BioTracker™ NIR633 Lysosome Dye

Live Cell Dye

Cat. # SCT138

pack size: 10X100µL

Store at -20ºC

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

Data Sheet

Background

Lysosomes are membrane-enclosed organelles that contain an array of enzymes capable of breaking down all types of biological material including proteins, nucleic acids, carbohydrates, and lipids. Lysosomes function as the digestive system of the cell, serving both to degrade material taken up from outside the cell and to digest obsolete components of the cell itself.

BioTracker Lysosome dyes are fluorescent stains for imaging lysosome localization and morphology in live cells. The dyes accumulate in the low pH environment of the lysosomes, resulting in highly specific lysosomal staining without the need for a wash step.

The BioTracker™ NIR633 Lysosome Dye can be detected using the red Cy5 channel. The fluorescence is dependent on lysosome pH changes.

Kit Components

1) 10 vials of 100µl lyophilized dye

Storage

Store BioTracker NIR633 Lysosome Dye at -20ºC. Protect From Light.

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

Spectral Properties

Absorbance: 634nm
Emission: 659nm

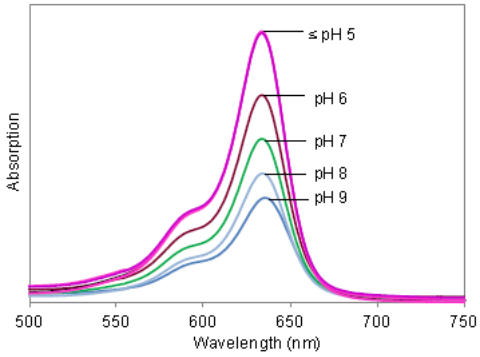

Figure 1. Absorption spectra of BioTracker NIR633 Lysosome Dye at varying pH.

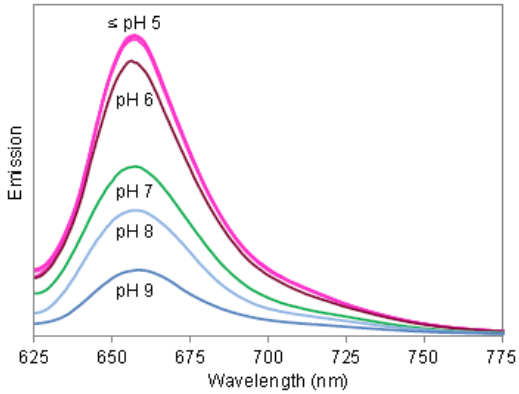

Figure 2. Emission spectra of BioTracker NIR633 Lysosome Dye at varying pH.

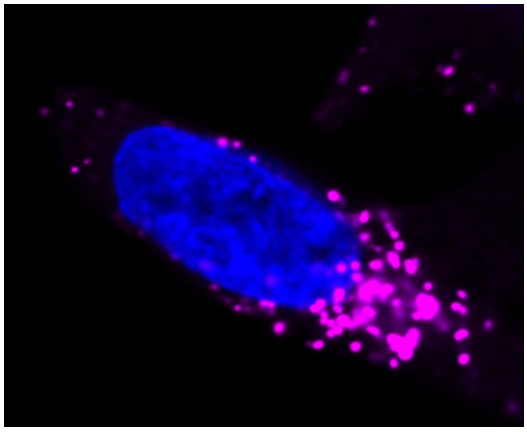

Figure 3. Hela cells stained with BioTracker NIR633 Lysosome Dye.

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Assay Protocol

Reconstitution

1. To prepare 1000X BioTracker NIR633 Lysosome Dye briefly centrifuge vial to collect any loose material from cap before opening. Add 100 uL dH2O to one vial of lyophilized dye and vortex to mix. The 1000X stock solution can be stored at -20°C, protected from light.

Staining Protocol

1. Dilute 1000X BioTracker Lysosome stock solution in cell culture medium to a final concentration of 1X.

Note: We recommend using 1X dye as a starting point for optimization. Higher or lower concentrations may be optimal for different imaging systems or cell types.

2. Incubate live cells with medium containing 1X dye for 15-30 minutes at 37°C.

Note: Staining time can be varied depending on cell type and application. In our tests, cells showed no obvious signs of toxicity after 72 hours of incubation with BioTracker Lysosome dyes, but toxicity may vary by cell type. Staining may diminish after prolonged incubation (longer than 24 hours).

4. Image cells using the appropriate excitation/emission settings or detection channel (see Spectral Properties). No wash step is required before imaging.

Note: BioTracker Lysosome dyes are recommended for live cell imaging only. Staining is not well-retained after fixation with formaldehyde, which results in increased cytoplasmic staining.