

Acridine Orange Staining Solution

Chemical Properties

CAS No. :

Formula:

Molecular Weight:

Storage: Keep away from direct sunlight
Store at -20°C

Actual storage temperature shall be subject to the COA.

Biological Description

Description

Acridine Orange (AO) is a tricyclic heteroaromatic fluorescent dye with membrane permeability that can penetrate cell membranes and bind to nucleic acids. It is commonly used for the detection of intracellular DNA and RNA. When bound to double-stranded DNA, Acridine Orange emits green fluorescence with an emission wavelength of 530 nm; when bound to single-stranded DNA or RNA, it emits orange-red fluorescence with an emission wavelength of 640 nm.

Acridine Orange staining is often applied in the detection of cell apoptosis. In normal cells, Acridine Orange can penetrate the cell membrane and bind to nuclear DNA, producing green or yellow-green fluorescence. In apoptotic cells, due to chromatin condensation or fragmentation, Acridine Orange staining appears as dense yellow-green fluorescence or yellow-green granular fragments. In necrotic cells, increased membrane permeability and disrupted nucleic acid structure lead to weakened or even disappeared fluorescence.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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