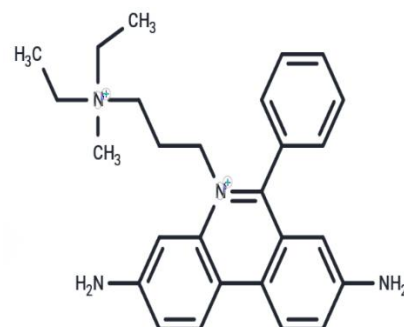


## Propidium Iodide [25535-16-4]

#Cat: NB-64-10859-10mg	Size: 1mL
#Cat: NB-64-10859-25mg	Size: 25mg
#Cat: NB-64-10859-50mg	Size: 50mg
#Cat: NB-64-10859-100mg	Size: 100mg

### Chemical Properties

Cas No:	25535-16-4
Formula:	C <sub>27</sub> H <sub>34</sub> I <sub>2</sub> N <sub>4</sub>
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

<b>Description</b>	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.
<b>Targets(IC50)</b>	Others
<b>In vitro</b>	<b>METHODS:</b> 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]

### Solubility Information

<b>Solubility</b>	H <sub>2</sub> O: 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

Huang F, Liang J, Lin Y, et al. Repurposing of Ibrutinib and Quizartinib as potent inhibitors of necroptosis. *Communications Biology*. 2023, 6(1): 972. Crowley LC, et al. Measuring Cell Death by Propidium Iodide Uptake and Flow Cytometry. *Cold Spring Harb Protoc*. 2016 Jul 1;2016(7). 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. 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.

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