Product Information

MitoScene™ Green II

Catalog Number: M4064

Product Size: 50 μg / 20 × 50 μg

Application Scope: Mitochondrial dye

Parameters

Appearance: Red solid soluble in DMSO or DMF

Ex/Em: 490/523 nm (in MeOH)

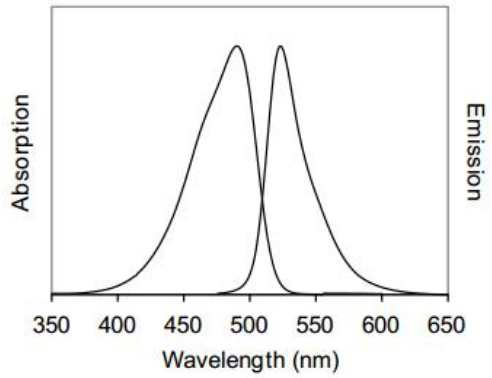

Figure 1. Absorption and emission spectra of MitoScene™ Green II dye in Methanol.

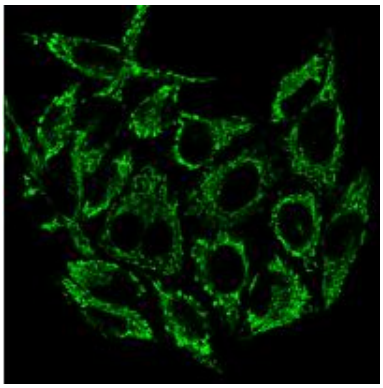

Figure 2. Experimental results of HeLa cells stained with MitoScene™ Green II (100 nM 37°C for 30 min)

Storage

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

Description

MitoScene™ Green II is a green fluorescent mitochondrial dye that stains mitochondria at the nanomolar level. The dye is non-fluorescent until it partitions into the mitochondrial membrane. The staining relies on mitochondrial mass, not on mitochondria membrane potential. Thus, the dye can be used to stain mitochondria in both live cells and fixed cells. When stained fixed cells, the signal-to-noise ratios is unideal. The fluorescent signal will be weakened or lost after fixed and permeabilized.

Protocol

1. Dyeing liquid preparation

(1) Preparation of stock solution: Dissolve one 50 μg vial of lyophilized dye in 400 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™ Green II at concentrations between 20-200 nM. At higher concentrations, other structures may be stained.

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

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prewarmed MitoScene™ Green II working solution.

(2) Incubate cells for 15-45 minutes at 37°C.

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

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

3. Staining Fixed Cells

(1) Fix cells with 4% formaldehyde solution in PBS.

(2) After the fixation, add amount of prewarmed MitoScene™ Green II working solution to the cells.

Note: The concentration of dye should be increased accordingly when cells are fixed.

(3) Incubate cells for 15-45 minutes at 37°C.

(4) Discard MitoScene™ Green II staining solution and add new medium or PBS to the cells.

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

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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