

DAPI stain solution

Catalog No.	AR1176
Size	10ml (100-200 assays)
Storage	Store at -20°C in dark for one year

Introduction

DAPI (4',6-diamidino-2-phenylindole) is a kind of fluorescent dye which can bind DNA strands robustly, and the fluorescence can be detected by fluorescence microscope. DAPI can dye live cells and fixed cells as it can transmit whole membrane. The molecular formula is C₁₆H₁₅N₅·2HCl with 350.25 molecular weight, CAS Number 28718-90-3.

DAPI could transmit cell membrane and bind the double-strand DNA in the nucleus, and produce 20 times stronger fluorescence than itself. The sensitivity for double stranded DNA staining is many times larger comparing with EB. Blue fluorescent cell would be seen under the microscope. The efficiency detected by fluorescence microscope is very high (almost 100%), and there is no side effect for the live cells. DAPI staining is usually used in cell death detection. After staining with DAPI, detect with fluorescence microscope or flow cytometry. The largest excitation wavelength for DAPI is 340nm, and the largest emission wavelength is 488nm. When DAPI binds with double-strand DNA, the largest excitation wavelength is 360nm, while the the largest emission wavelength becomes 460nm.

Protocol

1. **Fixed cells and tissues:** wash appropriately to remove fixative. If necessary, immunofluorescent staining can be performed first, then perform the DAPI staining. If there is no other staining, perform DAPI staining directly.
Adherent cells or tissue slices: add a sufficient volume of DAPI stain solution to completely cover the sample.
2. Incubate for 5-10 minutes at RT(room temperature).
3. Remove the stain solution.
4. Wash with TBST, PBS or physiological saline for 2-3 times, 3-5 minutes each.
5. Observe the sample under fluorescence microscope.

Note

DAPI is a known mutagen and should be handled with care.