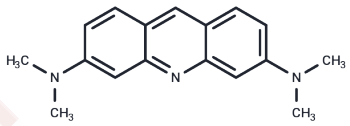
Data Sheet (Cat.No.T75338)

TargetMol

Acridine Orange base

Chemical Properties



CAS No. : 494-38-2

Formula: C17H19N3

Molecular Weight: 265.35

Storage: Keep away from direct sunlight
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Acridine Orange base is a cell-permeable fluorescent dye that binds to nucleic acids and emits different colors of fluorescence, which exhibits green fluorescence when bound to dsDNA (Ex=488 nm, Em=520-524 nm) and red fluorescence when bound to ssDNA or ssRNA (Ex=457 nm, Em=630-644 nm) and can be used for cell cycle analysis and apoptosis detection.
Targets(IC50)	Others,Parasite
In vitro	Fixed cell staining I. Sample preparation: 1. For cells in suspension culture or hematology samples: rinse cells once with ice-cold PBS and suspend in ice-cold PBS at 10^6 cells/mL. 2. For cells attached to tissue culture plates: collect cells from flasks or culture dishes by trypsinization, fill the trypsinized cells with cells floating in the culture medium (mainly isolated mitotic and dead cells), and then use culture medium containing serum to inactivate trypsin. Finally, suspend the cells in ice-cold PBS at about 10^6 cells/mL. 3. For cells isolated from solid tumors: rinse cells without any enzymes for cell dissociation and suspend in ice-cold PBS at about 10^6 cells/mL. II. Operation steps: 1. Transfer 1 mL of cell suspension with a Pasteur pipette to a 15 mL conical glass tube containing 10 mL of ice-cold 70% ethanol. Fix the cells on ice for ≥2 hours. 2. Centrifuge the tube at 300 × g, 4°C for 5 min. Remove all ethanol with ice-cold PBS, rinse once, and suspend in ice-cold PBS at a density of <2×10^6 cells/mL. 3. Take 0.2 mL of cell suspension (≤2×10^5 cells) and transfer to a small tube. Cool on ice. 4. Add 0.4 mL of ice-cold permeabilization solution. Wait 15 seconds and keep cells on ice. 5. Add 1.2 mL of ice-cold AO staining solution. Keep cells on ice. 6. Add 1.2 mL of ice-cold Acridine Orange base staining solution. Keep cells on ice. 7.After adding Acridine Orange base solution, measure and record cell fluorescence using a flow cytometer within 2 to 10 minutes. [1] The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.

Solubility Information

Solubility	DMSO: 30 mg/mL (113.06 mM),Sonication is recommended. H2O: 4 mg/mL (15.07 mM),Sonication is recommended. 1 M HCl: 180 mg/mL (678.35 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.7686 mL	18.843 mL	37.6861 mL
5 mM	0.7537 mL	3.7686 mL	7.5372 mL
10 mM	0.3769 mL	1.8843 mL	3.7686 mL
50 mM	0.0754 mL	0.3769 mL	0.7537 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Darzynkiewicz Z, et al. Differential staining of DNA and RNA. Curr Protoc Cytom. 2004 Nov;Chapter 7:Unit 7.3.
Mirrett S. Acridine orange stain. Infect Control. 1982 May-Jun;3(3):250-2.
Yektaeian N, et al. Lipophilic tracer DiI and fluorescence labeling of acridine orange used for Leishmania major tracing in the fibroblast cells. Heliyon. 2019 Dec 18;5(12):e03073.