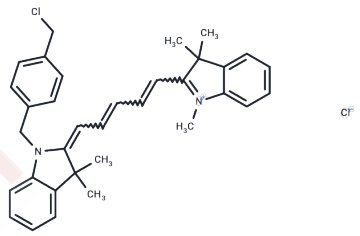
Data Sheet (Cat.No.T86902)

TargetMol

MitoTracker Deep Red FM

Chemical Properties



CAS No. : 873315-86-7

Formula: C34H36Cl2N2

Molecular Weight: 543.57

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	MitoTracker Deep Red FM is a deep red fluorescent dye for mitochondria that selectively accumulates within the mitochondrial matrix dependent on the mitochondrial membrane potential (Δψ). It covalently binds to mitochondrial proteins by reacting with free thiol groups on cysteine residues. Following covalent binding, sensitivity to Δψ changes diminishes, though initial staining remains Δψ-dependent. The MitoTracker Deep Red FM probe is suitable for staining live cells or tissues, serving to label mitochondria and indirectly detect mitochondrial membrane potential alterations. Its maximum excitation/emission wavelengths are 644/665 nm (Storage: Protect from light).
Targets(IC50)	Others
In vitro	MitoTracker Deep Red FM is prepared by dissolving 50 μg of the compound in 92 μL of DMSO to create a 1 mM stock solution. This stock should be aliquoted and stored at -20°C or -80°C, protected from light. For working solution preparation, dilute the stock solution 1:5000-1:50000 in pre-warmed, serum-free cell culture medium or PBS to achieve a concentration of 20-200 nM, adjusting the concentration as necessary and preparing fresh as needed. For staining suspension cells, collect cells by centrifugation and wash twice with PBS, maintaining a cell density of 1×10^6/mL. Incubate the cells in 1 mL of the working solution at room temperature for 15-45 minutes, then centrifuge at 400 g for 3-4 minutes and discard the supernatant. Wash cells twice with PBS and resuspend in 1 mL serum-free medium or PBS for observation using a fluorescence microscope or flow cytometer. For staining adherent cells, culture cells on sterile coverslips, remove them from the medium, and eliminate excess medium. Add 100 μL of the dye working solution, ensuring it covers the cells evenly, and incubate for 15-45 minutes. Remove the dye solution, wash the cells 2-3 times with medium, and then use a fluorescence microscope or flow cytometer for observation. Store MitoTracker Deep Red FM at -20°C protected from light for up to a year. It is recommended to store the stock solution in aliquots to avoid repeated freeze-thaw cycles, with storage stability of one month at -20°C and six months at -80°C. This product

In vitro	is intended for scientific research by professionals only and is not suitable for clinical, food, or pharmaceutical use. For safety, wear a lab coat and disposable gloves when handling. The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.8397 mL	9.1984 mL	18.3969 mL
5 mM	0.3679 mL	1.8397 mL	3.6794 mL
10 mM	0.184 mL	0.9198 mL	1.8397 mL
50 mM	0.0368 mL	0.184 mL	0.3679 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.