

Mitochondrial Membrane Potential Assay Kit | JC-1 assay kit

Mitochondrial Membrane Potential Assay Kit (JC-1)

CATALOG #
AAA330129

PRODUCT SYNONYMS

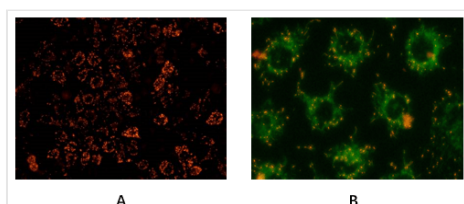
Mitochondrial Membrane Potential; Mitochondrial Membrane Potential Assay Kit (JC-1); JC-1 assay kit

PRODUCT SPECIFICATIONS

Preparation and Storage

Refer to list of materials supplied for storage conditions of individual components. Stable for at least 12 months at recommended temperature from date of shipment.

IMAGES



Application Data

Fig. HeLa cells stained with AAA Biotech Mitochondrial Membrane Potential Assay Kit (JC-1).

ADDITIONAL INFORMATION

Related Product Information for JC-1 assay kit

Principle of the Assay: Mitochondria, the site of most energy production in eukaryotic cells, have a double membrane structure: an outer membrane and a folded inner membrane. Across the inner membrane of intact mitochondria there is a voltage gradient (membrane potential= $\Delta\psi$) with the inside negative and the outside positive. Disruption of the mitochondrial transmembrane potential is one of the earliest intracellular events that occur following induction of apoptosis. Mitochondrial Membrane Potential Assay Kit (JC-1) provides a simple method for distinguishing between healthy and apoptotic cells by detecting the changes in the mitochondrial transmembrane potential, based on a carbocyanine dye, JC-1. In healthy cells, this dye accumulates and aggregates in the mitochondria, where it forms bright red fluorescent agglomerates. Any event that dissipates the mitochondrial membrane potential prevents the accumulation of the JC-1 dye in the mitochondria and thus, the dye remains in the cytoplasm in its monomer form, leading to a shift from red (agglomerated JC-1, Ex/Em=585/590 nm) to green fluorescence (JC-1 monomers, Ex/Em=510/527 nm). JC-1 can be used as an indicator of mitochondrial potential in a variety of cell types, including myocytes and neurons, as well as in intact tissues and isolated mitochondria. This kit contains CCCP that causes an uncoupling of the proton gradient, which established during the normal activity of electron carriers in the electron transport chain, and thus, dissipates the mitochondrial electrochemical potential and may be used as a control that prevents JC-1 aggregation.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://www.aaabiotech.com/jc-1-assay-kits/mitochondrial-membrane-potential/330129>