ER-Tracker Blue-White DPX

Cat. No.: HY-D1429

CAS No.: 287715-95-1

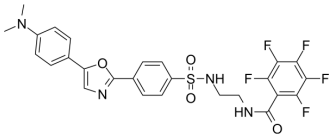
Molecular Formula: $C_{26}H_{21}F_5N_4O_4S$

Molecular Weight: 580.53

Target: Fluorescent Dye

Pathway: Others

Storage: 4°C, sealed storage, away from moisture and light
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 5 mg/mL (8.61 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	1.7226 mL	8.6128 mL	17.2256 mL
	5 mM	0.3445 mL	1.7226 mL	3.4451 mL
	10 mM	---	---	---

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

BIOLOGICAL ACTIVITY

Description

ER-Tracker dye is a derivative of BODIPY series dyes coupled with Glibenclamide (HY-15206), highly selective binding to the endoplasmic reticulum, non-toxic to cells at low concentrations, this type of dye is an environmentally sensitive probe, and formaldehyde treatment can still retain part of the fluorescence, with high fluorescence life, good extinction coefficient and other characteristics. Glibenclamide is an atp-dependent K^+ channel blocker (Kir6, KATP) and CFTR Cl-channel blocker that binds in the endoplasmic reticulum. ER-Tracker is not suitable for staining cells after fixation[1].

In Vitro

1. Preparation of ER-Tracker working solution
1.1 Preparation of the stock solution
Dissolve 100 ug ER-Tracker in 128 µL DMSO to obtain 1 mM of stock solution.
Note: It is recommended to store the stock solution at -20℃ or -80℃ away from light and avoid repetitive freeze-thaw cycles.
1.2 Preparation of ER-Tracker working solution
Dilute the stock solution in serum-free cell culture medium or PBS to obtain 100 nM-1 µM of working solution.
Note: Please adjust the concentration of ER-Tracker working solution according to the actual situation.
2. Cell staining
2.1 Suspension cells (6-well plate)
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 or flow cytometry.
Note: If detection by flow cytometry, cells need to be resuspended before staining.
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Corryn E Chini, et al. Observation of endoplasmic reticulum tubules via TOF-SIMS tandem mass spectrometry imaging of transfected cells. Biointerphases. 2018 Feb 26;13(3):03B409.

[2]. Yun-Mi Jeong, et al. CDy6, a photostable probe for long-term real-time visualization of mitosis and proliferating cells. Chem Biol. 2015 Feb 19;22(2):299-307.

[3]. Merianda TT, et al. A functional equivalent of endoplasmic reticulum and Golgi in axons for secretion of locally synthesized proteins. Mol Cell Neurosci. 2009 Feb;40(2):128-42.

[4]. Tanuja T Merianda, et al. A functional equivalent of endoplasmic reticulum and Golgi in axons for secretion of locally synthesized proteins. Mol Cell Neurosci. 2009 Feb;40(2):128-42.

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