

Product Information

MitoView™ Fix 640

Catalog Number: 70082-50ug, 70082

Unit Size: 50 ug or 10 x 50 ug

Storage and Handling

Store at 4°C or below, protected from light. Product is stable for at least 12 months from date of receipt when stored as recommended.

Spectral Properties

Absorption/Emission: 648/670 nm (in methanol)

Product Description

MitoView™ Fix 640 is far-red mitochondrial stain. The cell membrane-permeant dye rapidly accumulates in the mitochondria of live cells for no-wash, live cell staining. The dye has a reactive group that can covalently react with proteins inside the mitochondria, so that staining is well-retained after fixation and permeabilization.

Biotium offers a wide selection of live cell organelle and viability stains, including mitochondrial membrane potential-dependent MitoView™ 633, RedDot™ and NucSpot® nuclear stains, and CellBrite™ Fix and MemBrite™ Fix fixable membrane and cell surface stains.

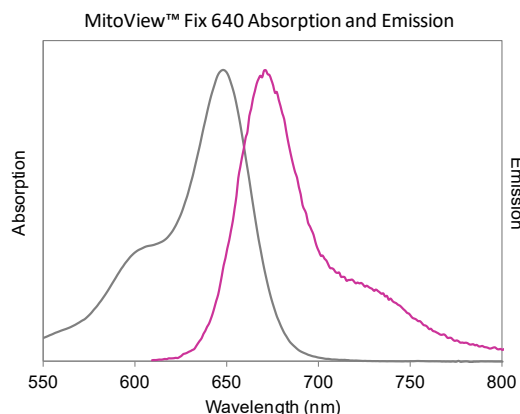


Figure 1. Absorption and emission spectra of MitoView™ Fix 640 dye in methanol.

Protocols

Reconstitution

To prepare a 200 uM stock solution, add 322 uL of anhydrous DMSO (see Related Products) or DMF to one 50 ug vial of dye and vortex to dissolve completely. The stock solution can be stored at 4°C or below, protected from light, for at least 12 months.

Considerations for Staining

- **Staining concentration:** The optimal staining concentration may vary by cell type and application. We recommend performing an initial test with the dyes at concentrations between 50-200 nM.
- **Staining time for fixation:** If cells will be fixed after staining, we recommend staining for at least 2 hours to allow time for the dye to react with mitochondrial proteins, for better retention after fixation and permeabilization.
- **Toxicity and long-term staining:** Cells can be incubated with the dye for at least 72 hours with no apparent cytotoxicity, but this may vary by cell type. If the dye is removed and cells are returned to culture, mitochondrial staining will be retained for up to several days depending on cell type, but signal may be dimmer compared to cells incubated continuously with the dye. If you wish to observe staining in cells that are cultured after dye removal, we recommend performing the staining step for 2 hours or longer before removing the dye.
- **Staining after fixation:** MitoView™ Fix shows non-specific staining when used on cells that are already fixed. MitoView™ Green (see Related Products) or one of our CF® dye-labeled anti-mitochondrial marker antibodies can be used to stain mitochondria in fixed cells.

Cell Staining Procedure

1. Remove cell culture medium and add pre-warmed medium containing MitoView™ Fix dye at the desired final concentration (see Considerations for Staining). For suspension cells, pellet the cells and resuspend in medium containing MitoView™ Fix.
Note: Alternatively, the dye can be added directly to the culture medium. We recommend making an intermediate dilution of the dye in culture medium to avoid exposing the cells to a transient high concentration of dye. For example, dilute MitoView™ Fix 640 1:100 in culture medium to obtain a 2 uM intermediate dilution. Then add 1/10 volume of the intermediate dilution to the medium already on the cells and mix by gently pipetting up and down.
2. Incubate cells for 15 minutes or longer at 37°C (see Considerations for Staining). Washing is optional, but not required before imaging.
3. Optional: Fix cells according to your preferred method. Staining can tolerate fixation with formaldehyde and permeabilization with detergent or fixation with methanol, as well as subsequent immunofluorescence staining.
4. Image staining in the appropriate channel (Cy®5 filter set or imaging settings).

Related Products

Catalog number	Product
90082	DMSO, anhydrous
22023	Paraformaldehyde, 4% in PBS Ready-to-Use Fixative
70070	MitoView™ 405
70051	MitoView™ Green
70055	MitoView™ 633
70075	MitoView™ 650
70068	MitoView™ 720
30021-30023	CellBrite™ Cytoplasmic Membrane Stains
30088-30090	CellBrite™ Fix Membrane Stains
30092-30104	MemBrite™ Fix Cell Surface Staining Kits
30105-30109	CellBrite™ Steady Membrane Staining Kits
32002-32017	Live-or-Dye™ Fixable Viability Staining Kits
31010	Live-or-Dye NucFix™ Red
40083	NucSpot® 470
30068	ViaFluor® 405 SE Cell Proliferation Kit
30086	ViaFluor® 488 SE Cell Proliferation Kit
40081	NucSpot® Live 488
40082	NucSpot® Live 650
40060	RedDot™1 Far-Red Nuclear Stain
40061	RedDot™2 Far-Red Nuclear Stain
23001	EverBrite™ Mounting Medium
23002	EverBrite™ Mounting Medium with DAPI
23003	EverBrite™ Hardset Mounting Medium
23004	EverBrite™ Hardset Mounting Medium with DAPI
23008	Drop-n-Stain EverBrite™ Mounting Medium
23009	Drop-n-Stain EverBrite™ Mounting Medium with DAPI

Please visit our website at www.biotium.com for information on our life science research products, including CF® dye labeled mitochondrial marker antibodies, live cell organelle and nuclear stains, apoptosis reagents, and other probes and kits for cell biology research.

Cy dye is a registered trademark of GE Healthcare.

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