Supporting information

Indole–rhodamine-based ratiometric fluorescent probe for Pd$^{2+}$ determination and cell imaging

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8. ESI-MS, $^1$H NMR and $^{13}$C NMR spectrum of R1
1. The fluorescence intensities ratio ($F_{590}/F_{410}$) for $R1$ as a function of Pd$^{2+}$ concentration

![Graph](image1)

**Fig. S1** The fluorescence intensities ratio ($F_{590}/F_{410}$) for $R1$ as a function of Pd$^{2+}$ concentration in CH$_3$OH/PBS (5 mM, pH = 7.40, 50% CH$_3$OH) solution (excited at 330 nm).

2. Job plots of $R1$ with Pd$^{2+}$

![Graph](image2)

**Fig. S2** Job plots of $R1$ with Pd$^{2+}$ in CH$_3$OH/PBS (5 mM, pH = 7.40, 50% CH$_3$OH) solution according to the absorbance at 570 nm. The total concentration of $R1$ and Pd$^{2+}$ were all kept at 10 $\mu$M.

3. The Benesi-Hildebrand plot of the $R1$-Pd$^{2+}$ complex.
Fig. S3 The Benesi-Hildebrand plot of the R1-Pd$^{2+}$ complex.

4. ESI-MS spectrum of the probe R1 with Pd$^{2+}$
5. The effect of pH

Fig. S4 ESI-MS spectrum of the probe R1 with Pd$^{2+}$ in EtOH solution.

6. The effect of 1 equiv. coexistent metal cations
**Fig. S6** The effect of 1 equiv. coexistent metal cations on the relative fluorescence intensity at 410 and 590 nm (excited at 330 nm) of 5 μM R1 with 1 equiv. Pd^{2+} in CH\(_3\)OH/PBS (5 mM, pH = 7.40, 50% CH\(_3\)OH) solution

7. Time course for the fluorescence response

![Graph](image)

**Fig. S7** Time course for the fluorescence response at 410 nm and 590 nm (excited at 350 nm) of 5 μM R1 upon the addition of 1.0 eq. Pd^{2+} in CH\(_3\)OH/PBS (5 mM, pH = 7.40, 50% CH\(_3\)OH) solution at room temperature.

8. ESI-MS, \(^1\)H NMR and \(^{13}\)C NMR spectrum of R1
Fig. S8 ESI-MS spectrum of R1 in EtOH solution.

Fig. S9 $^1$H NMR spectrum of R1.
Fig. S10 $^{13}$C NMR spectrum of R1.