

BioTracker™ NIR694 Nuclear Dye (Water)

Live Cell Dye

Cat. # SCT117

pack size: 250µL

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

Store at 2-8°C



Data Sheet

page 1 of 2

Background

The nucleus is a membrane-enclosed organelle found in eukaryotic cells. Cell nuclei contain most of the cell's genetic material, organized as multiple long linear DNA molecules in complex with a large variety of proteins, such as histones, to form chromosomes. Traditionally, DNA stains such as DAPI and Hoechst have been used for microscopy but require fixation and cannot be used for live cell imaging.

The BioTracker™ NIR694 Nuclear Dye (Water) is a far red nuclear stain for live cells. The dye can be excited by wavelengths from 488 to 647nm and emits far red fluorescence with emission maximum at 694nm. The dye specifically stains the nucleus of live cells. Staining does not require a wash step and demonstrates greater photostability than the traditional blue fluorescent nuclear stains DAPI and Hoechst. also can be used to stain live cells for cell cycle distribution analysis by flow cytometry BioTracker™ NIR694 Nuclear Dye (Water) staining is not fixable. For fixed cells we recommend the BioTracker™ NIR694 Nuclear Dye (DMSO).

Storage

Store BioTracker™ NIR694 Nuclear Dye (Water) at 2-8°C. Protect From Light.

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

Spectral Properties

Absorbance: 662nm

Emission: 694nm

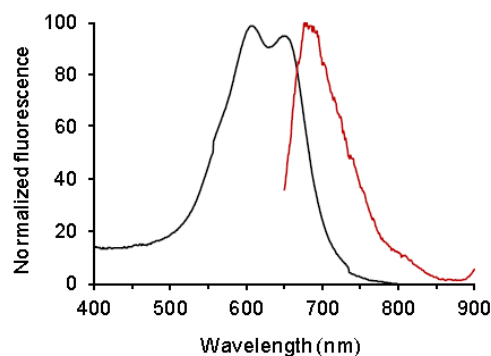


Figure 1. Absorption and emission spectra of BioTracker™ NIR694 Nuclear Dye (Water).

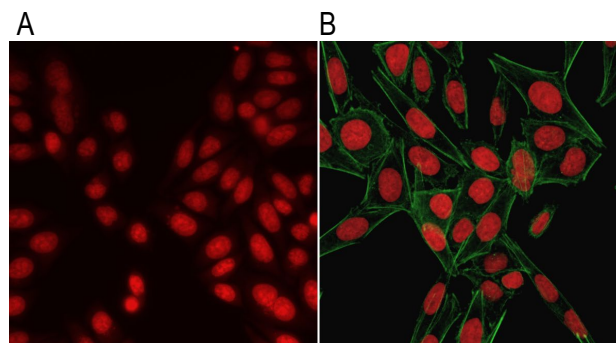


Figure 2. A) Live cell staining of HeLa cells using the BioTracker™ NIR694 Nuclear Dye (Water) B) Fixed cell staining of HeLa cells using the BioTracker™ NIR694 Nuclear Dye (DMSO)

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Assay Protocol

Live Cell Staining Protocol

Because BioTracker™ NIR694 Nuclear Dyes do not require a wash step, it can be added after other cell labeling or treatment and immediately prior to fluorescence analysis.

1. Dilute BioTracker™ NIR694 Nuclear Dye in cell culture medium or PBS to a final concentration of 1X.
2. Incubate cells with medium or PBS containing dye for 5-30 minutes at room temperature or for 5 minutes at 37°C.
3. Detect far red nuclear staining by fluorescence microscopy, flow cytometry, or fluorescence microplate reader.

Note: Like many membrane permeable nucleic acid binding dyes, BioTracker™ NIR694 Nuclear Dyes demonstrate cellular toxicity within 4-18 hours after staining (toxicity may vary by cell type).

Note: For flow cytometry analysis of cell cycle distribution, use a slow flow rate and linear scaling for fluorescence acquisition.

BioTracker™ is a trademark of Merck KGaA

■ antibodies ■ Multiplex products ■ biotools ■ cell culture ■ enzymes ■ kits ■ proteins/peptides ■ siRNA/cDNA products

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