Supporting Information

Highly selective, naked-eye and fluorescent “off-on” probe for detection of histidine/histidine-rich protein and its application in living cell imaging

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1. The fluorescent Spectra of M2 with Cu(II) addition

![Fluorescent Spectra of M2 with Cu(II) addition](image)

**Fig S1.** The fluorescent influence of M2 (10 μM) in the presence of increasing Cu²⁺ concentration (0 – 100 μM) in EtOH-buffer solution (40/60, v/v, 50 mM HEPES, pH 7.2).

2. Determination of the association constant Kₛ

The association constant (Kₛ, Formation of a 1:1 complex) was determined by a nonlinear least-squares analysis of I versus CM using the following equation:

\[
Y = Y₀ + \frac{Y_{\text{lim}} - Y₀}{2} \left[ 1 + \frac{C_M}{C_L} + \frac{1}{Kₛ C_L} \left( \left( 1 + \frac{C_M}{C_L} + \frac{1}{Kₛ C_L} \right)^2 - 4 \frac{C_M}{C_L} \right)^{\frac{1}{2}} \right]
\]

Where Y is the fluorescent intensity (or fluorescent intensity ratio); Cₑ is the concentration of additional compounds; Cₐ is the concentration of probe.

**Fig. S2.** The fitting curve of fluorescence intensity of S₁ versus increasing concentrations of histidine in EtOH-water solution (60:40, v/v, 50 mM HEPES buffer, pH 7.2). The concentration of S₁ was 10 μM.
3. The FTIR spectras of compounds 3, 2, M2 and S1

Fig. S3 The FTIR spectra of compound 3

Fig. S4 The FTIR spectra of compound 2
**Fig. S5** The FTIR spectra of compound M2

**Fig. S6** The FTIR spectra of compound S1
4. The HRMS spectra of compound M2

Fig. S7 The HRMS spectra of compound M2

5. The HRMS spectra of compound S1

Fig. S8 The HRMS spectra of compound S1