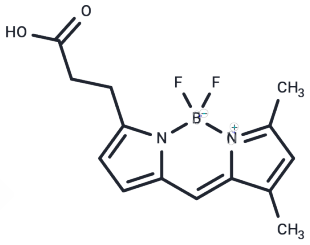
Data Sheet (Cat.No.T66518)

TargetMol

BODIPY-FL

Chemical Properties



CAS No. : 165599-63-3

Formula: C14H15BF2N2O2

Molecular Weight: 292.09

Storage: Keep away from direct sunlight
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	BODIPY-FL (BDP FL acid) is a broad-spectrum and effective fluorescent dye that can be used to label probes or primers and is a compound for the quantitative detection of specific DNA/RNA based on fluorescence bursts.BODIPY-FL-labelled monoterpenes can be used to detect Gram-positive and Gram-negative bacteria as characteristic and pathogenic fungi.
Targets(IC50)	Others
In vitro	I. DNA/RNA detection: 1. Primer labeling: BODIPY-FL is chemically labeled with the target DNA primer or RNA probe. After labeling, the primer can be used for real-time PCR or other nucleic acid detection methods. 2. Fluorescence detection: The fluorescence signal changes of BODIPY-FL primers or probes are observed by real-time PCR instruments or fluorescence detectors, and then the quantitative analysis of DNA/RNA is performed. 3. Quantitative analysis: The content of target DNA/RNA is quantified according to the intensity of the fluorescence signal and the reaction curve. II. Bacterial detection 1. Bacterial staining: BODIPY-FL dye is added to the bacterial sample and incubated at 37°C for 30 minutes to 1 hour. 2. Staining observation: BODIPY-FL-labeled bacteria are observed using a fluorescence microscope or flow cytometer, and real-time fluorescence imaging is performed to analyze the bacterial species and their number. 3. Identification of bacteria: Gram-positive and negative bacteria are identified based on the fluorescence characteristics of bacteria (such as color and brightness). 3. Fungal Detection 1. Fungal labeling: BODIPY-FL and fungal samples are stained and labeled by flow cytometry. 2. Microscopic observation: Fluorescent signals in samples are observed using a fluorescence microscope to confirm the fungal species. The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.

Solubility Information

Solubility	DMSO: 100 mg/mL (342.36 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.4236 mL	17.118 mL	34.236 mL
5 mM	0.6847 mL	3.4236 mL	6.8472 mL
10 mM	0.3424 mL	1.7118 mL	3.4236 mL
50 mM	0.0685 mL	0.3424 mL	0.6847 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Joshi R, Hawkridge AM. Investigation and Development of the BODIPY-Embedded Isotopic Signature for Chemoproteomics Labeling and Targeted Profiling. J Am Soc Mass Spectrom. 2024 Oct 2;35(10):2440-2447.
Christensen LF,et al. A homo-FRET assay for patatin-specific proteolytic activity. Food Chem. 2025 Jan 15;463(Pt 1): 141105.
Alferiev IS,et al. Robust Chemical Strategy for Stably Labeling Polyester-Based Nanoparticles with BODIPY Fluorophores. ACS Appl Polym Mater. 2022 Feb 11;4(2):1196-1206.