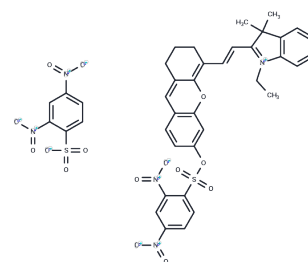


NIR-Thiol dinitrobenzenesulfonate

Chemical Properties

CAS No. :	T19039
Formula:	C39H33N5O15S2
Molecular Weight:	875.83
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-Thiol dinitrobenzenesulfonate has both absorption and emission in the NIR region. It is capable of imaging endogenously produced thiol in living cells and mice.
Targets(IC50)	Others
In vitro	NIR-Thiol dinitrobenzenesulfonate is highly selective to typical small molecular weight biological thiols (Cys, Hcy, and GSH) over other biorelevant species, such as Phe, Gly, Arg, Lys, Tyr, Leu, glucose, Ser, and Val. The sensor NIR-Thiol dinitrobenzenesulfonate is incubated with living HeLa or Bel 7702 cells, and bright fluorescence is observed. NIR-Thiol dinitrobenzenesulfonate has some prominent features, including NIR absorption and emission, rapid response, high sensitivity, excellent selectivity, good cell membrane permeability, and low cytotoxicity.
In vivo	Varying doses (0, 20, 40, or 160 nmol) of NIR-Thiol dinitrobenzenesulfonate were administered intraperitoneally in mice, resulting in observable fluorescence intensity changes. Mice receiving the 20 nmol dose exhibited strong fluorescence, while control mice showed negligible fluorescence. Increasing the dosage to 40 or 160 nmol enhanced the fluorescence brightness significantly. Notably, a 700-fold increase in signal-to-noise contrast ratio was recorded for the 20 nmol dosage, which escalated to approximately 2900- and 7400-fold at 40 and 160 nmol dosages, respectively.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.1418 mL	5.7089 mL	11.4177 mL
5 mM	0.2284 mL	1.1418 mL	2.2835 mL
10 mM	0.1142 mL	0.5709 mL	1.1418 mL
50 mM	0.0228 mL	0.1142 mL	0.2284 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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