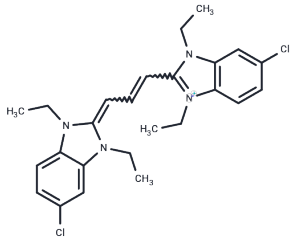
Data Sheet (Cat.No.TD0056)

TargetMol

JC-10

Chemical Properties



CAS No. : 5563-28-0

Formula: C25H29Cl2IN4

Molecular Weight: 583.34

Storage: Keep away from direct sunlight,Store at low temperature
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	JC-10 is a potent inhibitor of metalloproteinases and is often used as a probe.
Targets(IC50)	MMP
Cell Research	Instructions 1. Solution preparation 1. Stock solution preparation: Dissolve JC-10 dye in anhydrous DMSO to prepare a 100× stock solution. 2. Working solution preparation: Dilute the stock solution to the working concentration using preheated cell culture medium. For example, add 10 μL of JC-10 stock solution to 1 mL of preheated culture medium and mix until the solution changes from pink to nearly colorless. 2. Operation steps Cell staining 1. Add the dye working solution to the cells, ensuring that the cells are completely immersed. 2. Incubate at 37°C in the dark for 15-30 minutes. 3. Washing: After incubation, remove the dye working solution. 4. Wash the cells 2-3 times with preheated PBS or culture medium to remove unbound dye. 5. Detection: Detect using a fluorescence microscope or flow cytometer. JC-10 forms aggregates in the mitochondria of healthy cells, showing orange-red fluorescence (excitation/emission wavelength: 540/590 nm); when the membrane potential decreases, JC-10 exists in monomeric form, showing green fluorescence (excitation/emission wavelength: 490/525 nm). Notes: 1) Wear gloves during operation to avoid contact between skin or mucous membranes and reagents. 2) Avoid light during incubation and storage to prevent fluorescence quenching. 3) After staining, fluorescence detection analysis should be performed as soon as possible.

Cell Research	The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.7143 mL	8.5713 mL	17.1427 mL
5 mM	0.3429 mL	1.7143 mL	3.4285 mL
10 mM	0.1714 mL	0.8571 mL	1.7143 mL
50 mM	0.0343 mL	0.1714 mL	0.3429 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

Lin B,et al. Comprehensive Profiling of Transcriptome and m6A Epitranscriptome Uncovers the Neurotoxic Effects of Yunaconitine on HT22 Cells. Evol Bioinform Online. 2024 Oct 12;20:11769343241290461.
Liu T, Yang Q, Zheng H, et al. Multifaceted roles of a bioengineered nanoreactor in repressing radiation-induced lung injury. Biomaterials. 2021: 121103.
Guo Q, et al. Differences in the response of normal oral mucosa, oral leukoplakia, oral squamous cell carcinoma-derived mesenchymal stem cells, and epithelial cells to photodynamic therapy. J Photochem Photobiol B. 2024 Jun; 255:112907.
Gharbaran R,et al. Diminazene aceturate-induced cytotoxicity is associated with the deregulation of cell cycle signaling and downregulation of oncogenes Furin, c-MYC, and FOXM1 in human cervical carcinoma Hela cells. J Biochem Mol Toxicol. 2024 Jan;38(1):e23527.