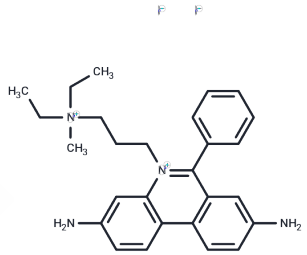
Data Sheet (Cat.No.T2130)

TargetMol

Propidium Iodide

Chemical Properties



CAS No. : 25535-16-4

Formula: C27H34I2N4

Molecular Weight: 668.39

Storage: 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	Propidium Iodide (PI) is a red fluorescent dye utilized for cell staining and is suitable for fluorescence microscopy, confocal microscopy, flow cytometry, and fluorometer analysis. In aqueous solution, the Ex/Em of PI is 493/636 nm. Upon binding with nucleic acid, the Ex/Em shifts to 535/617 nm, enhancing the fluorescence signal 20-30 times.
Targets(IC50)	Others,DNA/RNA Synthesis
In vitro	**METHODS**: Propidium Iodide uptake and Flow cytometry to detect cell death: 1. Store the PI stock solution (0.5 mg/mL in PBS) in a dark place at 4°C. Immediately before use, prepare PI-FACS buffer by adding 20 μL of PI stock solution per 1 mL of PBS. 2. Collect suspended cells: Collect cells directly in centrifuge tubes and centrifuge at 500g for 5 min to harvest all cells. 3. Collect adherent cells: Remove and preserve the medium containing dead and mitotic cells. Isolate live cells using standard tissue culture techniques, such as incubation with trypsin-EDTA, and be sure to collect any washings (e.g., PBS). Add cells from the culture medium and cells from any wash solution to the isolated cells and centrifuge at 500 g for 5 min to harvest all cells. 4. Resuspend the harvested cells in PI-FACS buffer. The cells were incubated in the dark for 15 min at room temperature. 5. Determine the cell mortality rate by flow cytometry. [1] The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.
Cell Research	Propidium Iodide absorption and flow cytometry assay for cell death 1. Store PI stock solution (0.5 mg/mL in PBS) at 4°C in the dark. Immediately before use, prepare PI-FACS buffer by adding 20 μL of PI stock solution to every 1 mL of PBS. 2. Collect suspended cells: Collect cells directly in a centrifuge tube and harvest all cells by centrifugation at 500g for 5 min. 3. Collect adherent cells: Remove and save the culture medium containing dead and mitotic cells. Isolate live cells using standard tissue culture techniques, such as incubation with trypsin-EDTA, and be sure to collect any wash solution (such as PBS). Add cells in the culture medium and cells from any wash solution to the isolated cells and harvest all cells by centrifugation at 500g for 5 min. 4. Resuspend the harvested cells in PI-FACS buffer. Incubate the cells in the dark at room

Cell Research	temperature for 15 min. 5. Determine cell death rate by flow cytometry. The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.

Solubility Information

Solubility	H2O: 5 mg/mL (7.48 mM),Sonication and heating to 60℃ are recommended. DMSO: 126.3 mg/mL (188.96 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: 3.3 mg/mL (4.94 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	1.4961 mL	7.4807 mL	14.9613 mL
5 mM	0.2992 mL	1.4961 mL	2.9923 mL
10 mM	0.1496 mL	0.7481 mL	1.4961 mL
50 mM	0.0299 mL	0.1496 mL	0.2992 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

Gospodinova Z, et al. In Vitro Anticancer Effects of Aqueous Leaf Extract from Nepeta nuda L. ssp. nuda. Life (Basel). 2024 Nov 24;14(12):1539.

Huang F, Liang J, Lin Y, et al.Repurposing of Ibrutinib and Quizartinib as potent inhibitors of necroptosis. Communications Biology.2023, 6(1): 972.

Li D, Li Y, Chen L, et al.Natural Product Auraptene Targets SLC7A11 for Degradation and Induces Hepatocellular Carcinoma Ferroptosis.Antioxidants.2024, 13(8): 1015.

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