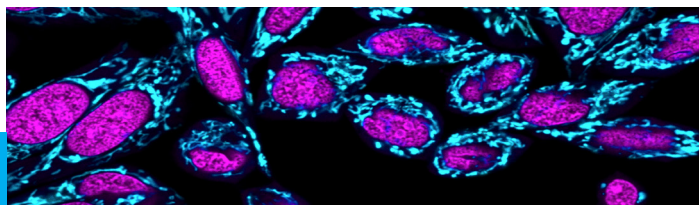


MitoView™ Dyes

live and fixed mitochondrial stains



MitoView™ Blue and RedDot™ 1 far-red nuclear stain

Loss of mitochondrial membrane potential is a hallmark for apoptosis. Biotium offers our MitoView™ Blue and MitoView™ 633 dyes for membrane potential-sensitive staining of mitochondria. MitoView Blue™ (Ex/Em 398/440 nm) can be detected using the 405 nm laser line by flow cytometry or microscopy. Far-red MitoView™ 633 (Ex/Em 622/648 nm) is optimally detected in the Cy[®]5 channel, but also emits visible red fluorescence in the Cy[®]3 channel. It has been reported to exhibit rapid responses to mitochondrial membrane potential.

MitoView™ Green (Ex/Em 490/523 nm) is a mitochondrial membrane potential-independent dye. MitoView™ Green can be used to stain mitochondria in live cells before or after mitochondrial depolarization or formaldehyde fixation.

FEATURES

- Highly specific, no-wash staining of mitochondria
- Mitochondrial membrane potential-dependent MitoView™ Blue for the 405 nm laser
- Potential-independent, fixable MitoView™ Green
- Potential-dependent MitoView™ 633 for the Cy[®]3 or Cy[®]5 channel

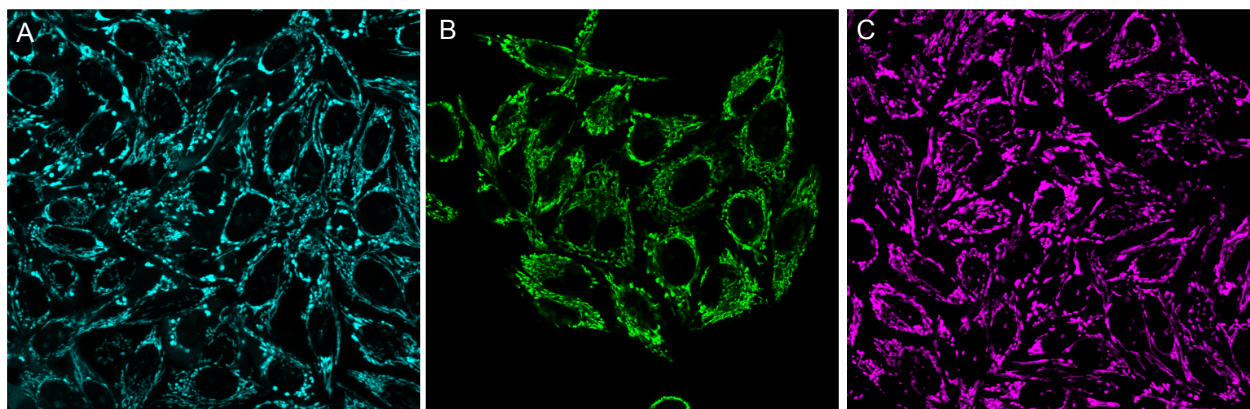


Figure 1. Live HeLa cells stained with (A) MitoView™ Blue, (B) MitoView™ Green, or (C) MitoView™ 633.

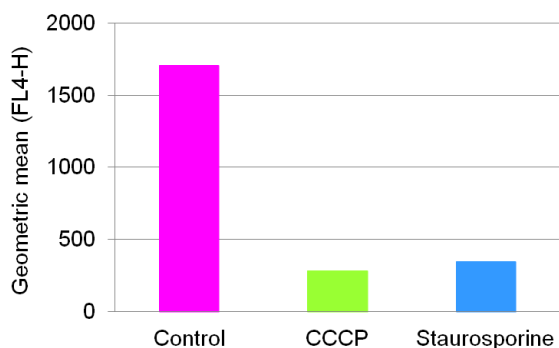


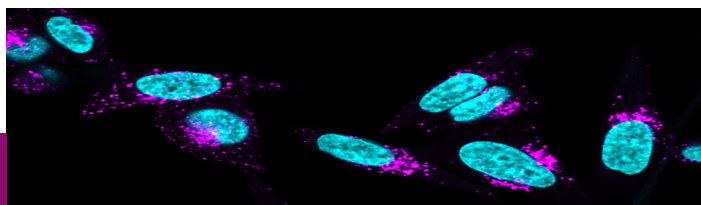
Figure 2. Flow cytometry analysis of Jurkat cells treated with CCCP to depolarize the mitochondrial membrane or staurosporine to induce apoptosis, resulting in decreased MitoView™ 633 staining.

Catalog no.	Description	Size
70052	MitoView™ Blue	20 x 50 ug
70054	MitoView™ Green	20 x 50 ug
70058	MitoView™ 633	120 x 50 ug

Visit www.biotium.com to find a full selection of classic potentiometric mitochondrial dyes, as well as nuclear stains, cytoplasmic membrane stains, fluorescent conjugates of transferrin, cholera toxin, and Annexin V, NucView™ caspase substrates, and other tools for cellular imaging.

