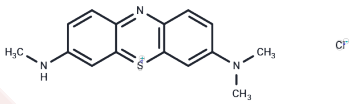
Data Sheet (Cat.No.T18918)

TargetMol

Azure B

Chemical Properties



CAS No. : 531-55-5

Formula: C15H16ClN3S

Molecular Weight: 305.83

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	Azure B (Azure B chloride) is a cationic dye and the major metabolite of Methylene blue. Azure B is a selective, and reversible inhibitor of MAO-A (IC50s: 11 and 968 nM for recombinant human MAO-A and MAO-B).
Targets(IC50)	MAO,Monoamine Oxidase
In vivo	Azure B (4-30 mg/kg; i.p.; once) reduces immobility in the forced swim test [1].
Cell Research	Instructions 1. Solution configuration 1. Configuration of mother liquor: Use sterile water or PBS to configure MHI-148 into 1-10mM mother liquor and store it at -20℃ or -80℃. Please aliquot it to avoid repeated freeze-thawing. 2. Configuration of working fluid: When in use, dilute the MHI-148 mother liquor into a working fluid that meets the requirements and adjust according to the experimental requirements. 2. Blood smear staining: 1. Prepare an Azure B staining solution, usually by dissolving Azure B chloride in buffer or solvent. 2. Apply the staining solution to the prepared blood smear. 3. Allow the smear to incubate in solution for a few minutes to promote cell staining. 4. Rinse the smear thoroughly with water to remove excess dye and then air dry. 5. Check the stained smear under a microscope and analyze the morphology of blood cells. 3. Monoamine oxidase (MAO) inhibition: 1. Introduce Azure B into in vitro experiments, the inhibitory effect is usually determined using recombinant human MAO-A and MAO-B. 2. The IC50 value at a specific experimental setting can be determined through dose response studies. 3. In addition, the antidepressant effect of Azure B can be evaluated in animal models through behavioral experiments (such as forced swimming experiments, tail suspension experiments). The above information is based on published literature. Experimental procedures

Cell Research	should be appropriately modified to meet specific research demands.

Solubility Information

Solubility	DMSO: Insoluble, (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.2698 mL	16.349 mL	32.6979 mL
5 mM	0.654 mL	3.2698 mL	6.5396 mL
10 mM	0.327 mL	1.6349 mL	3.2698 mL
50 mM	0.0654 mL	0.327 mL	0.654 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

Biberoglu K, Yuksel M, Tacal O. Azure B affects amyloid precursor protein metabolism in PS70cells. Chem Biol Interact. 2019 Feb 1;299:88-93.
Kumar V, Pandey N, Dharmadhikari S, Ghosh P. Degradation of mixed dye via heterogeneous Fenton process: Studies of calcination, toxicity evaluation, and kinetics. Water Environ Res. 2020 Feb;92(2):211-221.
Heng S, et al. Spiropyran-Based Nanocarrier: A New Zn2+ -Responsive Delivery System with Real-Time Intracellular Sensing Capabilities. Chemistry. 2019 Jan 14;25(3):854-862.