Mito-Tracker Deep Red 633

Introduction

Mito-Tracker Deep Red 633 is a red-fluorescent probe that selectively labels mitochondria. Like some conventional mitochondria probes tetramethylrosamine and rhodamine 123, Mito-Tracker Deep Red 633 is potential-dependent. So Mito-Tracker Deep Red 633 stains live cells well but is not suitable for fixed cells. Meanwhile, Mito-Tracker Deep Red 633 can be used to monitor changes in mitochondria membrane potential during apoptosis. Mito-Tracker Deep Red 633 is easy to use that rapidly accumulates in mitochondria and can be imaged without washing.

Components and Storage

Components	B8809-50 μg
Mito-Tracker Deep Red 633	50 μg

This product should be stored at -20°C away from light and moisture. Stable for 3 years.

Properties

Physical Appearance	Solid
Ex/Em	622/648
Solubility	Soluble in DMSO

Protocol

1. **Preparation of the stock solution:** Dissolve 50 μg Mito-Tracker Deep Red 633 in 460 μL anhydrous DMSO to make a 200 μM stock solution. The stock solution should be stored at -20°C away from light. It is recommended to aliquot the stock solution into small volumes and avoid repeated freeze/thaw cycles.

***Note:** Allow Mito-Tracker Deep Red 633 to warm to room temperature before opening.

2. **Preparation of the working solution:** Dilute the stock solution in a suitable buffer (for example, HBSS with Calcium and Magnesium) or growth medium to make a working solution. The recommended concentration of the working solution is 20-200 nM. To reduce non-specific staining, keep the concentration of working solution as low as possible. It is suggested to dilute Mito-Tracker Deep Red 633 when using it.

***Note:** The optimal concentration of working solution varies depending on the type of cell.

3. **Labeling of Mitochondria:** For adherent cells, grow cells to reach the desired density. Remove the growth medium and add an appropriate working solution to cover the cells. Incubate at 37°C away from light for 15 min. Replace the working solution with a fresh, pre-warmed suitable buffer or growth medium. Then detect the fluorescence signal of cells by a microscope with a Cy5 filter set.

***Note:** The optimal time for incubation varies depending on the type of cells. For suspension cells, harvest cells and perform similarly to the adherent cells.

Note

1. Fluorescent probes are easy to quench, please protect them from light when using.
2. For your safety and health, please wear lab coats and gloves during the experiment.
3. For research use only. Not to be used in clinical diagnostic or clinical trials.

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