Biotium, Inc.
Glowing products for science

MitoView Green

Catalog Number: 70054
(20 X 50 ug)

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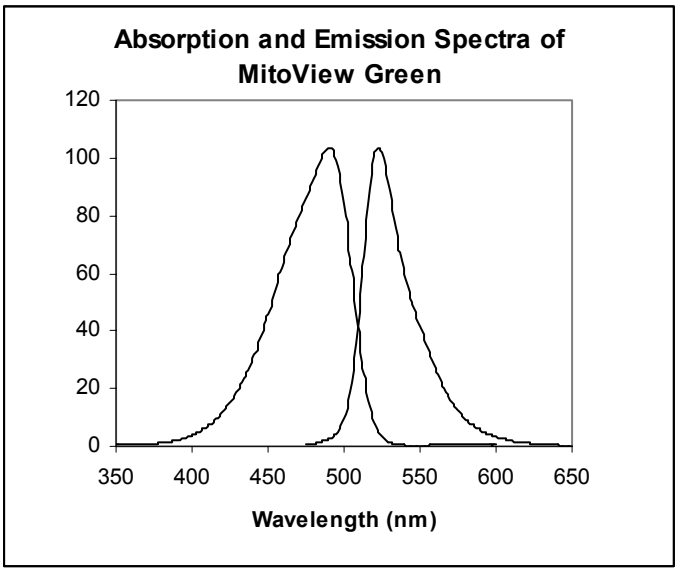
Description

The cell permeant MitoView Green reagent is incubated at nanomolar concentrations, which diffuses across the plasma membrane and accumulates in the mitochondria. Mitochondria stained with MitoView Green become brightly fluorescent after accumulation of the dye in the lipid environment of mitochondria. MitoView Green can stain mitochondria in live or formaldehyde fixed cells.

To prepare a ~200 uM stock solution, dissolve a 50 ug tube of lyophilized product in 400 uL anhydrous DMSO or DMF. MitoView Green stock solutions can be stored in frozen aliquots at -20°C and should be protected from light.

The concentration of MitoView Green for optimal staining will vary by application and cell type. The recommended procedure below is a general guideline and may need to be optimized. Dilute the MitoView Green stock solution to the final working concentration in medium. For live-cell staining, working concentrations of 20-200 nM is recommended. At higher concentrations, this probe may stain other cellular structures.

Product Spectra:



*Values measured in methanol.

Procedure

Staining of adherent cells:

1. Grow cells on coverslips in a dish or directly onto dish if slide mounting is not desired.

2. When cells are at appropriate confluency, remove the medium and add prewarmed medium containing diluted MitoView Green. Alternatively, the probe can be added directly to the current culture medium.
3. Incubate cells for 30 minutes (or longer).
4. Replace the loading solution with fresh medium or PBS and observe cells using a fluorescence microscope.

Note: If cells are not stained sufficiently, increase the concentration or the incubation time for the dye to accumulate in the mitochondria.

Staining of suspension cells:

1. Pellet cells and aspirate the supernatant.
2. Resuspend pellet in medium containing diluted MitoView Green.
3. Incubate for 30 minutes (or longer).
4. Centrifuge the cells and resuspend pellet in fresh medium or PBS and observe cells using a fluorescence microscope.

Note: If cells are not stained sufficiently, increase the concentration or the incubation time for the dye to accumulate in the mitochondria.

Staining of fixed cells:

1. MitoView Green may be used to stain cells fixed in formaldehyde. We recommend 3.7% formaldehyde in PBS for 10 min as a fixative.
2. Following fixation, rinse cells in PBS and incubate with MitoView Green. Rinse cells at least once with PBS before viewing. [**Note:** The concentration of the probe and staining time may differ between fixed and live cells.]

Note: Live cells stained with MitoView Green can be fixed but fluorescence is not well-retained. Subsequent permeabilization steps may also affect staining.

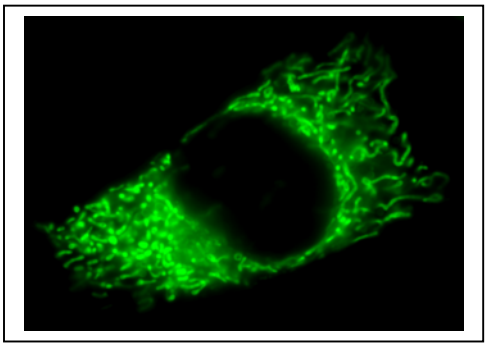


Figure 1: HeLa cells were stained with MitoView Green for 30 min, rinsed in PBS and fluorescence was visualized on an Olympus epifluorescence microscope using a FITC filter. Image is a representative live HeLa cell stained with MitoView Green.