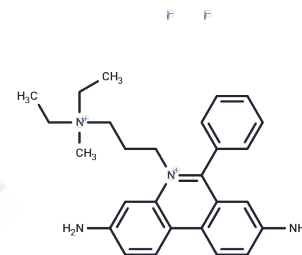


Propidium Iodide

Chemical Properties

CAS No. :	25535-16-4
Formula:	C ₂₇ H ₃₄ I ₂ N ₄
Molecular Weight:	668.39
Appearance:	no data available
Storage:	keep away from direct sunlight, keep away from moisture Powder: -20°C for 3 years In solvent: -80°C for 1 year



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
In vitro	<p>METHODS: Propidium Iodide uptake and Flow cytometry to detect cell death:</p> <ol style="list-style-type: none"> 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]
Cell Research	<p>Propidium Iodide absorption and flow cytometry assay for cell death</p> <ol style="list-style-type: none"> 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 temperature for 15 min. 5. Determine cell death rate by flow cytometry.

Solubility Information

Solubility	H2O: 5 mg/mL (7.48 mM), Sonication and heating to 60°C are recommended. DMSO: 6.68 mg/mL (10 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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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.

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.
- Atallah R, et al. Succinate Regulates Endothelial Mitochondrial Function and Barrier Integrity. Antioxidants (Basel). 2024 Dec 21;13(12):1579.
- Schmidt ENC, et al. Tonabersat enhances temozolomide-mediated cytotoxicity in glioblastoma by disrupting intercellular connectivity through connexin 43 inhibition. Mol Oncol. 2024 Dec 16.
- Yin J, Ding L, Yao S, et al. Y9, a Gboxin analog, displays anti-tumor effect in non-small cell lung cancer by inducing lysosomal dysfunction and apoptosis. Bioorganic Chemistry. 2024: 107820.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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