

Accepted Manuscript

Title: A colorimetric and fluorescent probe for rapid detection of glutathione and its application to tissue specific bio-imaging in living cells and zebrafish

Authors: Liyan Chen, Jong-Su Park, Di Wu, Cheol-Hee Kim, Juyoung Yoon



PII: S0925-4005(18)30293-4
DOI: <https://doi.org/10.1016/j.snb.2018.02.023>
Reference: SNB 24118

To appear in: *Sensors and Actuators B*

Received date: 14-12-2017
Revised date: 1-2-2018
Accepted date: 2-2-2018

Please cite this article as: Liyan Chen, Jong-Su Park, Di Wu, Cheol-Hee Kim, Juyoung Yoon, A colorimetric and fluorescent probe for rapid detection of glutathione and its application to tissue specific bio-imaging in living cells and zebrafish, *Sensors and Actuators B: Chemical* <https://doi.org/10.1016/j.snb.2018.02.023>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

A colorimetric and fluorescent probe for rapid detection of glutathione and its application to tissue specific bio-imaging in living cells and zebrafish

Liyan Chen,^{a,1} Jong-Su Park,^{b,1} Di Wu,^a Cheol-Hee Kim^{*,b} and Juyoung Yoon^{*,a}

^aDepartment of Chemistry and Nano Science, Ewha Womans University, Seoul, 120-750, Korea.

^bDepartment of Biology, Chungnam National University, Daejeon 34134, Korea.

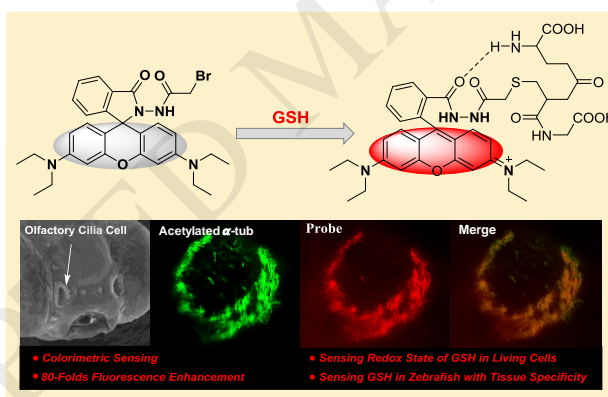
¹Co-first authors Liyan Chen and Jong-Su Park contributed equally to this work.

*Correspondence should be addressed to:

jyoon@ewha.ac.kr (Yoon, J)

zebrakim@cnu.ac.kr (Kim, C.-H.)

Graphical abstract:



Highlights:

- A rhodamine-based fluorescence probe for sensing glutathione was developed.
- Up to an 80-fold enhancement in the intensity of fluorescence and a color change from colorless to pink were achieved upon the addition of glutathione.
- The probe can be utilized to sense endogenous and exogenous glutathione in HeLa cells.
- The probe can be utilized to interrogate the oxidation states of glutathione.
- The probe can be utilized to detect glutathione in zebrafish with a high specificity for olfactory pit tissue.

Download English Version:

<https://daneshyari.com/en/article/7140515>

Download Persian Version:

<https://daneshyari.com/article/7140515>

[Daneshyari.com](https://daneshyari.com)