Product Information Sheet

DAPI staining solution

Catalog No. AR1177
Size 50ml (500-1000 assays)
Storage -20℃ in dark for at least 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. DAPI is also usually used in nucleus staining and double-strand DNA staining in some special situation. After heat treatment, using DAPI stain the cell for 3min,then morphological changes of the nucleus can be detected the under the fluorescence microscope.

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.

This DAPI Staining Solution can be used for fixed cells or nucleus of tissue staining directly.

Protocol

1. As for the fixed cell and tissue, wash appropriately to remove the fixing agent. If necessary, immunofluorescent staining can be performed first, then perform the DAPI staining. If there is no other staining, perform DAPI staining directly.
2. As for the adherent cell or tissue slice, add small volume of DAPI staining solution directly (overlying the sample is enough, about 50-100μl). But for the suspending cell, add at least 3 times volume of DAPI staining solution comparing with the sample and mix thoroughly.
3. Incubate for 5-10 minutes at RT(room temperature)
4. Pipette the DAPI out, and wash with TBST or PBS or physiological saline for 2-3 times, 3-5 minutes each to remove the unbinding DAPI.
5. Observe the cell under the fluorescence microscope with optical filter owning 360nm excitation wavelength and 460nm emission wavelength.

Note

1. Since all fluorescent dyes have the problem of cancellation, we suggest finish detecting within the

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day of staining.

2. Can use the Anti-fade solution (AR1109) to retard the cancellation of fluorescent dyes.
3. Please pay attention to the irritation of DAPI.
4. Please operate with gloves.

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