Data Sheet (Cat.No.T19827)

TargetMol

DAPI Dihydrochloride

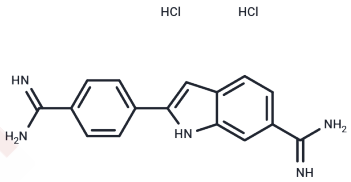
Chemical Properties

CAS No. : 28718-90-3

Formula: C16H17Cl2N5

Molecular Weight: 350.24

Storage: Keep away from direct sunlight,Store at low temperature
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.



Biological Description

Description	DAPI Dihydrochloride is a cell-permeable fluorescent probe. By binding to small forests rich in A-T DNA sequences, it is used to stain DNA and chromosomes, with a preference for DNA rich in adenine and thymine.
Targets(IC50)	Others,Autophagy
In vitro	DAPI dihydrochloride staining (adherent cells) I. Preparation of working solution: Dissolve 1 mg DAPI dihydrochloride in 1 mL ddH2O/DMSO to obtain a 1 mg/mL stock solution. Use for adherent cells: For example, HeLa cells: Material preparation: PBS (phosphate buffered saline): used for cell washing and diluting DAPI dihydrochloride. Fixative solution: 4% paraformaldehyde (PFA) or glacial acetic acid fixative is commonly used. Sealants: For example, anti-fluorescence decay agents, help protect samples from light. Fluorescence microscope: used to observe staining results. II. Experimental steps 1. Cell fixation Culturing cells: Cultivate adherent cells on sterile coverslips (usually to 70-80% confluence). Fixed cells:

In vitro	1) Aspirate the culture medium in the culture dish and wash the cells 1-2 times with PBS to remove the residual culture medium. 2) Add 4% PFA fixative and fix the cells at room temperature for 10-30 minutes (depending on the cell type). 3) After fixation, wash the cells 3 times with PBS buffer for 5 minutes each time to remove excess fixative. 2. DAPI staining Prepare DAPI working solution: DAPI is diluted in ddH2O/DMSO, usually at a concentration of 1-10 μg/mL. Staining: Add DAPI working solution (100 μL) to the fixed cells for 10-30 minutes, which can be adjusted according to the cell type and experimental requirements. 3. Washing Gently wash the cells 3 times with PBS buffer for 5 minutes each time to remove unbound DAPI dihydrochloride. 4. Sealing Prepare the sample: Add an appropriate amount of PBS or anti-fluorescence decay agent sealing solution and gently cover the coverslip. Fixation: Seal the edges of the coverslip with transparent tape or sealing agent to prevent drying. 5. Microscopic observation Use a fluorescence microscope to observe the staining results at a specific wavelength. The cell nucleus will show bright blue fluorescence. III. Precautions 1. Avoid light: DAPI dihydrochloride is light-sensitive and should be avoided from long-term exposure to light to prevent dye photodegradation. 2. Fixation time: The fixation time and conditions of different adherent cells may vary and need to be optimized according to the specific cell type. 3. Self-control: It is recommended to set up a negative control (unstained cells) to confirm the specificity and effectiveness of the staining. 4. Cell status: Ensure that the cells grow healthily before fixation to avoid dead cells affecting the staining results. 5. Please adjust the concentration of DAPI dihydrochloride working solution according to the actual situation.

In vitro	6. This product is for scientific research only and is not for drug, home or other purposes. 7.For your safety and health, please wear a white coat and disposable gloves when operating. The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.

Solubility Information

Solubility	H2O: 5 mg/mL (14.28 mM),Sonication is recommended. DMSO: 247.5 mg/mL (706.66 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween-80+45% Saline: 3.3 mg/mL (9.42 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.8552 mL	14.2759 mL	28.5519 mL
5 mM	0.571 mL	2.8552 mL	5.7104 mL
10 mM	0.2855 mL	1.4276 mL	2.8552 mL
50 mM	0.0571 mL	0.2855 mL	0.571 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

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Folarin OR, Snyder AM, Peters DG, Olopade F, Connor JR, Olopade JO. Brain Metal Distribution and Neuro-Inflammatory Profiles after Chronic Vanadium Administration and Withdrawal in Mice. Front Neuroanat. 2017 Jul 25;11:58. doi: 10.3389/fnana.2017.00058. eCollection 2017. PubMed PMID: 28790895; PubMed Central PMCID: PMC5524677.
Kobayashi D, Shibata A, Oike T, Nakano T. One-step Protocol for Evaluation of the Mode of Radiation-induced Clonogenic Cell Death by Fluorescence Microscopy. J Vis Exp. 2017 Oct 23;(128). doi: 10.3791/56338. PubMed PMID: 29155723.
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