Supplementary data

A novel colorimetric and ratiometric fluorescent CN$^-$ sensor
based on Rhodamine B hydrazone derivatives in aqueous
media and its application in sprouting potatoes

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1. Influence of pH on the fluorescence of Z and Z+CN⁻.

Fig. S1 Influence of pH on the fluorescence of Z and Z+ CN⁻.
2. $^1$H NMR spectra of Z

Fig. S2 $^1$H NMR spectra of Z
3. ESI-MS spectra of Z

**Fig. S3** ESI-MS spectra of Z
4. $^{13}$C NMR spectra of Z

Fig. S4 $^{13}$C NMR spectra of Z
A part of the literatures were provided in the followed table:

Table S1:

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<tbody>
<tr>
<td>This work</td>
<td>Colorimetric and fluorometric (off-on)</td>
<td>DMSO/H₂O (1:9, v/v)</td>
<td>5.18×10⁻⁸ M</td>
<td>Test strips and sprouting potato</td>
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<td><em>J. Fluoresc.</em> 26 (2016) 1857-1864</td>
<td>Colorimetric</td>
<td>DMSO/EtOH (1:9, v/v)</td>
<td>3.07×10⁻⁷ M</td>
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<td><em>Sensors and Actuators B</em> 246 (2017) 319–326.</td>
<td>Colorimetric and fluorometric (off-on)</td>
<td>DMF/H₂O (1:1, v/v)</td>
<td>4.97×10⁻⁷ M</td>
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<td><em>Spectrochimica Act A</em> 175 (2017) 125–133.</td>
<td>Colorimetric and fluorometric (off-on)</td>
<td>DMSO/H₂O (3:7, v/v)</td>
<td>1.69×10⁻⁷ M</td>
<td>Test strips</td>
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