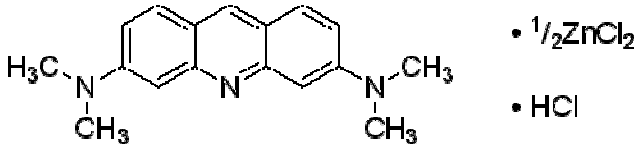
Acridine Orange (AO), 10 mg/mL

Cell Staining

Catalogue Number: CD056

Product Description: Acridine Orange (AO) selectively stains the acidic compartment of the cell, which was useful for nuclear acid and acidic body staining and cell cycle determination. AO interacts with DNA and RNA by intercalation or electrostatic attraction respectively. DNA intercalated AO fluoresces green (525nm); RNA electrostatically bound AO fluoresces red (>630nm). It distinguishes between quiescent and proliferating cells, and also allows differential detection of multiple G1 compartments. AO is also useful as a method for measuring apoptosis, and for detecting intracellular pH gradients and the measurement of proton-pump activity.



F.W. 369.96

CAS number 10127-02-3

Application: Acridine orange has been used as a fluorescent stain for nucleic acids in agarose and polyacrylamide gels. It has also been used extensively for cell staining of DNA cell cycle analysis and programmed cell death including apoptosis.

Storage: 4ºC

Pack Size: 1 ml

Procedure: (for paraffin embedded tissue sections):

1. Preparation of Tissue Sections

a. Fix tissue sections in formalin and embed in paraffin blocks by following the standard procedures.
b. Clean glass slides with 95% ethanol; treat with subbing solution and air dry. Or use pre-treated slides.
c. Cut 5 micron thick tissue sections, and apply to slides.
d. Deparaffinize in xylenes using three changes for 5 min each.
e. Hydrate sections gradually through graded alcohols: wash in 100% ethanol twice for 10 min each, then 95% ethanol twice for 10 min each.
f. Wash in deionized H2O for 1 min with stirring.
g. Aspirate excess liquid from slides.

2. Tissue Section Stain

a. The slides were incubated for 5 min in phosphate buffered saline, PBS (Cat#: CC008) supplemented with 0.2% Triton X-100
b. Quickly wash the slides with PBS
c. Apply 20-50 µL of 1 µg/ml AO (pre-diluted with PBS) for 30 min in the dark.
d. The slides were then washed three times with PBS for 5 min each.

e. Air dry the slides, and apply DAPI containing mounting media (Mounting Blue, Cat#: .IR008) and observe under the fluorescent microscopy.

f. (optional) Following the steps below to permanently mount the slides: Dehydrate through alcohols and xylenes as follows: 95% ethanol twice for 10 sec each, then 100% ethanol twice for 10 sec each, then xylenes three times for 10 sec each. Wipe off excess xylene. Immediately add 1–2 drops of mounting medium; Cover with a glass coverslip and observe under the fluorescent microscopy.

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