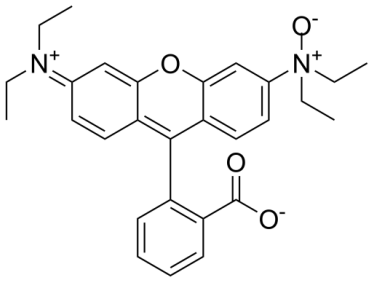
Data Sheet

Product Name:	RhoNox-1
Cat. No.:	CS-0541855
CAS No.:	1447815-38-4
Molecular Formula:	$C_{28}H_{30}N_2O_4$
Molecular Weight:	458.55
Target:	Fluorescent Dye
Pathway:	Others
Solubility:	10 mM in DMSO



BIOLOGICAL ACTIVITY:

RhoNox-1 is a fluorescent probe for the specific detection of divalent iron ions, and when RhoNox-1 reacts with Fe2+, it can generate an irreversible orange (red) fluorescent product (Ex/Em：540/575 nm). Neither the iron(III) ion (Fe3+) nor other divalent metal ions other than iron ions at physiological concentrations enhances fluorescence. FeRhoNox-1 can enter the cell well, suitable for the detection of Fe2+ in living cells, and tends to be localized in the Golgi apparatus[1]. ***In Vitro:*****1.Preparation of RhoNox-1 working solution**

1.1Preparation of the stock solution

Dissolve 50 μg RhoNox-1 in 110 μL DMSO to obtain 1 mM of stock solution.

Note: It is recommended to store the stock solution at -20 °C or -80 °C away from light and avoid repetitive freeze-thaw cycles.

1.2Preparation 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°C for 3-5 minutes and then discard the supernatant. Wash twice with PBS, 5 minutes each time.The cell density is 1×10^6mL

b.Add 1 mL of working solution, and then incubate at room temperature for 5-30 minutes.

c.Centrifuge at 400 g at 4°C 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.

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.

CAIndexNames:

Xanthylium, 9-(2-carboxyphenyl)-3-(diethylamino)-6-(diethyloxidoamino)-

SMILES:

O=C(C1=C(C2=C3C=C/C(C=C3OC4=CC([N+](CC)(CC)[O-])=CC=C42)=[N+](CC)\CC)C=CC=C1)[O-]

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