Acridine Orange Fluorescence Staining Kit

Cat #: A-CSH393

Size: 100T

Storage: 2-8°C, avoid light (6 months)

Product Description

Acridine Orange (AO) is a fluorescent dye with an excitation filter wavelength of 488nm and an emission filter wavelength of 515nm. It exhibits different colors of fluorescence depending on its binding to DNA and RNA in cells. It emits green fluorescence when binding to a small amount of DNA and orange or reddish-orange fluorescence when binding to a large amount of RNA. This dye is membrane-permeable and can penetrate cell membranes to stain nuclear DNA and RNA.

Under a fluorescence microscope, Acridine Orange can pass through the normal cell membrane, resulting in a uniform green or yellow-green fluorescence in the cell nucleus. In apoptotic cells, the chromatin condenses or breaks into fragments of varying sizes, forming apoptotic bodies. Acridine Orange stains these bodies with dense, intense yellow-green fluorescence or yellow-green fragmented particles. In necrotic cells, the yellow fluorescence weakens or even disappears.

Usage

1. Preparation: Dilute the 10× buffer solution with double-distilled water to make a 1× buffer solution.

2. Collect cells (if using flow cytometry, cells should be fixed first), wash the cells once with PBS, add an appropriate amount of 1× buffer solution to resuspend the cells, count and adjust the cell density to 1×106/ml.

3. Take an appropriate amount of cell suspension and AO staining solution, mix them in a ratio of 19:1 (cell suspension: AO staining solution), and gently mix. If observing under a fluorescence microscope, generally mix 95μl of cell suspension with 5μl of AO staining solution. (The optimal staining concentration and incubation time may vary depending on the cell type.)

4. Incubate at room temperature in the dark for 15 minutes, then drop the stained cells onto a glass slide and cover

with a coverslip.

5. Observe under a fluorescence microscope (excitation filter wavelength: 488nm, emission filter wavelength: 515nm), count, and capture images.

Notes

1. AO staining solution is moderately toxic, handle with care.

2. For your safety and health, please wear a lab coat and disposable gloves while performing the operation.

Disclaimer

The reagent is only used in the field of scientific research, not suitable for clinical diagnosis or other purposes.