Br-DAPI

Cat. No.: HY-D1396

CAS No.: 2387906-44-5

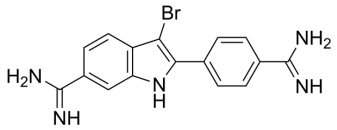
Molecular Formula: $C_{16}H_{14}BrN_5$

Molecular Weight: 356.22

Target: Fluorescent Dye; DNA Stain

Pathway: Others; Cell Cycle/DNA Damage

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 (280.73 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.8073 mL	14.0363 mL	28.0725 mL
	5 mM	0.5615 mL	2.8073 mL	5.6145 mL
	10 mM	0.2807 mL	1.4036 mL	2.8073 mL

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

BIOLOGICAL ACTIVITY

Description

Br-DAPI is a marker dye in DAPI series. DAPI is a fluorescent dye that binds strongly to DNA. It binds to the AT base pair of the double-stranded DNA minor groove, and one DAPI molecule can occupy three base pair positions. The fluorescence intensity of DAPI molecules bound to double-stranded DNA is increased by about 20 times, and it is commonly observed with fluorescence microscopy, and the amount of DNA can be determined based on the intensity of fluorescence. In addition, because DAPI can pass through intact cell membranes, it can be used to stain both live and fixed cells[1]. Storage: Keep away from light.

In Vitro

General Protocol
1. Preparation of DAPI working solution
1.1 Preparation of the stock solution
Dissolve 1 mg DAPI in 1 mL ddH_2O to obtain 1 mg/mL 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 DAPI working solution
Dilute the stock solution in serum-free cell culture medium or PBS to obtain 1-10 ug/mL of working solution.
Note: Please adjust the concentration of DAPI working solution according to the actual situation.
2. Cell staining
2.1 Suspension cells6-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 3-10 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 3-10 minutes.
d. Wash twice with medium, 5 minutes each time.Observation by fluorescence microscopy or flow cytometry.

Storage
-20°C, 1 year. Protect from light

Precautions 1. Please adjust the concentration of DAPI working solution according to the actual situation.
2. This product is for R&D use only, not for drug, household, or other uses.
3. For your safety and health, please wear a lab coat and disposable gloves to operate.
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Pharmacol Res. 2022 Dec 16;106613.
- Cell Transplant. 2023 Jan-Dec;32:9636897231177356.
- SSRN. 2023 Nov 28.

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REFERENCES

[1]. Kapuscinski J, et al. DAPI: a DNA-specific fluorescent probe. Biotech Histochem. 1995 Sep;70(5):220-33.

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