

Product Data Sheet

Product Name: Liperfluo
Cat. No.: GC26099

Chemical Properties

Cas. No. 1448846-35-2

Formula $C_{51}H_{41}N_2O_8P$ M.Wt 840.85

Solubility DMSO : 8.5 mg/mL (10.11 mM; Need ultrasonic and warming) Storage 4°C, sealed storage, away from moisture and light.

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure



Protocol

This plan only provides a guide, please modify it to meet your specific needs.

1. Prepare dyeing solution

(1) Dye stock solution: Centrifuge the tube before use to concentrate the powder at the bottom of the tube. Suggest dissolving the powder in DMSO and preparing a stock solution with a concentration of 10mM. The pre-configured stock solution should be packaged and stored in a sealed manner at -20°C or -80°C, away from moisture and light.

Caution: Product has not been fully validated for medical applications. For research use only.

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(2) Dye working solution: Dilute the stock solution with a suitable buffer solution (such as HBSS) and prepare Liperfluor working solution with a concentration of 10 μ M. Please adjust and optimize the concentration of the working solution according to the actual situation, and prepare it as needed.

2. Cell suspension staining (Taking 6-well plate as an example)

(1) Suspension cells were centrifuged at 1000g for 3-5 minutes. Discard the supernatant and clean twice with HBSS for 5 minutes each time.

(2) Wash the adherent cells twice with HBSS, add Trypsin to digest the cells, centrifuge at 1000g for 3-5 minutes after digestion, and discard the supernatant.

(3) Add 1mL of dye working solution to resuspend the cells and incubate at 37°C in the dark for 30 minutes. The optimal incubation time for different cells varies, please adjust according to the actual situation.

(4) After incubation, centrifuge at 1000g for 5 minutes to remove the supernatant, and wash 2-3 times with HBSS for 5 minutes each time.

(5) Use HBSS to resuspend cells and observe them using fluorescence microscopy or flow cytometry.

3. Cell adhesion staining

(1) Cultivate adherent cells on sterile coverslips.

(2) Remove the cover glass from the culture medium, aspirate excess culture medium, and place the cover glass in a damp environment.

(3) Add 100 μ L of dye working solution from one corner of the cover glass, gently shake to evenly cover all cells with dye, and incubate at 37°C in the dark for 30 minutes. The optimal culture time for different cells varies, please adjust according to the actual situation.

(4) Discard the dye working solution and clean the cover glass 2-3 times with HBSS, each time for 5 minutes.

4. Observe using a fluorescence microscope or flow cytometer. The maximum excitation/emission

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wavelength of Liperfluo is 524/535nm.

Precautions:

- ① Fluorescent dyes all have quenching problems. Please try to avoid light to slow down fluorescence quenching;
- ② For your safety and health, please wear a lab coat and disposable gloves.

Background

Liperfluo is a marker of iron death and a useful fluorescent probe, which can be used to study the role of lipid peroxidation in various cell pathophysiology. Liperfluo reduces lipid hydroperoxide to lipid alcohol, which can be used to image lipid hydroperoxide in living cells.

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