

## Contents

1. Description
  - 1.1 Background information
  - 1.2 Applications
  - 1.3 Recommended dilution
2. Example of dead cell staining with Propidium Iodide Solution

## 1. Description

This product is for research use only.

**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 the B2 channel commonly used for PE or in the B3 channel commonly used for PerCP-Vio® 700, PE-Cy®5, etc.

### 1.2 Applications

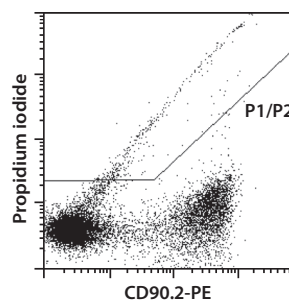
- Exclusion of dead cells from flow cytometric analysis.
- Cell cycle analysis.

### 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.

## 2. Example of dead cell staining with Propidium Iodide Solution

$10^6$  mouse splenocytes were stained with CD45-VioBlue® for leukocyte detection and with CD90.2-PE for pan T cell detection. Shortly before flow cytometric analysis, 10 µL of Propidium Iodide 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.



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