Data Sheet

BioTracker™ Dual-Color Mitochondria-Lysosome Live Cell Dye

Live Cell Dye

SCT244

Pack Size: 1 mg

Store at -20 °C

FOR RESEARCH USE ONLY

Not for use in diagnostic procedures. Not for human or animal consumption.

Background

The Biotracker™ Dual-Color Mitochondria-Lysosome Live Cell Dye is a fluorescent probe used to detect mitochondria-lysosome interactions.

Mitochondrial-lysosomal synergy is critically important in the processes of cellular homeostasis. Mitochondria and lysosomes have unique interactions which involve the transfer of metabolites. Certain disease pathogenesis can be linked to this important cellular interaction. The Biotracker™ Dual-Color Mitochondria-Lysosome Live Cell Dye is a unique cell-permeable and viscosity-responsive molecular probe that is capable of monitoring mitochondrial and lysosomal intercommunication in living cells. Through the use of fluorescence conversion, this live cell probe can simultaneously tag mitochondria with blue fluorescence and lysosomes with red fluorescence.

Source

SCT244 does not contain genetically modified organisms.

Spectral Properties

Fluorescence images obtained by λex = 405 nm and emission at 450 nm (Mitochondria) and λex = 561 nm and emission at 590 nm (Lysosome).

Quality Control Testing

Purity: ≥ 98% confirmed by HPLC, HNMR, LC-MS and elemental analysis. Molar Mass: 586.46 g/mol.

Storage and Handling

Store Biotracker™ Dual-Color Mitochondria-Lysosome Live Cell Dye at -20 °C, desiccated and protected from light.

Note: Centrifuge vial briefly to collect contents at bottom of vial before opening.

Presentation

Lyophilized. Brown solid.

Representative Data

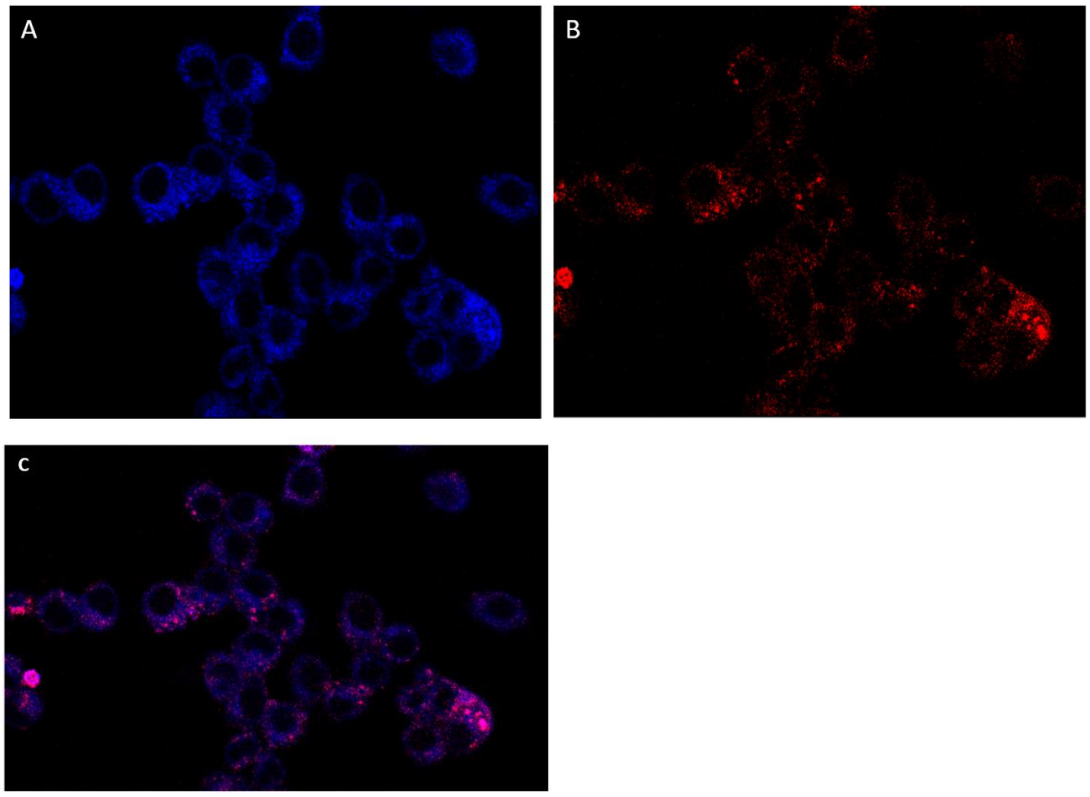
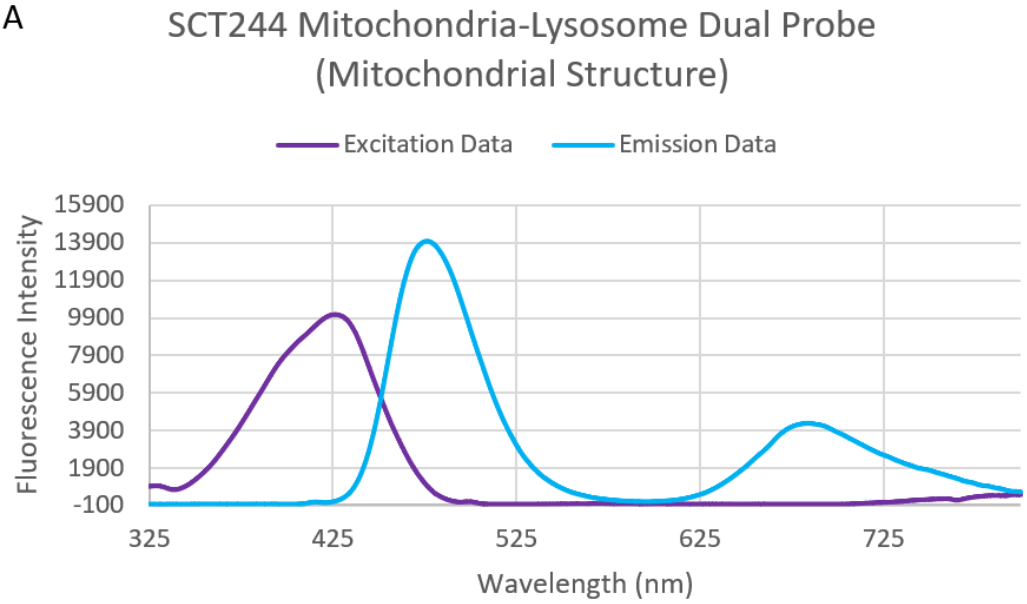


