RhoNox-1

Cat. No.: HY-D1533

CAS No.: 1447815-38-4

Molecular Formula: $C_{28}H_{30}N_2O_4$

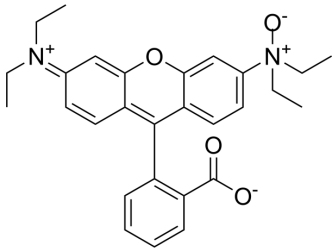
Molecular Weight: 458.55

Target: Fluorescent Dye

Pathway: Others

Storage: 4°C, protect from light

* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (218.08 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.1808 mL	10.9039 mL	21.8079 mL
	5 mM	0.4362 mL	2.1808 mL	4.3616 mL
	10 mM	0.2181 mL	1.0904 mL	2.1808 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

RhoNox-1 is a fluorescent probe for the specific detection of divalent iron ions, and when RhoNox-1 reacts with Fe^{2+}. RhoNox-1 can generate an irreversible orange (red) fluorescent product (Ex/Em⊠540/575 nm) . FeRhoNox-1 can enter the cell well, suitable for the detection of Fe^{2+} in living cells, and tends to be localized in the Golgi apparatus[1].

In Vitro

1. Preparation of RhoNox-1 working solution
1.1 Preparation of the stock solution
Dissolve 50 μg RhoNox-1 in 110 μL DMSO to obtain 1 mM of stock solution.
1.2 Preparation of RhoNox-1 working solution
Dilute the stock solution in serum-free cell culture medium or PBS to obtain 1-10 μM of working solution.
Note: Please adjust the concentration of RhoNox-1 working solution according to the actual situation.
2. Cell staining (6-well plate)
2.1 Suspension cells
a.Centrifuge at 1000 g at 4⊠ for 3-5 minutes and then discard the supernatant. Wash twice with PBS, 5 minutes each time.The cell density is 1×10^6/mL.
b.Add 1 mL of working solution, and then incubate at room temperature for 5-30 minutes.
c.Centrifuge at 400 g at 4⊠ for 3-4 minutes and then discard the supernatant.
d.Wash twice with PBS, 5 minutes each time.

e.Resuspend cells with serum-free cell culture medium or PBS. Observation by fluorescence microscopy or flow cytometry.
2.2 Adherent cells
a.Culture adherent cells on sterile coverslips.
b.Remove the coverslip from the medium and aspirate excess medium.
c.Add 100 µL of working solution, gently shake it to completely cover the cells,and then incubate at room temperature for 5-30 minutes.
d.Wash twice with medium, 5 minutes each time. Observation by fluorescence microscopy.
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. 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.

[2]. 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.

[3]. 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.

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