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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
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- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

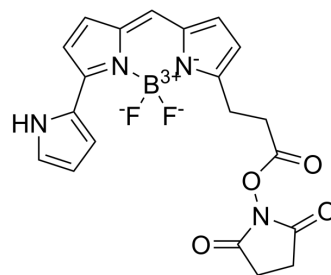
mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

Py-BODIPY-NHS ester

Cat. No.:	HY-D1106
CAS No.:	201998-61-0
Molecular Formula:	C ₂₀ H ₁₇ BF ₂ N ₄ O ₄
Molecular Weight:	426.18
Target:	Fluorescent Dye
Pathway:	Others
Storage:	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 25 mg/mL (58.66 mM; Need ultrasonic)				
		Solvent Concentration	Mass		
	Preparing Stock Solutions		1 mg	5 mg	10 mg
		1 mM	2.3464 mL	11.7321 mL	23.4643 mL
		5 mM	0.4693 mL	2.3464 mL	4.6929 mL
	10 mM	0.2346 mL	1.1732 mL	2.3464 mL	
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.08 mg/mL (4.88 mM); Clear solution				
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (4.88 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	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 ^[1] . 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 ^[2] .
In Vitro	General Protocol (Example for Py-BODIPY NHS ester) 1. Preparation of Py-BODIPY NHS ester working solution 1.1 Preparation of the stock solution Dissolve 1 mg Py-BODIPY NHS ester in 382 μL DMSO to obtain 10 mM of stock solution. 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 493/503 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 Py-BODIPY NHS ester working solution according to the actual situation.

2. Cell staining

2.1 Suspension cells (6-well plate)

a. Centrifuge at 1000 g at 4 ^\circ C for 3-5 minutes and then discard the supernatant. Wash twice with PBS, 5 minutes 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 minutes.

c. Centrifuge at 400 g at 4 ^\circ C for 3-4 minutes and then discard the supernatant.

d. Wash twice with PBS, 5 minutes 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 μL of working solution, gently shake it to completely cover the cells, and then incubate at room temperature for 5-30 minutes.

d. Wash twice with medium, 5 minutes each time. Observation by fluorescence microscopy or flow cytometry.

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

REFERENCES

- [1]. Kamkaew A, et al. BODIPY dyes in photodynamic therapy. *Chem Soc Rev.* 2013 Jan 7;42(1):77-88.
- [2]. Kang ZB, et al. Fluopack screening platform for unbiased cellular phenotype profiling. *Sci Rep.* 2020 Feb 7;10(1):2097.
- [3]. Vasta JD, et al. Quantitative, Wide-Spectrum Kinase Profiling in Live Cells for Assessing the Effect of Cellular ATP on Target Engagement. *Cell Chem Biol.* 2018 Feb 15;25(2):206-214.e11.
- [4]. Yuan H, et al. Fluorescent and radiolabeled triphenylphosphonium probes for imaging mitochondria. *Chem Commun (Camb).* 2013 Nov 14;49(88):10361-3.
- [5]. Robers MB, et al. Quantitative, Real-Time Measurements of Intracellular Target Engagement Using Energy Transfer. *Methods Mol Biol.* 2019;1888:45-71.

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