Figure 1: Confocal microscopy images of Biotracker™ Dual-Color Mitochondria-Lysosome Live Cell Dye staining. Raw264.7 mouse macrophage cells were incubated with 10 µM SCT244 solution (Red and blue). **A**. Mitochondrial staining is shown in the blue channel. **B**. Lysosomal staining is shown in red. **C**. A merged image is shown to display the interactions between mitochondrial and lysosomal channels.

A



B

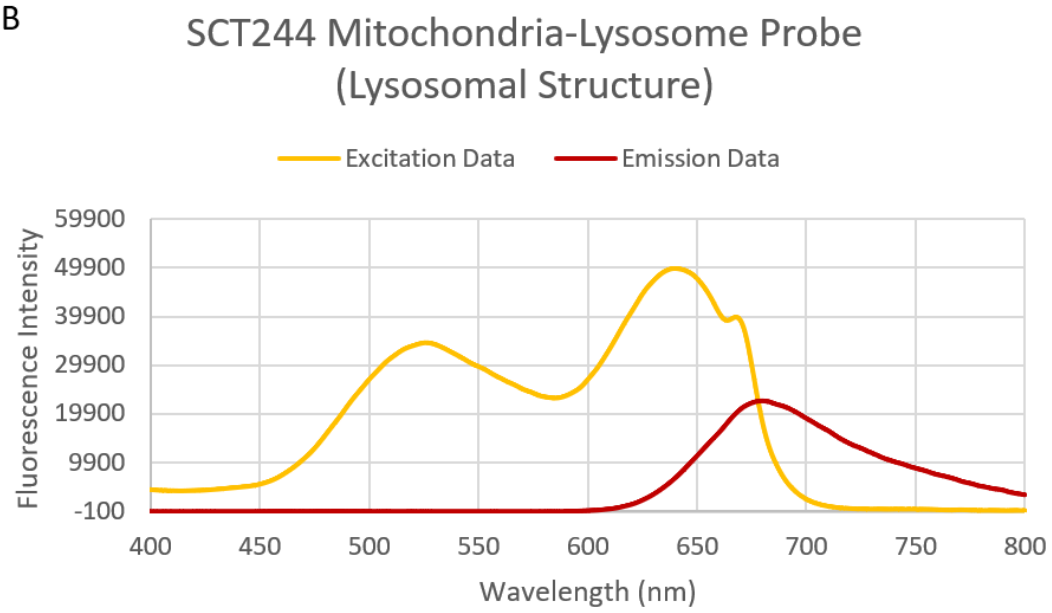


Figure 2: Probe excitation and emission data. 7 µL of probe at stock concentration (10 mM) was diluted in 1 mL of DMSO before undergoing excitation and emission scans. Spectral scans were conducted using a Fluorescence Spectrophotometer (PerkinElmer FL8500). **A**. Mitochondrial probe spectral data. **B**. Lysosomal probe spectral characteristics.

References

1. Chen, Qixin, et al. "A dual-labeling probe to track functional mitochondria–lysosome interactions in live cells." Nature communications 11.1 (2020): 1-10.

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