BODIPY FL C5

Cat. No.: HY-D1610

CAS No.: 217075-24-6

Molecular Formula: $C_{16}H_{19}BF_2N_2O_2$

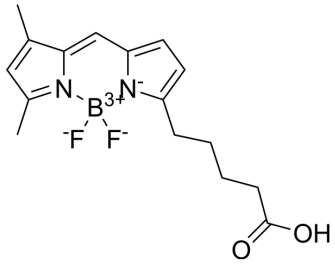
Molecular Weight: 320.14

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 : ≥ 100 mg/mL (312.36 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Mass / Solvent / 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 $CaCl_2$) 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 μL) was added and the emission was recorded.

2. An aliquot of phospholipid (78 μL 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 $CaCl_2$, 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 μL) was added with extra mixing of the viscous solution, and the emission was recorded.

3. A measured amount of BODIPYFL-C_5 (in the case of PBPEC6DNP and MBPEDNP) or BODIPY-FL-C_5-lyso-PAF (in the case of BC_{11}-$DNPC_8$-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_2HPO_4, 0.044 mM KH_2PO_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□, 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.

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