

JC-10 Mitochondrial Membrane Potential Assay Kit (Flow Cytometry) ab112133

8 References 1 图像

概述

产品名称	JC-10 Mitochondrial膜Potential Assay试剂盒(Flow Cytometry)
检测方法	Fluorescent
样品类型	Adherent cells, Suspension cells
检测类型	Direct
检测时间	0h 20m
产品概述	<p>JC-10 Mitochondrial Membrane Potential Assay Kit ab112133 is designed for use with flow cytometry, and it provides the most robust assay method for monitoring changes in mitochondrial membrane potential.</p> <p>The assay is based on the detection of the mitochondrial membrane potential changes in cells by the cationic, lipophilic JC-10 dye. In normal cells, JC-10 concentrates in the mitochondrial matrix where it forms red fluorescent aggregates. However, in apoptotic and necrotic cells, JC-10 diffuses out of mitochondria, changes to a monomeric form and stains cells with green fluorescence.</p> <p>Although JC-1 is widely used in many labs, its poor water solubility causes great inconvenience. Even at 1 μM concentration, JC-1 tends to precipitate in aqueous buffer. Compared to JC-1, JC-10 has much better water solubility.</p> <p>JC-10 selectively enters mitochondria, and reversibly changes its color from green to orange-red as membrane potentials increase. This property is due to the reversible formation of JC-10 aggregates upon membrane polarization which cause a shifts in emitted light from 520 nm (the emission of JC-10 monomeric form) to 570 nm (the emission of JC-10-aggregate form). When excited at 490 nm, the color of JC-10 changes reversibly from green to greenish orange as the mitochondrial membrane becomes more polarized.</p> <p>In normal cells, JC-10 concentrates in the mitochondrial matrix where it forms red fluorescent aggregates. However, in apoptotic and necrotic cells, JC-10 exists in monomeric form and stains cells green. The green emission can be analyzed in fluorescence channel 1 (FL1) and greenish orange emission in channel 2 (FL2). Both colors can be detected using the filters commonly mounted in all flow cytometers. Besides its use in flow cytometry, it can also be used in fluorescence imaging and fluorescence microplate platform.</p>

JC-10 assay protocol summary:

- add JC-10 staining solution to experimentally treated cells
- incubate cells for 15-60 min
- analyze with flow cytometer

说明

If you would like to use JC-10 on a microplate reader, we recommend **JC-10 Mitochondrial Membrane Potential Assay Kit (Microplate) (ab112134)**.

Related assays

Review the **cell health assay guide** to learn about kits to perform a **cell viability assay**, **cytotoxicity assay** and **cell proliferation assay**.

Review the **metabolism assay guide** to learn about assays for metabolites, metabolic enzymes, mitochondrial function, and oxidative stress, and also about how to assay metabolic function in live cells using your plate reader.

平台

Flow cytometer

性能

存放说明

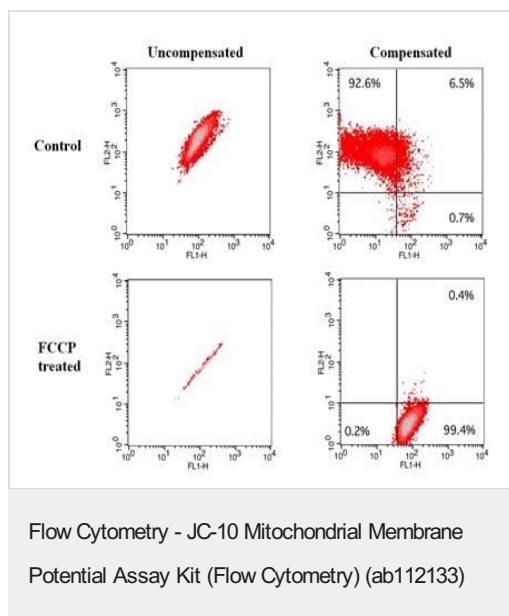
Store at -20°C. Please refer to protocols.

组件	100 tests
200X JC-10 in DMSO	1 x 250µl
Assay Buffer A	1 x 50ml

相关性

Mitochondrial Membrane Potential is an important parameter of mitochondrial function used as an indicator of cell death. The collapse of the mitochondrial Membrane potential coincides with the opening of the mitochondrial permeability transition pores, leading to the release of cytochrome c into the cytosol, which in turn triggers other downstream events in the apoptotic cascade.

图片



JC-10 Mitochondrial Membrane Potential Assay Kit (Flow Cytometry) (ab112133) was used to measure the effect of FCCP induced mitochondria membrane potential change in Jurkat cells by Flow Cytometry. Jurkat cells were dye loaded with JC-10 dye-loading solution along with DMSO (Top) or 5 μ M FCCP (Low) for 10 minutes. The fluorescent intensities for both J-aggregates and monomeric forms of JC-10 were measured with a flow cytometer using FL1 and FL2 channels. Uncompensated data (left column) were compared with compensated data (right column).

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.cn/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors