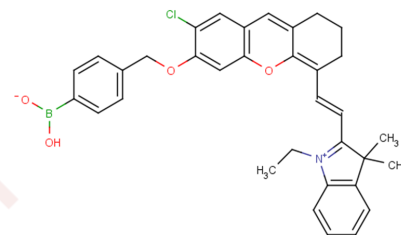


NIR-H2O2

Chemical Properties

CAS No. :	T19038
Formula:	C34H33BClNO4
Molecular Weight:	565.89
Appearance:	no data available
Storage:	keep away from direct sunlight Powder: -20°C for 3 years In solvent: -80°C for 1 year



Biological Description

Description	NIR-H2O2 is a cell-permeable near-infrared (NIR) fluorescent turn-on sensor. It responds to H2O2 with a large turn-on NIR fluorescence signal upon excitation in the NIR region.
Targets(IC50)	Others
In vitro	NIR-H2O2 is highly selective to H2O2 over other typical ROS and bio relevant species. HeLa cells incubated with NIR-H2O2 (5 μ M) for 30 min at 37 °C provide almost no fluorescence. However, when the living HeLa cells loaded with NIR-H2O2 are further treated with H2O2, they give strong fluorescence. When stimulated by phorbol myristate acetate (PMA), macrophage cells may produce endogenous H2O2. The living RAW264.7 macrophage cells loaded with only the NIR sensor NIR-H2O2 (1 μ M) display almost no fluorescence. However, the macrophage cells coincubated with PMA (3.0 μ g/mL), and the sensor NIR-H2O2 (1 μ M) exhibit a dramatic enhancement in the red emission. NIR-H2O2 is capable of fluorescent imaging of endogenously produced H2O2 in the living RAW264.7 macrophage cells.
In vivo	In an acute inflammation model induced by lipopolysaccharide (LPS), in vivo hydrogen peroxide (H2O2) production was generated by activated macrophages and neutrophils. Mice treated with both LPS and near-infrared-responsive H2O2 (NIR-H2O2) displayed significantly higher fluorescence readouts than those untreated or treated solely with NIR-H2O2. Specifically, fluorescence intensity in mice administrated with LPS and NIR-H2O2 was approximately 10- and 20-fold greater compared to mice treated with saline and the sensor, and mice treated with saline alone, respectively.

A DRUG SCREENING EXPERT

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.7671 mL	8.8356 mL	17.6713 mL
5 mM	0.3534 mL	1.7671 mL	3.5343 mL
10 mM	0.1767 mL	0.8836 mL	1.7671 mL
50 mM	0.0353 mL	0.1767 mL	0.3534 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Yuan L, et al. A unique approach to development of near-infrared fluorescent sensors for in vivo imaging. J Am Chem Soc. 2012 Aug 15;134(32):13510-23.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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