Bacterial Membrane Potential Kit

Cat. No. Kit-1678 **Lot. No.** (See product label)

SPECIFICATION

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.

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Usage	For Research Use Only. Not for use in diagnostic procedures.
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 µ of a 500 ₥ 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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