CREATIVE BIOMART®
Assay Kit

Bacterial Membrane Potential Kit

Product Information

Cat.No.

Kit-1678

Product Overview

The reagents in the Bacterial Membrane Potential Kit have been tested at Molecular Probes on logarithmically growing cultures of the following bacterial species: Micrococcus luteus, Staphylococcus aureus, S. warnerii, Bacillus cereus, Klebsiella pneumoniae, Escherichia coli, and Salmonella choleraesuis. Many bacteria do not show a proportional response to partial membrane depolarization with DiOC2 (3). The response of each bacterial system should be investigated and optimized. Occasionally the DiOC2 (3) concentration and staining time must be adjusted for optimal detection of membrane potential. The experimental protocols below are provided as examples to guide researchers in the development of their own bacterial staining procedures. Some common buffer components, such as Tween 20, azide, and thimerosal, can alter membrane potential and should be avoided. Be sure to test buffer additives for their effect on membrane potential during optimization studies.

Size

100 tests

Description

The Bacterial Membrane Potential Kit provides the fluorescent membrane-potential indicator dye, DiOC2(3), along with a proton ionophore (CCCP) and premixed buffer. DiOC2(3) at low concentrations exhibits green fluorescence in all bacterial cells, but it becomes more concentrated in healthy cells that are maintaining a membrane potential, causing the dye to self-associate and the fluorescence emission to shift to red. The red- and green-fluorescent bacterial populations are easily distinguished using a flow cytometer. CCCP is included in the kit for use as a control because it eradicates the proton gradient, eliminating bacterial membrane potential.

Usage

For Research Use Only. Not for use in diagnostic procedures.

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Storage

Store the components of the BacLight Bacterial Membrane Potential Kit at room temperature before opening the vials. When stored properly, these kit components are stable for at least six months. Caution:DMSO stock solutions should be handled with particular care, as DMSO is known to facilitate the entry of organic molecules into tissues. Please dispose of the stains in compliance with all pertinent local regulations.

Kit Components

DiOC2 (3) (Component A), 1.2 mL of a 3 mM solution in DMSO CCCP (Component B), 300 µL of a 500 µM solution in DMSO Phosphate-buffered saline (PBS, Component C), 200 mL of 10 mM sodium phosphate, 145 mM sodium chloride, pH 7.4

Detection method Fluorescent

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