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1. Description

Product format 2 mL Propidium Iodide Solution: the Propidium Iodide Solution is supplied in phosphate-buffered saline at a concentration of 100 µg/mL.

Storage Store protected from light at 2–8 °C. Do not freeze. The expiration date is indicated on the vial label.

1.1 Background information

Propidium iodide (PI) is a fluorescent dye that intercalates into double-stranded nucleic acid. It is excluded from viable cells, but can penetrate cell membranes of dead or dying cells. Therefore, it is widely used for evaluation of cell death and apoptosis or for determination of DNA content in cell cycle analysis.

The fluorescence emission maximum for DNA-bound PI is about 615–620 nm. When excited by a 488 nm laser, PI can therefore be detected in both, the red fluorescence channel commonly used for R-phycoerythrin (PE)-Cy5 tandem dye detection as well as the yellow fluorescence channel commonly used for R-phycoerythrin (PE) detection.

1.2 Applications

- Exclusion of dead cells from flow cytometric analysis.
- Cell cycle analysis.

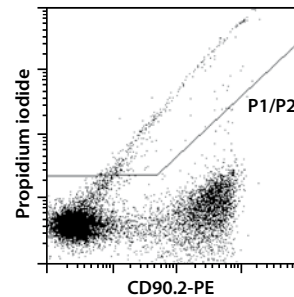
1.3 Recommended dilution

It is recommended to use Propidium Iodide Solution at a final concentration of 1 µg/mL. Since applications vary, each investigator should titrate the reagent to obtain optimal results.

▲ **Caution:** Propidium iodide is a suspected carcinogen; contact with eyes, skin, and mucous membranes should be avoided. Always wear proper protective clothing and gloves when handling the solution.

2. Example of dead cell staining with Propidium Iodide Solution

10⁶ mouse splenocytes were stained with MC CD90.2 T Cell Cocktail (# 130-092-862). Shortly before flow cytometric analysis, 10 µL of PI solution was added to 1 mL of cell suspension. Cells were analyzed by flow cytometry. Dead cells are positive for PI and thus can be excluded from the analysis. Viable cells belong to the P2 population.



All protocols and data sheets are available at www.miltenyibiotec.com.

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