

A new method for effectively labeling thiols on proteins, living cells and tissues

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Using N-(2-Aminoethyl) maleimide-cysteine (StBu) (Mal-Cys) as a medium, protein thiols were converted into N-terminal cysteines. After a biocompatible condensation reaction between the N-terminal cysteine and fluorescent probe 2-cyanobenzothiazole-Gly-Gly-Gly-fluorescein isothiocyanate (CBT-GGG-FITC), a new fluorogenic structure luciferin-GGG-FITC was obtained. The latter exhibits a 2-fold fluorescence emission increase compared to the precursor moiety. Thus, a new method for more effective labeling of thiols on proteins was developed. With enhanced fluorescence imaging of thiols on proteins, outer membranes of living cells, and endothelial cell layers of small arteries was successfully achieved.

Biography

Dongxin Zhang has completed his Bachelor of Science at the age of 22 years from University of Science and Technology of China. He is a first year Ph.D. candidate at Okinawa Institute of Science and Technology Graduate University.

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