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Product Data Sheet

BODIPY FL C5

Cat. No.: HY-D1610 CAS No.: 217075-24-6 Molecular Formula: $C_{16}H_{19}BF_2N_2O_2$

Molecular Weight: 320.14

Target: Fluorescent Dye

Pathway: Others

Storage: 4°C, protect from light

* In solvent: -80°C, 6 months; -20°C, 1 month (protect from light)

SOLVENT & SOLUBILITY

In Vitro

DMSO: 125 mg/mL (390.45 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Mass Concentration	1 mg	5 mg	10 mg
	1 mM	3.1236 mL	15.6182 mL	31.2363 mL
	5 mM	0.6247 mL	3.1236 mL	6.2473 mL
	10 mM	0.3124 mL	1.5618 mL	3.1236 mL

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

BIOLOGICAL ACTIVITY

Description

BODIPY FL C_5 is a green fluorescent fatty acid. BODIPY FL C_5 can be used as a precursor for the synthesis of various fluorescent phospholipids. BODIPY FL C_5 is relatively insensitive to the environment and fluoresces in both water-soluble and lipid environments^[1].

In Vitro

Guidelines (Following is our recommended protocol. This protocol only provides a guideline, and should be modified according to your specific needs).

A. Enzyme assays^[1]:

- 1. An aliquot of phospholipid was placed in a 1×1 -cm fluorescence cuvette and buffer (50 mM Tris, pH 8, 100 mM NaCl, 1 mM CaCl₂) was added to a total volume of 1.3 mL. The temperature was allowed to equilibrate at 35°C with stirring for several minutes and the background emission was recorded (the background rate was undetectable). Enzyme (1-10 μ L) was added and the emission was recorded.
- 2. An aliquot of phospholipid (78 μ L of 0.05 mM substrate/0.5 mM DTPM) was placed in a 1×1-cm fluorescence cuvette and buffer (50 mM Tris, pH 8, 100 mM NaCl, 1 mM CaCl₂, 30% glycerol) was added to a total volume of 1.3 mL. The temperature was allowed to equilibrate at 35°C with stirring for several minutes and the background emission was recorded (the background rate was undetectable). Enzyme (1-10 μ L) was added with extra mixing of the viscous solution, and the emission was recorded.
- 3. A measured amount of BODIPYFL-C₅ (in the case of PBPEC6DNP and MBPEDNP) or BODIPY-FL-C₅-lyso-PAF (in the case of

 BC_{11} -DNPC₈-PC) was added to the phospholipid substrate solutions and the increase in emission was recorded. The factor, picomoles of BODIPY product/intensity unit increase, was then used to convert emission increase/sec to picomoles of product/second in the assays.

- B. Zebrafish in vitro assay $^{[1]}$:
- 1. Embryos were placed in 0.15 mL of embryo medium (EM: 13.7 mM NaCl, 0.537 mM KCl, 0.025 mM Na $_2$ HPO $_4$, 0.044 mM KH $_2$ PO $_4$, 1.30 mM CaCl $_2$, 1 mM MgSO $_4$, 4.2 mM NaHCO $_3$, pH 7.2) .
- 2. Containing 150-200 ng of a fluorescent phospholipid substrate, and sonicated for 2-5 s.
- 3. After 1 h at 37 \(\text{M}, reactions were stopped by the addition of 0.45 mL of chloroform: methanol (2:1), mixed, and centrifuged (30 s, 16,000g).
- 4. The aqueous fraction was discarded and an aliquot of organic fraction was loaded on thin-layer chromatography plates.
- 5. Plates were developed in toluene: diethyl ether: ethanol: acetic acid (50:40:2:0.2) and quantified using a laser scanner. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. H S Hendrickson, et al. Intramolecularly quenched BODIPY-labeled phospholipid analogs in phospholipase A(2) and platelet-activating factor acetylhydrolase assays and in vivo fluorescence imaging. Anal Biochem. 1999 Dec 1;276(1):27-35.

Caution: Product has not been fully validated for medical applications. For research use only.

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