

PI Solution (50 µg/mL, ready to use)

Introduction

Propidium Iodide (PI) is a commonly used nuclear probe that binds to nucleic acids and emits red fluorescence, with an intensity 20-30 times stronger than that of PI itself. Since PI cannot penetrate intact cell membranes, it is only suitable for staining cells with compromised membranes, such as apoptotic cells. Leveraging this characteristic, PI is often used in combination with live-cell probes like Calcein-AM, Hoechst 33258, or Hoechst 33342 for live/dead cell staining and analysis. Additionally, PI is a commonly used counterstain in immunofluorescence.

This product is a ready-to-use PI solution. Stained samples can be analyzed by fluorescence microscopy or flow cytometry.

Storage

Store at -20°C in the dark, stable for 2 years. For frequent use, it can be stored at 4°C in the dark and remains stable for 6 months.

Properties

Physical Appearance	Liquid
M.Wt	668.4
Cas No.	25535-16-4
Formula	C ₂₇ H ₃₄ I ₂ N ₄
Ex/Em	535/615 nm (after binding DNA)

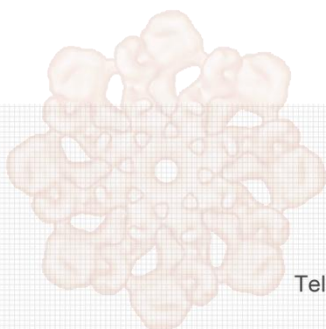
Protocol

1. Fix cells or tissue samples following your experimental protocol, and then wash thoroughly to remove the fixative. If performing immunofluorescence, complete antibody staining before proceeding to PI staining.
2. For adherent cells or tissue sections, cover the sample with sufficient PI solution. For suspension cells, resuspend the cell pellet in at least 3 volumes of PI solution. Incubate at room temperature, protected from light, for 3-5 min.
3. Remove the PI solution and wash the sample 2-3 times with PBS or an appropriate buffer. Observe by fluorescence microscopy or flow cytometry (Ex/Em: 535/615 nm).

***Note:** For live cell detection, due to the cytotoxicity of PI, it is recommended to perform detection as soon as possible after staining to avoid increased cell death, which could lead to false positive results.

■ Note

1. This product is a ready-to-use PI solution suitable for general staining applications. For those requiring a higher concentration of PI solution, PI stock solution (Catalog No. K2403) or PI powder (Catalog No. B7758) is available for purchase.
2. This product is light-sensitive. Protect from light during use and storage.
3. For your safety and health, please wear lab coats and gloves during the experiment.
4. For research use only. Not to be used in clinical diagnostic or clinical trials.



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