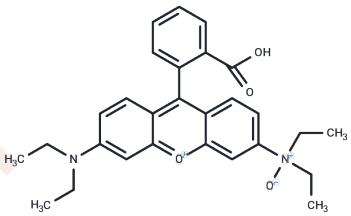
Data Sheet (Cat.No.T87330)

TargetMol

RhoNox-1

Chemical Properties



CAS No. : 1447815-38-4

Formula: C28H31N2O4

Molecular Weight: 459.56

Storage: Keep away from direct sunlight
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	RhoNox-1 is a divalent iron ion (Fe^{2+}) fluorescent probe specific and available for use in living cells, with a maximum absorption wavelength of 540 nm and a maximum emission wavelength of 575 nm, producing an irreversible orange-red fluorescent product. RhoNox-1 has the advantage of cell membrane permeability and is usually localized to the c.
Targets(IC50)	Others
In vitro	Instructions I. Solution preparation 1. Preparation of mother solution: Use DMSO to prepare RhoNox-1 and obtain 10 mM stock solution. Note: Please adjust the concentration of the mother solution according to your experimental needs. The mother solution should be stored in aliquots at -80℃ or -20℃ to avoid repeated freezing and thawing. 2. Preparation of working solution: Dilute the stock solution with preheated serum-free cell culture medium or PBS to prepare 1-10 μM RhoNox-1 working solution. Note: Please adjust the concentration of RhoNox-1 working solution according to actual conditions and prepare it before use. II. Cell staining 1. Adherent cells 1) Culture adherent cells on sterile coverslips. 2) Remove the coverslips from the culture medium and remove excess culture medium. 3) Add 100μL of dye working solution, shake gently to completely cover the cells, and incubate at room temperature for 5-30 minutes. 4) Aspirate the dye working solution, wash 2-3 times with culture medium, 5 minutes each time, and observe using a fluorescence microscope or flow cytometer. 2. Suspended cells 1) Suspended cells: Collect cells by centrifugation, add PBS and wash twice, 5 minutes each time. Cell density is 1×106/mL 2) Add 1 mL of working solution and incubate at room temperature for 5-30 minutes. 3) Centrifuge at 400 g for 3-4 minutes and discard the supernatant. 4) Add PBS and wash cells twice, 5 minutes each time. 5) Resuspend cells with 1 mL of serum-free culture medium or PBS and observe using a fluorescence microscope or flow cytometer.

In vitro	The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.

Solubility Information

Solubility	DMSO: 80 mg/mL (174.08 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.176 mL	10.880 mL	21.7599 mL
5 mM	0.4352 mL	2.176 mL	4.352 mL
10 mM	0.2176 mL	1.088 mL	2.176 mL
50 mM	0.0435 mL	0.2176 mL	0.4352 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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Mukaide T, et al. Histological detection of catalytic ferrous iron with the selective turn-on fluorescent probe RhoNox-1 in a Fenton reaction-based rat renal carcinogenesis model. Free Radic Res. 2014 Sep;48(9):990-5.
Jamnongkan W, et al. Upregulation of transferrin receptor-1 induces cholangiocarcinoma progression via induction of labile iron pool. Tumour Biol. 2017 Jul;39(7):1010428317717655.
Ito F, et al. Contrasting intra- and extracellular distribution of catalytic ferrous iron in ovalbumin-induced peritonitis. Biochem Biophys Res Commun. 2016 Aug 5;476(4):600-606.