BioTracker™ 560 Orange Lysosome Dye

Live Cell Dye

Cat. # SCT019

pack size: 10x10µg

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

Store at -20ºC

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.

The BioTracker™ 560 Orange Lysosome Dye is a live cell fluorescence imaging probe which enhances fluorescence dramatically in acidic environments. This probe can stain acidic organelles such as lysosome, late endosome and granule selectively. Namely, in the condition of pH 5.0, identical to the environment of acidic organelles, fluorescence intensity is 50-fold or more compared to physical pH 7.4. The BioTracker™ 560 Orange Lysosome Dye shows great photostability against irradiating excitation light. As it emits orange color fluorescent by excitation at 532nm or 514 nm, multicolor imaging is possible by combining with blue fluorescence (CFP, Hoechst, etc.), green fluorescence (GFP, fluorescein, etc.) and near-infrared fluorescence.

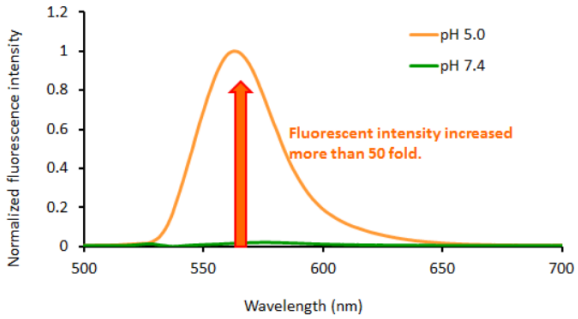

Figure 1. Fluorescence spectra of BioTracker 560 Orange Lysosome Dye was measured in phosphate buffer pH 5.0 or pH 7.4, respectively. Fluorescent intensity of BioTracker 560 Orange Lysosome Dye at pH 5.0 increased 50 fold to that in the pH 7.4 buffer. (λex 532 nm / λem 568 nm)

Storage

Store BioTracker 560 Orange Lysosome Dye at -20°C, desiccate and protect from light

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

Spectral Properties

Absorbance: 535nm
Emission: 560nm

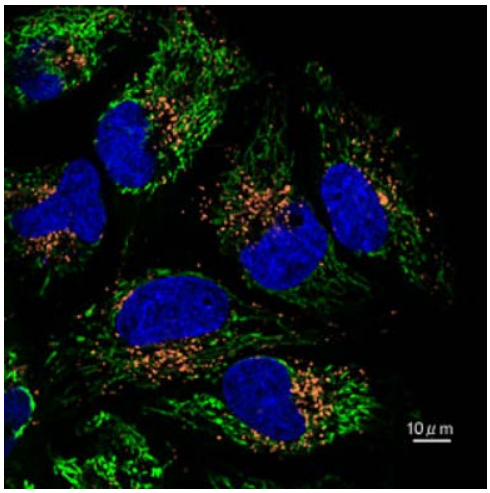

Figure 2. HeLa cells expressing Mitochondria-GFP were stained with BioTracker 560 Orange Lysosome Dye and Hoechst33342.

Rev.1.0/2018-03-16/SCT019/NJA

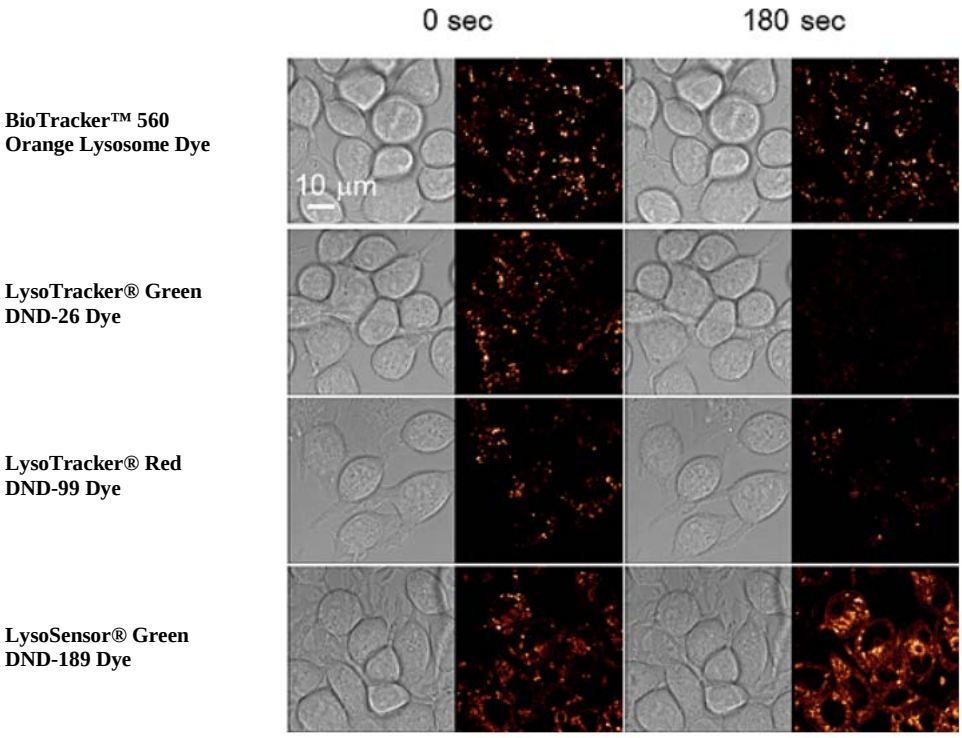

Figure 3. **Photostability of BioTracker 560 Orange Lysosome Dye**. HeLa cells were continuously illuminated for 180 seconds and viewed by confocal microscopy. Although LysoTracker® Green DND-26 and LysoTracker® Red DND-99 discolored dramatically, fluorescence of BioTracker 560 Orange Lysosome Dye remained strong. LysoSensor® Green DND-189 was not suitable for continuous observation because fluorescence leaked to cytoplasm by excitation light irradiation.

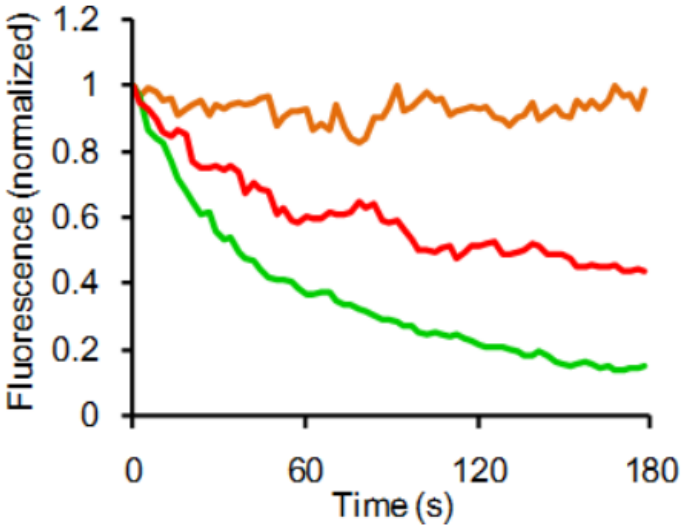

Figure 4. Photostability of BioTracker 560 Orange Lysosome Dye vs LysoTracker Green and LysoTracker Red over 180 seconds of continuous light exposure using HeLa cells.