Product Information

MitoScene™ 633

Catalog Number: M4045

Product Size: 50 μg, 20×50 μg

Application Scope: Mitochondrial dye

Parameters

Appearance: Dark red solid soluble in DMSO or DMF

Ex/Em: 622/648 nm (in MeOH)

Molecular Weight: 586.23

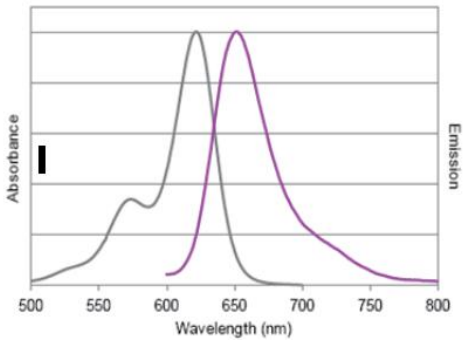

Figure 1. Absorption and emission spectra of MitoScene™ 633 dye in Methanol.

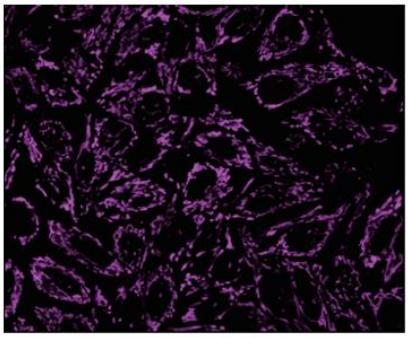

Figure 2. Experimental results of HeLa cells stained with MitoScene™ 633 (25 nM 37°C for 15 min)

Storage

Store at -20℃ and protect from light. When stored as directed, product is stable for at least 12 months.

Description

MitoScene™ 633 is a new far-red fluorescent mitochondrial dye. The dye is membrane permeable and becomes brightly fluorescent upon accumulation in the mitochondrial membrane. Staining is dependent on mitochondrial membrane potential, and can be used to monitor mitochondrial membrane potential in intact cells. The dye is designed for use in live cells, and is not fixable.

Note: The optimal detection settings for MitoScene™ 633 are the same as for Cy®5 and other far-red dyes. However, the dye also has visible red fluorescence and can be imaged using Cy®3 settings as well. As a consequence, the dye cannot be used for two-color imaging with other red probes.

Protocol

1. Dyeing liquid preparation

(1) Preparation of stock solution: Dissolve one 50 μg vial of lyophilized dye in 460 μL anhydrous DMSO to prepare 200 μM stock solution.

(2) Preparation of working solution: Dilute the stock solution with medium or PBS to prepare a working solution with a concentration of 20-200 nM.

2. Staining Live Cells

The optimal staining concentration may vary depending on cell type and application. We recommend performing a test with MitoScene™ 633 at concentrations between 20-200 nM. At higher concentrations, other structures may be stained.

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(1) When cells are at appropriate confluence, remove the medium and add prewarmed MitoScene™ 633 working solution. For suspension cells, pellet the cells and resuspend in prewarmed MitoScene™ 633 working solution.

(2) Incubate cells for 15-30 minutes at 37°C.

(3) Discard MitoScene™ 633 staining solution and add new medium or PBS to the cells

(4) Analyze fluorescence by fluorescence microscopy or flow cytometry.

Note: MitoScene™ 633 are not well-retained after fixation. For fixed cell staining with MitoScene™ Green (M4063/M4064).

Notes

1. There are quenching problems with fluorescent dyes. Please avoid light to slow down the fluorescence quenching.

2. For your safety and health, please wear lab coats and disposable gloves.

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