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Zuschläge

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SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

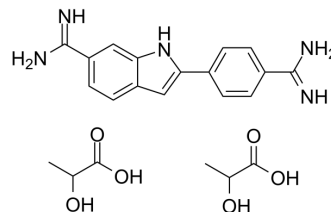
mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

DAPI dilactate

Cat. No.:	HY-D1738
CAS No.:	28718-91-4
Molecular Formula:	C ₂₂ H ₂₇ N ₅ O ₆
Molecular Weight:	457.48
Target:	Fluorescent Dye
Pathway:	Others
Storage:	-20°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (218.59 mM; Need ultrasonic)

Concentration	Mass		
	1 mg	5 mg	10 mg
1 mM	2.1859 mL	10.9294 mL	21.8589 mL
5 mM	0.4372 mL	2.1859 mL	4.3718 mL
10 mM	0.2186 mL	1.0929 mL	2.1859 mL

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

BIOLOGICAL ACTIVITY

Description

DAPI (dilactate) is a blue fluorescent dye that preferentially binds dsDNA and binds to minor groove AT clusters. DAPI (dilactate) is combined with dsDNA, and the fluorescence was enhanced about 20-fold. DAPI (dilactate) can be used to identify the cell cycle and specifically stains the nucleus but not the cytoplasm. DAPI (dilactate) form is more soluble in water than DAPI (dihydrochloride) form. ^{[1][2]}

In Vitro

General protocol

1. Preparation of DAPI dilactate working solution

1.1 Preparation of stock solution

Dissolve 5 mg DAPI dilactate in 1 mL ddH₂O to obtain 5 mg/mL stock solution (DAPI, dilactate 10.9 mM).

Note: It is recommended to store the stock solution at -20°C or -80°C in the dark and avoid repeated freezing and thawing.

1.2 Preparation of DAPI dilactate working solution

The stock solution was diluted 1:5000 in PBS to 1 µg/mL. Store the working solution at 4 °C.

Note: Please adjust the concentration of DAPI dilactate working solution as needed

2. Cell staining

2.1 Suspension cells (96-well plate)

a. Centrifuge at 1000 g for 3-5 min at 4°C and discard the supernatant. Wash with PBS twice, 5 minutes each time. The cell

density is 1×10^6 /mL.

b. Add 1 mL of working solution and incubate at room temperature for 3-10 minutes.

c. Centrifuge at 400 g for 3-4 minutes at 4°C and discard the supernatant.

d. Wash 2 times with PBS, 5 min each.

e. Resuspend cells in serum-free cell culture medium or PBS. Fluorescence microscopy or flow cytometry observation.

2.2 Adherent cells

a. Adherent cells were cultured on sterile coverslips.

b. Remove the coverslip from the medium and aspirate excess medium. c. Add 100 μ L of working solution, shake gently to completely cover the cells, and incubate at room temperature for 3-10 minutes.

d. Wash 2 times with medium, 5 min each. Fluorescence microscope or flow cytometry observation.

Precautions

For long-term storage the stock solution can be aliquoted and stored at $\leq -20^\circ\text{C}$. For shortterm storage the solution can be kept at 2–6°C, protected from light. When handled properly, DAPI solutions are stable for at least six months.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Nat Methods. 2023 Nov 30.
- Cell Res. 2022 Dec;32(12):1047-1067.
- Light Sci Appl. 2022 Nov 11;11(1):324.
- Adv Funct Mater. 2022: 2204636.
- ACS Nano. 2023 Jul 3.

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REFERENCES

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

[2]. Nazaroff CD, et al. Assessment of Lung Eosinophils In Situ Using Immunohistological Staining. Methods Mol Biol. 2021;2223:237-266.

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

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