JC-10 Mitochondrial Membrane Potential Assay Kit

Cat. No. Kit-0488 **Lot. No.** (See product label)

SPECIFICATION

Product Overview	JC-10 Mitochondrial Membrane Potential Assay Kit is a fluorescent assay used to detect cell apoptosis by monitoring the loss of mitochondiral membrane potential with flow cytometry .
Description	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. JC-10 is developed to be a superior alternative to JC-1 when high dye concentration is desired. Compared to JC-1, JC-10 has much better water solubility. JC-10 is capable of selectively entering into mitochondria, and reversibly changes its color from green to orange as membrane potentials increase. This property is due to the reversible formation of JC-10 aggregates upon membrane polarization that causes shifts in emitted light from 520 nm (i.e., emission of JC-10 monomeric form) to 570 nm (i.e., emission of J-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. Both colors can be detected using the filters commonly mounted in all flow cytometers. The green emission can be analyzed in fluorescence channel 1 (FL1) and greenish orange emission in channel 2 (FL2). Besides its use in flow cytometry, it can also be used in fluorescence imaging and fluorescence microplate platform.
Applications	This kit is based on the detection of the mitochondrial membrane potential changes in cells by the cationic, lipophilic JC-10 dye.
Usage	For research use only (RUO)

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Storage	Keep in freezer and protect from light.
Kit Components	Component A: 200X JC-10 in DMSO 250 µLComponent B: Assay Buffer 50 mL
Detection method	Fluorometric

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