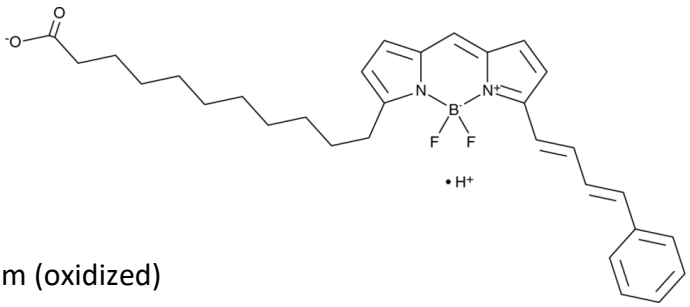
BODIPY 581/591 C11 (lipid peroxidation sensor)

equivalent to MCE Cat: HY-D1301

Cat #: **BGT-CHM-00100**

Size: 1mg

Product specifications



Cas No: 217075-36-0

MF: $C_{30}H_{34}BF_2N_2O_2 \bullet H$

FW: 504.4

Purity: ≥95%

Ex: 581 nm (reduced), 500 nm (oxidized)

Em: 591 nm (reduced), 510 nm (oxidized)

Supplied as: A solid

Storage/stability: Protect from light

Solid	-20°C	2 years
In solvent	-80°C/-20°C	6 months

Solvent & Solubility: **DMSO**: 30 mg/ml(≈ 59.5 mM)

Mass / Concentration	1mg	5mg	10mg
1mM	**1.983 ml**	**9.912 ml**	**19.825 ml**
5mM	**0.397 ml**	**1.983 ml**	**3.965 ml**
10mM	**0.198 ml**	**0.991 ml**	**1.983 ml**

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

Description

C11 BODIPY 581/591 is a lipid-soluble ratiometric fluorescent indicator of lipid oxidation. Upon oxidation, its excitation maximum shifts from 581 to 500 nm and the emission maximum shifts from 591 to 510 nm. C11 BODIPY 581/591 has been used in the quantitation of ferroptosis.

Recommended protocol for cell staining(1mg is enough for 200-900 assays)

- **Preparation of stock solution and working solution**

1. Dissolve 1 mg BODIPY 581/591 C11 in 0.1983 mL DMSO to obtain a 10 mM BODIPY 581/591 C11 stock solution.
Note: Store the aliquot stock solution protected from light at –20 °C or –80 °C; avoid repeated freeze thaw cycles.

2. Dilute the stock solution in serum-free cell-culture medium or PBS to 2–10 uM BODIPY 581/591 C11 working solution.
Note: Adjust the concentration according to your specific experimental requirements.

- **Cell staining**

1. Cell preparation

Suspension cells: Centrifuge at 4 °C, 1000 × g for 3–5 min and discard the supernatant. Wash twice with PBS, 5 min each time.
Adherent cells: Remove the culture medium, detach cells with trypsin, and prepare a single-cell suspension. Centrifuge at 4 °C, 1000 × g for 3–5 min and discard the supernatant. Wash twice with PBS, 5 min each time.

2. Add 1 mL BODIPY 581/591 C11 working solution and incubate at room temperature for 30 min.

3. Centrifuge at 4 °C, 400 × g for 3–4 min and discard the supernatant.

4. Wash twice with PBS, 5 min each time.

5. Resuspend cells in serum-free cell-culture medium or PBS and analyze by fluorescence microscopy or flow cytometry

References

[1] Pap, E.H.W., Drummen, G.P.C., Winter, V.J., et al. Ratio-fluorescence microscopy of lipid oxidation in living cells using C11-BODIPY581/591. FEBS Lett. 453(3), 278-282 (1999).

[2] Naguib, Y.M.A. A fluorometric method for measurement of peroxyl radical scavenging activities of lipophilic antioxidants. Anal. Biochem. 265(2), 290-298 (1998).

Note:

The product listed herein is for research use only and is not intended for use in human or clinical diagnosis.