BioTracker™ 488 Green Lipid Dye

Live Cell Dye

Cat. # SCT144

pack size: 125µL

Store at 2-8ºC

FOR RESEARCH USE ONLY.
NOT FOR USE IN DIAGNOSTIC PROCEDURES.
NOT FOR HUMAN OR ANIMAL CONSUMPTION.

Data Sheet

Background

Lipids are fundamental building blocks of cells and play important cellular roles. Lipids are key components of the plasma membrane and other cellular compartments, including the nuclear membrane, endoplasmic reticulum, Golgi apparatus, and trafficking vesicles such as endosomes and lysosomes. Intracellular lipid droplets are cytoplasmic organelles involved in the storage and regulation of triglycerides and cholesterol esters. Lipids have been implicated in various diseases including heart, vascular and neurological diseases.

BioTracker™ Lipid dyes rapidly stain lipid droplets in live or fixed cells with no wash step and minimal background staining of cellular membranes or other organelles. Cells also can be fixed and permeabilized after staining.

The BioTracker™ 488 Green Lipid Dye has an excitation around 430 nm, and can be excited equally well at 405 nm or 488 nm. In cells, it stains lipid droplets with bright green fluorescence using the FITC detection channel.

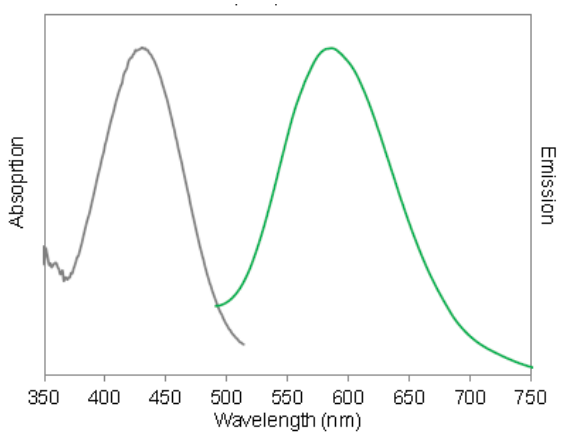

Figure 1. Emission spectra of BioTracker™ 488 Green Lipid Dye.

Storage

Store BioTracker™ 488 Green Lipid Dye at 2-8ºC. Protect From Light.

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

Spectral Properties

Absorbance: 427nm
Emission: 585nm

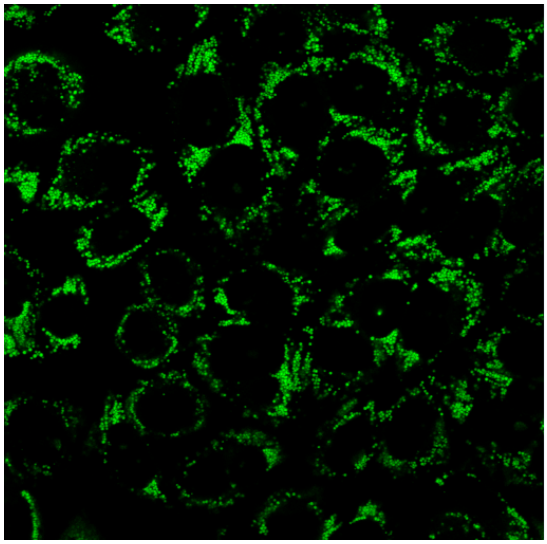

Figure 2. Hela cells stained with BioTracker™ 488 Green Lipid Dye

Rev.1.0/2018-01-29/SCT144/NJA

Assay Protocol

Oleic acid complexed to BSA can be used to induce lipid droplet formation in cultured cells as a positive control for BioTracker™ Lipid Dye staining.

Live Cell Staining

1. Dilute BioTracker™ Lipid Dye to 1X in complete cell culture medium or other buffer if desired. The dye concentration may be optimized if needed.
2. Incubate cells with the stain at 37°C for 30 minutes or longer, protected from light. No obvious cytotoxicity of the dye has been observed with incubation times up to 24 hours.
3. Image fluorescence in the appropriate detection channel (see Spectral Properties). Washing before imaging is optional.
4. Cells can be fixed in formaldehyde after staining. Staining also can withstand permeabilization by 0.1% Triton X-100, although permeabilization may alter lipid droplet morphology.

Fixed Cell Staining

1. Fix cells with a formaldehyde-based fixative. Alcohol fixation is not recommended. Cells can be permeabilized with 0.1% Triton X-100 before staining, although permeabilization may alter lipid droplet morphology.
2. Dilute BioTracker™ Lipid Dye to 1X in PBS or other buffer. The dye concentration may be optimized if needed.
3. Incubate cells with stain at room temperature for 10 minutes or longer, protected from light.
4. Image fluorescence in the appropriate detection channel (see Spectral Properties). Washing before imaging is optional.

Note: we do not recommend using antifade mounting medium with BioTracker™ Lipid dyes, because it can reduce staining and increase background.