

Product Information

MitoView™ Green

Catalog Number: 70054-T, 70054

Unit Size:

70054-T: 50 ug
70054: 20 x 50 ug

Storage and Handling

Store at -20°C, protected from light. Product is stable for at least 12 months from date of receipt when stored as recommended. To prepare a 200 uM stock solution, dissolve one 50 ug vial of lyophilized product in 400 uL anhydrous DMSO or DMF. MitoView Green stock solutions can be stored in aliquots at -20°C desiccated and protected from light for at least 6 months.

Spectral Properties

Ex/Em maxima: 490/523 nm

Product Description

Cell membrane permeable MitoView™ Green dye can be used at nanomolar concentrations to stain mitochondria. MitoView Green becomes brightly fluorescent after accumulating in the lipid environment of mitochondrial membranes. MitoView Green can stain mitochondria in live or formaldehyde fixed cells.

The concentration of MitoView Green for optimal staining will vary by application and cell type. The staining protocols provided here are general guidelines and may need to be optimized. Dilute the MitoView Green stock solution to the final working concentration in cell culture medium. For live cell staining, working concentrations of 20-200 nM are recommended. At higher concentrations, this probe may stain other cellular structures. Live cells stained with MitoView Green can be fixed but fluorescence is not well-retained. Subsequent permeabilization steps may also affect staining.

Biotium also offers MitoView™633, a novel far-red mitochondrial membrane potential dye, as well as a selection of classic mitochondrial membrane potential dyes.

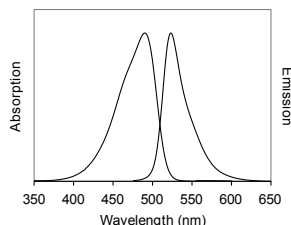


Figure 1. Absorption and emission spectra of MitoView™ Green in methanol.

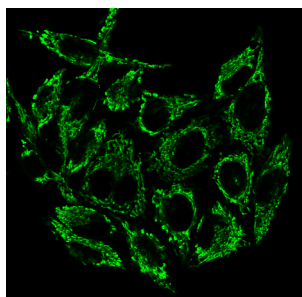


Figure 2. Live HeLa cells stained with 100 nM MitoView™ Green for 30 minutes at 37°C.

Staining Protocols

Staining of adherent cells:

1. Remove the culture medium and add warm medium containing diluted MitoView Green. Alternatively, the probe can be added directly to the culture medium.
2. Incubate cells for 30 minutes or longer.
3. Replace the loading solution with fresh medium or PBS and image cells by fluorescence microscopy.

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 image cells by fluorescence microscopy.

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.
3. 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.

Related Products

Catalog number	Product
70052	MitoView™ Blue
70055	MitoView™633
30001	JC-1 Mitochondrial Membrane Detection Kit
70058	LysoView™633
70059	LysoView™650
70061	LysoView™540
70062	ViaFluor™488 Live Cell Microtubule Stain
70063	ViaFluor™647 Live Cell Microtubule Stain
40081	NucSpot™ Live 488 Nuclear Stain
40082	NucSpot™ Live 650 Nuclear Stain
40060	RedDot™1 far-red nuclear stain for live cells
40061	RedDot™2 far-red nuclear stain for dead or fixed cells
30062	NucView™488 and MitoView™633 Apoptosis Assay Kit
30067	Dual Apoptosis Assay Kit with NucView™ 488 caspase-3 substrate and CF™594-Annexin V
30065	Apoptosis & Necrosis Quantitation Kit Plus
30066	Apoptotic, Necrotic & Healthy Cells Quantitation Kit Plus

Please visit our website at www.biotium.com for information on our life science research products, including environmentally friendly EvaGreen® qPCR master mixes, fluorescent CF™ dye antibody conjugates and Mix-n-Stain™ antibody labeling kits, apoptosis reagents, fluorescent probes, and kits for cell biology research.

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