MitoTracker Deep Red FM

Cat. No.: HY-D1783

CAS No.: 873315-86-7

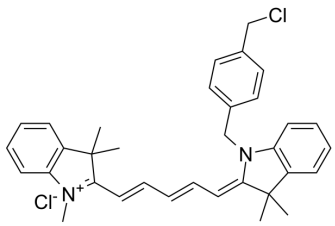
Molecular Formula: $C_{34}H_{36}Cl_2N_2$

Molecular Weight: 543.57

Target: Fluorescent Dye

Pathway: Others

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



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (229.96 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	1.8397 mL	9.1984 mL	18.3969 mL
	5 mM	0.3679 mL	1.8397 mL	3.6794 mL
	10 mM	0.1840 mL	0.9198 mL	1.8397 mL

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

BIOLOGICAL ACTIVITY

Description

MitoTracker Deep Red FM fluorescent dye that selectively accumulates in the mitochondrial matrix. MitoTracker Deep Red FM covalently binds mitochondrial proteins by reacting with free mercaptan of cysteine residues, allowing staining of mitochondrial membrane potential independent of membrane potential. Excitation/emission wavelength 644/665 nm[1].
Storage: Keep away from light.

In Vitro

General Protocol

1. Preparation of MitoTracker Deep Red FM working solution
1.1 Preparation of the stock solution
Dissolve 50 μg MitoTracker Deep Red FM in 92 μL DMSO to obtain 1 mM of stock solution.
Note: It is recommended to store the stock solution at -20 °C and -80 °C away from light and avoid repetitive freeze-thaw cycles.
1.2 Preparation of MitoTracker Deep Red FM working solution
Dilute the stock solution in serum-free cell culture medium or PBS dilute at 1:5000 or 1:50000 to obtain 20-200 nM of working solution.
Note: Please adjust the concentration of MitoTracker Deep Red FM working solution according to the actual situation.

2. Cell staining
2.1 Suspension cells（6-well plate）
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 1×10^6/mL.
b. Add 1 mL of working solution, and then incubate at room temperature for 15-45 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 or flow cytometry.

Storage
-20°C, 1 year. Protect from light

Precautions
1. Please adjust the concentration of MitoTracker Deep Red FM working solution according to the actual situation.
2. This product is for R&D use only, not for drug, household, or other uses.
3. For your safety and health, please wear a lab coat and disposable gloves to operate.
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Buckman JF, et al. MitoTracker labeling in primary neuronal and astrocytic cultures: influence of mitochondrial membrane potential and oxidants. J Neurosci Methods. 2001 Jan 15;104(2):165-76.

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