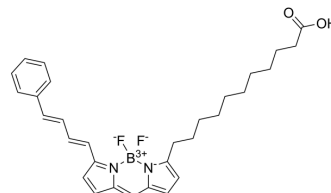


BODIPY 581/591 C11

Cat. No.:	HY-D1301
CAS No.:	217075-36-0
Molecular Formula:	C ₃₀ H ₃₅ BF ₂ N ₂ O ₂
Molecular Weight:	504.42
Target:	Ferroptosis; Fluorescent Dye
Pathway:	Apoptosis; Others
Storage:	-20°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 (24.78 mM; Need ultrasonic)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	1.9825 mL	9.9124 mL	19.8247 mL
	5 mM	0.3965 mL	1.9825 mL	3.9649 mL
	10 mM	0.1982 mL	0.9912 mL	1.9825 mL

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

BIOLOGICAL ACTIVITY

Description

BODIPY 581/591 C11 is a BODIPY borofluoroprene derivative with good light stability and low fluorescence artifacts. BODIPY 581/591 C11 can be used for study lipid peroxidation and antioxidant properties in living cells, or detect ferroptosis by reaction with hydroxyl radicals. BODIPY 581/591 C11 is emitted at 591 nm (reduced prototype), or redshifted to 510 nm (oxidized type). The excitation wavelengths were 581 nm (reduced prototype) and 500 nm (oxidized type)^[1].

In Vitro

Preparation of the stock solution

Dissolve 1mg BODIPY 581/591 C11 in 0.1983 mL DMSO to obtain 10 mM of BODIPY 581/591 C11.

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

1.2 Preparation of BODIPY 581/591 C11 working solution

Dilute the stock solution in serum-free cell culture medium or PBS to obtain 2-10 μM of BODIPY 581/591 C11 working solution.

Note: Please adjust the concentration of BODIPY 581/591 C11 working solution according to the actual situation.

Cell staining

2.1 Cell preparation:

For suspension cells: Centrifuge at 1000 g at 4°C for 3-5 minutes and then discard the supernatant. Wash twice with PBS, 5 minutes each time.

For adherent cells: Discard the cell culture medium, and add trypsin to dissociate cells to make a single-cell suspension. Centrifuge at 1000 g at 4°C for 3-5 minutes and then discard the supernatant. Wash twice with PBS, 5 minutes each time.

2.2 Add 1 mL of BODIPY 581/591 C11 working solution, and then incubate at room temperature for 30 minutes.

2.3 Centrifuge at 400 g at 4°C for 3-4 minutes and then discard the supernatant.

2.4 Wash twice with PBS, 5 minutes each time.

2.5 Resuspend cells with serum-free cell culture medium or PBS, and then detect by fluorescence microscope or flow cytometer.

Precautions

1. It is recommended to store the stock solution at -20°C or -80°C away from light and avoid repetitive freeze-thaw cycles.
 2. Please adjust the concentration of BODIPY 581/591 C11 working solution according to the actual situation.
 3. This product is for R&D use only, not for drug, household, or other uses.
 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

- Signal Transduct Target Ther. 2023 Aug 16;8(1):302.
- Adv Mater. 2023 Sep 5;e2306469.
- Drug Resist Updat. 2023 Jan.
- Sci Bull. 2022 Dec 30;S2095-9273(22)00609-0.
- ACS Nano. 2023 Feb 10.

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REFERENCES

[1]. Gregor P C Drummen, et al. C11-BODIPY(581/591), an oxidation-sensitive fluorescent lipid peroxidation probe: (micro)spectroscopic characterization and validation of methodology. Free Radic Biol Med. 2002 Aug 15;33(4):473-90.

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

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