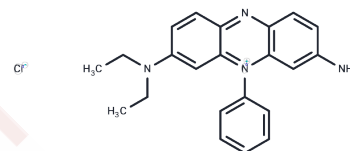


Methylene Violet 3RAX

Chemical Properties

CAS No. :	4569-86-2
Formula:	C ₂₂ H ₂₃ ClN ₄
Molecular Weight:	378.9
Storage:	Keep away from direct sunlight Powder: -20°C for 3 years In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



Biological Description

Description	Methylene Violet 3RAX is a cationic dye, a potential photosensitizer in photodynamic therapy, with antitumor activity that alters the molecular structure of DNA, disrupts the modules of DNA, and induces the production of reactive monoclinic oxygen species, which are used to stain the mitochondria of cells. Methylene Violet 3RAX inhibits the subcellular localization of cancer cells by severing the Methylene Violet 3RAX inhibits subcellular localization of cancer cells, leading to cell death by cutting DNA strands in tumor cells.
Targets(IC50)	Cholinesterase (ChE),Photosensitizer
In vitro	Methylene Violet 3RAX was able to inhibit human erythrocyte AChE and human plasma BChE with Ki of 1.58 μM and 0.51 μM, respectively. [2] It also exhibited antitumor activity, which is achieved by cleaving DNA strands in tumor cells. Methylene Violet 3RAX significantly enhances DNA cleavage in the concentration range of 0-400 μM. At a concentration of 300 μM, its DNA photocleavage activity exceeded 60%. [1]

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6392 mL	13.1961 mL	26.3922 mL
5 mM	0.5278 mL	2.6392 mL	5.2784 mL
10 mM	0.2639 mL	1.3196 mL	2.6392 mL
50 mM	0.0528 mL	0.2639 mL	0.5278 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

1. Si Yao, et al. Methylene violet 3RAX-conjugated porphyrin for photodynamic therapy: synthesis, DNA photocleavage, and cell study. RSC Advances. 2022,12, 21004-21013.

Onder S, et al. The kinetics of inhibition of human acetylcholinesterase and butyrylcholinesterase by methylene violet 3RAX. Chem Biol Interact. 2019 Dec 1;314:108845.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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