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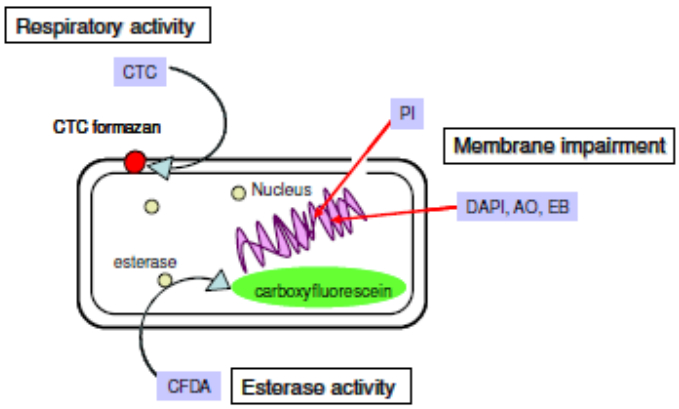
Product Information

79214 Bacteria stain propidium iodide solution

Introduction

Bacteria stain propidium iodide solution is a bacterial fluorescence staining dye and can be applied for microbial cell viability assay in different principles.
It is an ethidium bromide analog that emits red fluorescence upon intercalation with double-stranded DNA. Though PI does not permeate viable cell membranes, it passes through injured cell membranes and stains the nuclei. PI is often used in combination with a fluorescein compound, such as CFDA, for simultaneous
staining of viability and membrane injury.



Kit content

PI aqueous solution (25 µL × 4 tubes, 1 mg/mL)

Storage

Store the kit at -20ºC

Required Equipment

- Fluorescence microscope (blue or green excitation light, red emission filter)
- Flow cytometer (488 nm or 533 nm laser, red emission filter)
- Micropipette (20 µL, 1000 µL)

Staining procedure

1) Allow PI solution to stand at room temperature for 30 min for thawing. Solution should be protected from light).
2) Resuspend the organisms with PBS(-) or saline and adjust the number of cells to 106cells/mL(flow cytometry) or 108-109cells/mL(microscopy).
3) Add 1 µL of PI solution into the 1 mL of microbial cell suspension and vortex gently to mix.
4. Incubate the microbial cells at room temperature for 5 min.
5) Analyze the stained cells by flow cytometer or under a microscope.

Caution

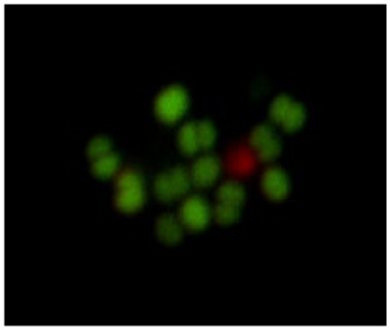
Since PI may be carcinogenic, please be careful in its handling/disposing.

Number of Tests possible

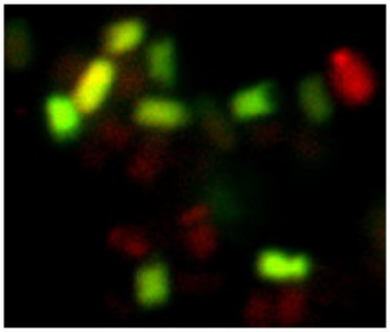
This kit can perform at least 100 tests for the flow cytometric assay and the microscopic assay by following the protocol described herein.

Double staining (optional)

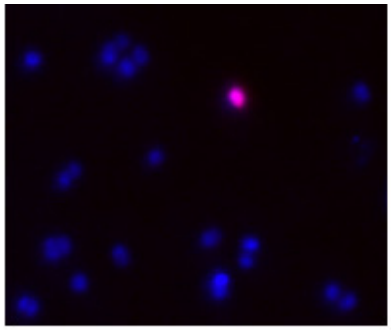
Bacteria stain CFDA solution and - Bacteria stain DAPI solution can be applied for double-staining examination with Bacteria stain PI solution.



Double-staining of *S.epidermidis* (CFDA / PI)



Double-staining of *E.coli* (CFDA / PI)



Double-staining of *S.epidermidis* (DAPI / PI)

Reference

1) N.Yamaguchi and M.Nasu, " Flow cytometric analysis of bacterial respiratory enzymatic activity in the natural aquatic environment ", *Journal of Appl. Microbiol.*, **1997**, *83*, 43-52.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.