, 5 nm.
Figure S6 HRMS spectra of Dep-EPtz upon addition of ClO\textsuperscript{−} (2.0 equivalents). The peak at [Dep-EPtzO + Na]\textsuperscript{+} = 462.1625 (calc. m/z 462.1616) and a weak peak at [Dep-EPtzO + H]\textsuperscript{+} = 440.1794 (calc. m/z 440.1791) corresponded to Dep-EPtzO, respectively.