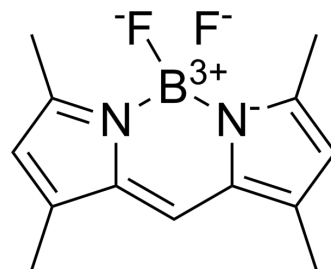


BODIPY 505/515

Cat. No.:	HY-D1237
CAS No.:	21658-70-8
Molecular Formula:	C ₁₃ H ₁₅ BF ₂ N ₂
Molecular Weight:	248.08
Target:	Fluorescent Dye
Pathway:	Others
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 12.5 mg/mL (50.39 mM); ultrasonic and warming and heat to 60°C

Concentration	Solvent	Mass	1 mg			5 mg			10 mg		
			Concentration			Concentration			Concentration		
1 mM			4.0310 mL			20.1548 mL			40.3096 mL		
5 mM			0.8062 mL			4.0310 mL			8.0619 mL		
10 mM			0.4031 mL			2.0155 mL			4.0310 mL		

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

BODIPY505/515 is a BODIPY dye. BODIPY dye is a small molecule dye with strong ultraviolet absorption ability, its fluorescence peak is relatively sharp, and the quantum yield is high. They are relatively insensitive to the polarity and pH of the environment and are relatively stable under different physiological conditions. Due to its structural asymmetry, BODIPY derives a variety of structural products. BODIPY lipid droplet dyes can well pass through the cell membrane into the cell, and localize the polar lipids in the cell to specifically stain the lipid droplets, which can be used for labeling of live cells and fixed cells^[1]. Maximum excitation/emission wavelength: 505/515 nm^[1].

In Vitro

General Protocol

1. Preparation of BODIPY 505/515 working solution

1.1 Preparation of the stock solution

Dissolve 1 mg BODIPY 505/515 in 382 µL DMSO to obtain 10 mM of stock solution.

Note: It is recommended to store the stock solution at -20°C or -80°C, keep away from light and avoid repetitive freeze-thaw cycles.

1.2 Preparation of BODIPY 505/515 working solution

Dilute the stock solution in serum-free cell culture medium or PBS to obtain 1-10 µM of working solution.

Note: Please adjust the concentration of BODIPY 505/515 working solution according to the actual situation.

2. Cell staining

2.1 Suspension cells (6-well plate)

- a. Centrifuge at 1000 g at 4°C for 3-5 min and then discard the supernatant. Wash twice with PBS, 5 min each time. The cell density is 1×10^6 /mL.
- b. Add 1 mL of working solution, and then incubate at room temperature for 5-30 min.
- c. Centrifuge at 400 g at 4°C for 3-4 min and then discard the supernatant.
- d. Wash twice with PBS, 5 min each time.
- e. Resuspend cells with serum-free cell culture medium or PBS. Observation by fluorescence microscopy or flow cytometry.

2.2 Adherent cells

- a. Culture adherent cells on sterile coverslips.
- b. Remove the coverslip from the medium and aspirate excess medium.
- c. Add 100 μ L of working solution, gently shake it to completely cover the cells, and then incubate at room temperature for 5-30 min.
- d. Wash twice with medium, 5 min each time. Observation by fluorescence microscopy or flow cytometry.

Storage

-20°C, 1 year; Protect from light.

Precautions

1. Please adjust the concentration of BODIPY 505/515 working solution according to the actual situation.
2. Experiments suggest a positive control, incubate the control group cells with 30 μ M oleic acid for 8 h and then perform subsequent experiments.
3. This product is only for R&D use, not for drug, household, or others.
4. For your safety and health, please wear a lab coat and disposable gloves to operate.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Mater Design. 2023 Apr.

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REFERENCES

- [1]. Dong Xu, et al. Detection and quantitation of lipid in the microalga Tetraselmis subcordiformis (Wille) Butcher with BODIPY 505/515 staining. Bioresour Technol. 2013 Jan;127:386-90.
- [2]. Dong Xu, et al. Detection and quantitation of lipid in the microalga Tetraselmis subcordiformis (Wille) Butcher with BODIPY 505/515 staining. Bioresour Technol. 2013 Jan;127:386-90.
- [3]. Bo Qiu, et al. BODIPY 493/503 Staining of Neutral Lipid Droplets for Microscopy and Quantification by Flow Cytometry. Bio Protoc. 2016 Sep 5;6(17):e1912.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA