DAPI Staining Solution

D1372407

Storage -20℃. Protect from light.

Introduction

The blue-fluorescent DAPI nucleic acid stain preferentially stains dsDNA; it appears to associate with AT clusters in the minor groove. Binding of DAPI to dsDNA produces a ~20-fold fluorescence enhancement, apparently due to the displacement of water molecules from both DAPI and the minor groove. DAPI also binds RNA, however in a different binding mode. The DAPI/RNA complex exhibits a longer-wavelength fluorescence emission maximum than the DAPI/dsDNA complex (~500 nm versus ~460 nm) and a quantum yield that is only about 20% as high.

The product is 1.0 mg/mL. We recommend the working concentration is 0.1-10 μg/mL for DNA staining.

Instruction for use

1. It is recommended to titrate the DAPI Staining Solution to obtain optimal results as applications vary.
2. Dilute the D1372407 with FACs buffer to the appropriate working solution (0.1-10 μg/mL).
3. Staining of Live Cells for Viability Analysis:

a. Obtain a single cell suspension, add 100 μL working solution to a 96-well and 1 mL to a 6-well;

b. Incubate 5 minutes at room temperature;

c. Proceed to analysis by flow cytometry or fluorescence analysis.

4. Staining of Fixed Cells for DNA Content Analysis:

a. Wash cells once to remove the fixation. DAPI staining is normally performed after all other staining.

b. Add appropriate volume of DAPI working solution (100 μL for a 96-well and 1 mL for a 6-well);

c. Incubate 5 minutes at room temperature;

d. Proceed to analysis by flow cytometry or fluorescence analysis.

Matters needing attention

1. DAPI is a known mutagen and should be handled with care. The dye must be disposed of safely and in accordance with applicable local regulations.
2. The fluorescent dye has the problem of quenching, and it is recommended to finish the analysis on the same day after dyeing.