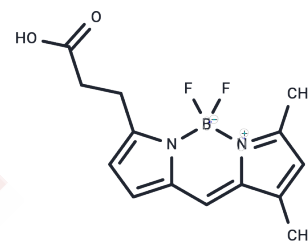


BODIPY-FL

Chemical Properties

| | |
|-------------------|--|
| CAS No. : | 165599-63-3 |
| Formula: | C ₁₄ H ₁₅ BF ₂ N ₂ O ₂ |
| Molecular Weight: | 292.09 |
| Storage: | Keep away from direct sunlight Powder: -20°C for 3 years In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small> |



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 | <p>I. DNA/RNA detection:</p> <ol style="list-style-type: none"> 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. <p>II. Bacterial detection</p> <ol style="list-style-type: none"> 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). <p>3. Fungal Detection</p> <ol style="list-style-type: none"> 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. <p>The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.</p> |

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, Hawkrige 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.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

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