DAPI Solution (10 μg/mL, ready to use)

Introduction

DAPI (4',6-Diamidino-2-Phenylindole) is a blue-fluorescent DNA stain that binds strongly to DNA, with fluorescence increasing substantially upon binding. It is weakly cell-permeable, preferentially staining cells with compromised membranes (e.g., dead, apoptotic, or fixed cells), and is commonly used for nuclear visualization, viability assessment, and apoptosis detection.

This product is a ready-to-use DAPI solution. Stained samples can be analyzed by fluorescence microscopy or flow cytometry.

Storage

Store at 4°C protected from light, stable for 6 months.

Properties

Physical Appearance	Liquid
M.Wt	350.25
Cas No.	28718-90-3
Formula	$C_{16}H_{17}Cl_2N_5$
Ex/Em	358/461 nm (after binding DNA).

Protocol

1. Fix cells or tissue samples following your experimental protocol, and then wash thoroughly to remove the fixative. If performing immunofluorescence, complete antibody staining before proceeding to DAPI staining.
2. For adherent cells or tissue sections, cover the sample with sufficient DAPI solution. For suspension cells, resuspend the cell pellet in at least 3 volumes of DAPI solution. Incubate at room temperature, protected from light, for 3-5 min.
3. Remove the DAPI solution and wash the sample 2-3 times with PBS or an appropriate buffer. Observe by fluorescence microscopy or flow cytometry (Ex/Em: 358/461 nm).

***Note:** Apoptotic cells may show condensed or fragmented nuclei when stained with DAPI.

Note

1. This product is a ready-to-use DAPI solution suitable for general staining applications. For those requiring a higher concentration of DAPI solution, DAPI stock solution (Catalog No. K2401) or DAPI powder (Catalog No. C3362) is available for purchase.
2. This product is light-sensitive. Protect from light during use and storage.
3. For your safety and health, please wear lab coats and gloves during the experiment.
4. For research use only. Not to be used in clinical diagnostic or clinical trials.

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