

Technical Datasheet

DAPI dihydrochloride

(4',6-Diamidino-2-phenylindole dihyrochloride) Cell Culture Tested

Product Code: TC229

Product Description :

Molecular Weight: 350.25 Molecular Formula: C₁₆H₁₅N₅.2HCl CAS Number: 28718-90-3 Synonym:4',6-Diamidino-2-phenylindole dihydrochloride

DAPI dihydrochloride is a fluorescent stain that binds strongly to the DNA. It is rapidly taken up by cellular DNA because of its high cell permeability. It selectively binds to the minor groove of double stranded DNA. The excitation maximum for DAPI dihydrochloride bound to dsDNA is 358nm and the emission maximum is 461nm. DAPI dihydrochloride can be used for both fixed and live cell staining, though the concentration of DAPI dihydrochloride used for live cell staining is generally much higher than for fixed cells. DAPI dihydrochloride is used in wide range of research applications. Some of them are mentioned below:

1. As acounter-stain:

Blue fluorescence emitted by DAPI dihydrochloride is distinctly different from red, yellow and green fluorescence emitted by other dyes. This property makes DAPI dihydrochloride useful in multicolor flow cytometry analysis or immunostaining of cells for cell markers.

2. Mycoplasma staining:

Mycoplasmas are widespread contaminants of cell culture. DNA fluorochrome staining with DAPI is one of the convenient methods of Mycoplasma detection as it is rapid, sensitive and can detect both Mycoplasma and other prokaryotic contaminants. The dye has high permeability into cells. This property facilitates quick uptake of the dye by the cells. Mycoplasma stained with DAPI dihydrochloride appears as a fine particulate or filamentous structure over the cytoplasm when observed microscopically. Nuclei of the cultured cells are also brightly stained by this method and thereby act as an endogenous control.

3. Flow cytometry:

DAPI dihydrochloride has been extensively used in separation of mammalian cells based on DNA content and cell viability using flow cytometry.

Directions :

Preparation instructions:

DAPI dihyrochloride is soluble in water. Heating or sonication may be required to solubilize the stain completely. DAPI does not dissolve directly in phosphate buffered saline (PBS). Hence, stock solutions are prepared in water and sterilized by filtering through a sterile membrane filter with porosity of 0.22 microns or less. Subsequent dilutions are performed in sterile PBS.

Quality Control:

Appearance

Yellow crystals or powder or solid

Solubility

Clear yellow coloured solution at 10 mg per ml in

Assay(HPLC) NLT 98.00%

Cell culture test Passes

Storage and Shelf Life:

Store DAPI powder at 2-8°Caway from bright light. Shelf life is 48 months.

Stock solutions of DAPI dihydrochloride should be sterile filtered and stored at 2-8°C away from bright light. They remain stable for up to 2 months at this temperature. For long term storage, store the solutions at -20°C. Use before expiry date given on the product label.

Disclaimer :

Revision:01/2022

2

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia[™] Publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia[™] Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal diagnostic or therapeutic use but for laboratory, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.