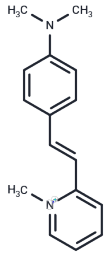
Data Sheet (Cat.No.T18883)

TargetMol

2-Di-1-ASP

Chemical Properties



CAS No. : 2156-29-8

Formula: C16H19IN2

Molecular Weight: 366.24

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	2-Di-1-ASP is a mono-stryryl dye and widely used as mitochondrial stain and groove-binding fluorescent probes for double-stranded DNA. It has selective for G-quadruplex (G4) and double-stranded DNA.
Targets(IC50)	Others,DNA/RNA Synthesis
In vitro	Compound 18a (2-Di-1-ASP) exhibits marked fluorescence intensification, achieving up to a 300-fold increase, specifically in the presence of G4 structures, while maintaining significant selectivity against double-stranded DNA. Moreover, 2-Di-1-ASP demonstrates fluorimetric selectivity for parallel forms of G4-DNA, including c-kit2, c-myc, and c-kit87up.
Cell Research	2-Di-1-ASP as an in situ mitochondrial stain Procedure 1. Cultivate cells to a suitable state, seed them on a 24 mm diameter coverslip at a pre-confluent density, add 3 μM 2-Di-1-ASP and incubate at 28°C for 40 minutes. 2. Rinse with Hank's balanced salt solution (HBSS) to remove extracellular 2-Di-1-ASP, and then observe mitochondrial activity under a microscope. The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.

Solubility Information

Solubility	DMSO: 20 mg/mL (54.61 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween-80+45% Saline: 2 mg/mL (5.46 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7304 mL	13.6522 mL	27.3045 mL
5 mM	0.5461 mL	2.7304 mL	5.4609 mL
10 mM	0.273 mL	1.3652 mL	2.7304 mL
50 mM	0.0546 mL	0.273 mL	0.5461 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

Ramadass R, Bereiter-Hahn J. How DASPMI reveals mitochondrial membrane potential: fluorescence decay kinetics and steady-state anisotropy in living cells. Biophys J. 2008 Oct;95(8):4068-76.