BioTracker™ 525 Green GGT Dye

Live Cell Dye

Cat. # SCT028

pack size:10x20µg

Store at -20ºC

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

Data Sheet

Background

Gamma-glutamyltransferase, or GGT, is an enzyme that plays a key role in the gamma-glutamyl cycle, a pathway for the synthesis and degradation of glutathione and drug and xenobiotic detoxification. GGT is predominantly used as a diagnostic marker for liver disease and is often significantly increased in human malignancies and cancers.

The BioTracker™ 525 Green GGT Dye is cancer-selective fluorescent imaging probe. This probe is rapidly activated by g-glutamyltranspeptidase (GGT), which is known to be tumor-associated enzyme, to give highly fluorescent compound. The membrane-permeable dye is applicable to live cell or *in vivo* imaging of cancer cells.

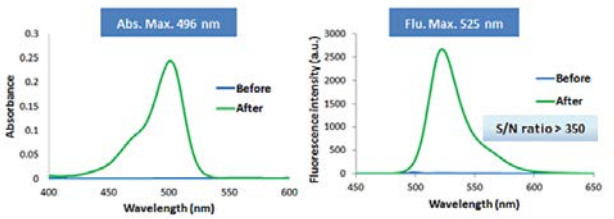

Figure 2. Fluorescent spectra of BioTracker 525 Green GGT Dye after treatment with GGT for 30 min at 37℃. Fluorescence intensity markedly increased at 525 nm (S/N ratio)

Storage

Store BioTracker 525 Green GGT 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: 496nm
Emission: 525nm

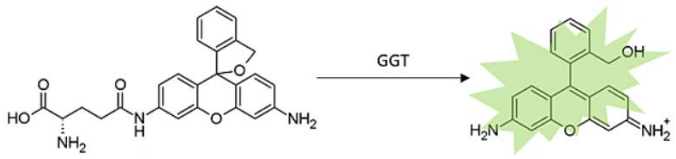

Figure 1. BioTracker 525 Green GGT Dye mechanism

Rev.1.0/2018-03-16/SCT028/NJA

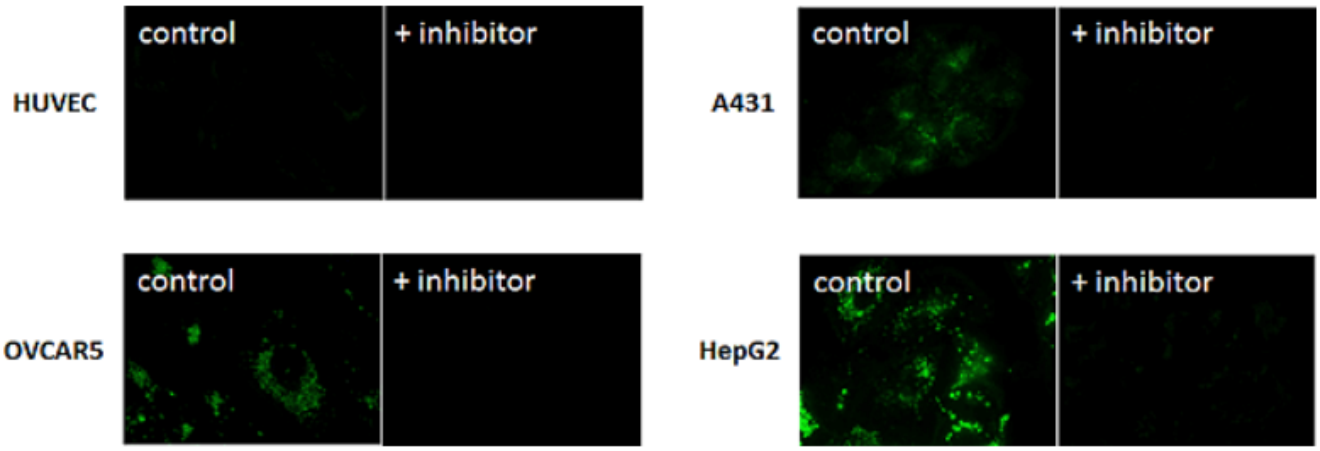

Figure 3. Live cell imaging of cancer cells (A431, OVCAR5, HepG2) or HUVEC cells. Cells were treated with BioTracker 525 Green GGT Dye (2 µM) for 1 h. The reaction was completely inhibited by treatment with GGT selective inhibitor.

Protocol

Reagent Preparation
1. Before opening the vial, spin down the solid to the bottom by a microcentrifuge or by a desktop centrifuge.
2. Dissolve dye in 29.7 µL of DMSO to prepare 1 mM stock solution.

Staining Protocol of Cultured Cells
1. Dilute the DMSO stock solution with HBSS to 1-2 µM cell stain solution.
2. Remove the culture medium from cell culture dish and wash twice with medium.
3. Add stain solution to the dish and incubate for 1 h at 37℃, 5% CO2. Even though the degree of stained cells is varied with cell type or growth condition, usually cells are well stained around 30 min.
4. After staining, wash 2-3 times with HBSS buffer. Replace to HBSS buffer and observe the cells using a fluorescence microscopy