Fluo-3AM

Cat. No.: HY-D0716

CAS No.: 121714-22-5

Molecular Formula: $C_{51}H_{50}Cl_2N_2O_{23}$

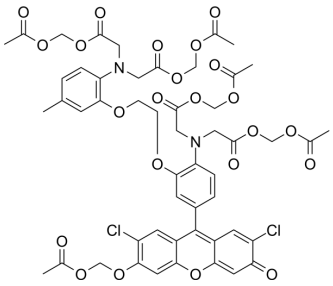
Molecular Weight: 1129.85

Target: Fluorescent Dye

Pathway: Others

Storage: -20°C, protect from light

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



SOLVENT & SOLUBILITY

In Vitro

DMSO : 12.5 mg/mL (11.06 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	0.8851 mL	4.4254 mL	8.8507 mL
	5 mM	0.1770 mL	0.8851 mL	1.7701 mL
	10 mM	0.0885 mL	0.4425 mL	0.8851 mL

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

BIOLOGICAL ACTIVITY

Description

Fluo-3 AM is a fluorecent Ca^{2+} chelator, with high affinity for calcium. Fluo-3 AM can specifically identify intracellular calcium ions, with high sensitivity, low cytotoxicity, increased AM acetylmethyl ester can enter the cell well, after being sheared by the intracellular esterase stay in the cell to bind to calcium ions, produce strong fluorescence[1].

In Vitro

1. Preparation of Fluo-3 AM working solution
1.1 Preparation of the stock solution
Dissolve 1 mg Fluo-3 AM in 135 µL DMSO to obtain 10 mM of stock solution.
Note: It is recommended to store the stock solution at -20°C or -80°C away from light and avoid repetitive freeze-thaw cycles.
1.2 Preparation of Fluo-3 AM working solution
Dilute the stock solution in HBSS to obtain 1-10 µM of working solution.
Note: Please adjust the concentration of Fluo-3 AMworking solution according to the actual situation.
2. Cell staining
2.1 Suspension cells (6-well plate)
a. Centrifuge at 1000 g at 4°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°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.
Storage
-20°C, 1 year
Protect from light
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Environ Sci Technol. 2017 Dec 5;51(23):13938-13948.
- Int J Biol Macromol. 2022 Jul 27;S0141-8130(22)01646-4.
- Biomedicines. 2021 Apr 21;9(5):444.
- RSC Adv. 2019, 2019, 9, 25107-25118.

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REFERENCES

[1]. Loughrey, C. M., MacEachern, K. E., Cooper, J., & Smith, G. L. (2003). Measurement of the dissociation constant of Fluo-3 for Ca2+ in isolated rabbit cardiomyocytes using Ca2+ wave characteristics. Cell Calcium, 34(1), 1–9. doi:10.1016/s0143-4160(03)00012-5

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