

APENER

BODIPY 581/591 C11

Introduction

BODIPY 581/591 C11 is a cell-permeable, ratiometric fluorescent probe that can indicate lipid peroxidation levels and antioxidant properties within model membrane systems or living cells. Under normal circumstances, BODIPY 581/591 C11 is in a reduced state, and its excitation and emission wavelengths are 581/591 nm, which is red fluorescence; and when the polyunsaturated butadienyl moiety of BODIPY 581/591 C11 is oxidized, its emission wavelength shifts from 590 nm to 510 nm, and the excitation wavelength and emission wavelength are 488/510 nm, which is green fluorescence. BODIPY 581/591 C11 has good photostability, high quantum yield, and is sensitive to oxygen radicals and peroxynitrite, but not to superoxide, nitric oxide and hydrogen peroxide.

Components and Storage

	C8003-1 mg
Components	
BODIPY 581/591 C11	1 mg
	х.

This product should be stored at -20°C away from light. Stable for 2 years.

Properties

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Physical Appearance	Solid	PER DECEMBER
CAS	217075-36-0	Part of Part
M.Wt	504.42	1999.
Formula	C ₃₀ H ₃₅ BF ₂ N ₂ O ₂	
Ex/Em	581/591 nm (reduced); 488/510 nm (oxidized)	

Protocol

 Preparation of the stock solution: Dissolve 1mg BODIPY 581/591 C11 in 198.3 µL anhydrous DMSO to make a 10 mM stock solution. The stock solution should be stored at -20°C away from light. It is recommended to aliquot the stock solution into small volumes and avoid repeated freeze/thaw cycles.

*Note: Allow BODIPY 581/591 C11 to warm to room temperature before using and centrifuge for several seconds to make the probe at the bottom of the tube.

2. Preparation of the working solution: Dilute the stock solution in a suitable buffer (for example, PBS) or growth medium to make a 10 μM working solution. It is suggested to dilute BODIPY 581/591 C11 when using

*Note: The optimal concentration of the working solution varies depending on the type of cells.

3. Labeling of cells: For adherent cells, grow cells to reach the desired density. Remove the growth medium and add a BODIPY 581/591 C11 working solution to cover the cells. Incubate at 37°C away from light for 30 min. Remove the working solution after incubation, and wash cells with PBS 2-3 times. Then detect the fluorescence signal at excitation/emission of 581/591 nm for the reduced dye, and the other at excitation/emission of 488/510 nm for the oxidized dye.

*Note: The optimal time for incubation varies depending on the type of cells. For suspension cells, harvest cells and perform similarly to the adherent cells.

Note

- 1. Fluorescent probes are easy to quench, please protect them from light when using.
- 2. For your safety and health, please wear lab coats and gloves during the experiment.
- 3. For research use only. Not to be used in clinical diagnostic or clinical trials.