LysoView™ Dyes

for live cell imaging of lysosomes



LysoView™ 633 and Hoechst nuclear stain

LysoView™ dyes are fluorescent stains for imaging lysosome localization and morphology in live cells. LysoView™ dyes belong to a family of lysosomotropic dyes that contain weakly basic amines that accumulate in acidic organelles. LysoView™ dye fluorescence is also pH-sensitive, resulting in specific lysosomal staining without a wash step (Figures 1 and 2). Choose red fluorescent LysoView™ 540 or far-red fluorescent LysoView™ 633.

Biotium also offers "Light-On" LysoView™ 555, a UV-activatable lysosome stain. In cells, the dye initially shows low fluorescence, but brief exposure to UV excitation from a mercury arc lamp activates bright red fluorescence localizing to lysosomes (Figure 3). Lysosomal fluorescence fades over the course of several minutes after UV exposure, but can be re-activated in the same cells multiple times by exposure to UV light. Therefore the dye provides a novel tool for UV-activated, reversible fluorescence imaging of lysosomes.

FEATURES

- Fluorescent dyes for imaging lysosomes in live cells
- Highly specific, no-wash staining of acidic organelles
- Red fluorescent LysoView™ 540 for the Cy³ channel
- Far-red fluorescent LysoView™ 633 for the Cy⁵ channel
- Unique, UV-activatable LysoView™ 555

LysoView™ 540

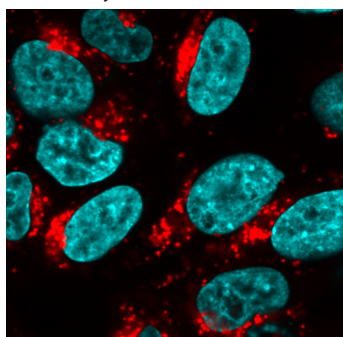


Figure 1. Live HeLa cells stained with 1X LysoView™ 540 (red). Nuclei are stained with Hoechst 33342 (Biotium catalog no. 40046).

"Light-On" LysoView™ 555

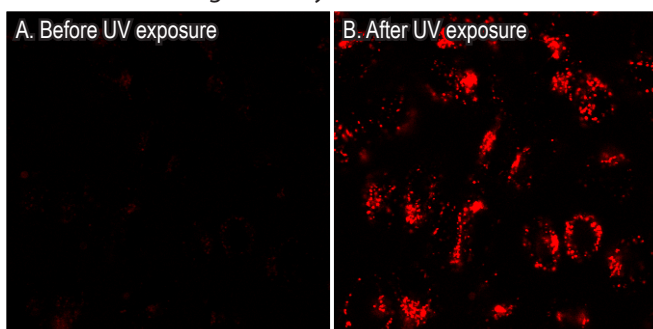


Figure 3. UV-activated lysosomal fluorescence with "Light-On" LysoView™ 555. HeLa cells were stained with 1 μ M Light-on LysoView™ 555 for 15 minutes at 37°C, then imaged using a Zeiss LSM 700 confocal microscope using a 40X objective and imaging settings for Cy³. A. Before UV exposure, fluorescence was not detectable. B. After five seconds of exposure to UV light from a short arc lamp, bright red fluorescence localized to lysosomes was observed.

LysoView™ 633 compared to LysoTracker® Deep Red

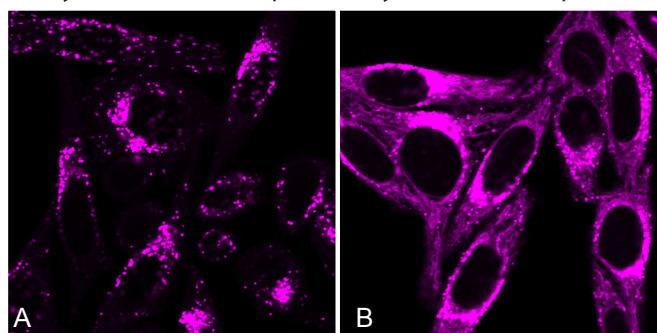


Figure 2. Live HeLa cells were stained for 10 minutes at 37°C with 1X LysoView™ 633 or 50 nM LysoTracker® Deep Red (Life Technologies) in cell culture medium. Both dyes were imaged using Cy⁵ excitation/emission settings with the same gain settings. LysoView™ 633 (A) shows more specific punctate lysosomal staining with less cytoplasmic staining compared to LysoTracker® Deep Red (B).

Catalog no.	Description	Size
70061-T	LysoView™ 540, 1000X in DMSO	10 μ L trial size
70061	LysoView™ 540, 1000X in DMSO	50 μ L
70058	LysoView™ 633 (1000X after reconstitution)	10 x 100 μ L vials
70060-T	"Light-On" LysoView™ 555, 1 mM in DMSO	10 μ L trial size
70060	"Light-On" LysoView™ 555, 1 mM in DMSO	50 μ L

Visit www.biotium.com to find nuclear stains, mitochondrial dyes, cytoplasmic membrane stains, fluorescent conjugates of transferrin, cholera toxin, and Annexin V, NucView™ caspase substrates, and other tools for cellular imaging.

