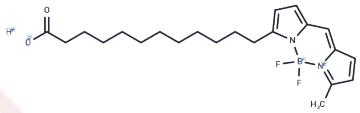
Data Sheet (Cat.No.T85870)

TargetMol

BODIPY 500/510 C1, C12

Chemical Properties



CAS No. : 144672-74-2

Formula: C22H31BF2N2O2

Molecular Weight: 404.3

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	BODIPY 500/510 C1, C12, a derivative of the robust BODIPY dye family, exhibits strong ultraviolet absorption and emits fluorescence with a high quantum yield at a sharp peak. This dye's effectiveness is minimally affected by environmental factors such as polarity or pH, and it maintains stability under various physiological conditions. BODIPY 500/510 C1, C12 has the unique ability to penetrate cell membranes and specifically target polar lipids within cells, effectively staining lipid droplets. This property makes it suitable for labeling both live and fixed cells [1]. It has a maximum excitation/emission wavelength of 500/510 nm [1]. For optimal preservation, it should be protected from light and stored at -20°C.
Targets(IC50)	Others
In vitro	BODIPY 500/510 C1, C12 working solution preparation involves diluting 1 mg of BODIPY 500/510 C1, C12 in 247 μL of anhydrous DMSO to create a 10 mM stock solution. It is recommended to aliquot and store the stock solution at -20°C or -80°C away from light. For working solution preparation, dilute the stock solution in pre-warmed serum-free cell culture medium or PBS to a final concentration of 1-10 μM, adjusting as needed for your specific application. For cell staining (suspension cells), cells are collected by centrifugation, washed twice with PBS for 5 minutes each, and resuspended at a density of 1×10^6 cells/mL. Add 1 mL of the working solution to the cells and incubate at room temperature for 5-30 minutes. Centrifuge at 400 g for 3-4 minutes and discard the supernatant. Wash cells twice with PBS for 5 minutes each and resuspend in 1 mL of serum-free medium or PBS for fluorescence microscopy or flow cytometry analysis. For adherent cell staining, cells are cultured on sterile coverslips. Remove the coverslip from the medium, remove excess medium, and add 100 μL of dye working solution, ensuring complete coverage of cells. Incubate for 5-30 minutes, then remove the dye solution and wash cells 2-3 times for 5 minutes each with culture medium, proceeding to microscopy or flow cytometry. Store at -20°C away from light for one year. Adjust BODIPY 500/510 C1, C12 concentration and incubation time as required, conduct experiments with a positive control using 30 μM oleic acid, and note that this product is intended solely for scientific research by professionals and is not for clinical, food, or drug use. Ensure personal safety with lab attire and disposable gloves while handling. The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.4734 mL	12.3671 mL	24.7341 mL
5 mM	0.4947 mL	2.4734 mL	4.9468 mL
10 mM	0.2473 mL	1.2367 mL	2.4734 mL
50 mM	0.0495 mL	0.2473 mL	0.4947 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.