

Mit Complex II Activity Assay Kit

Cat. No. Kit-0246 **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Complex II Activity Assay allows for the activity of complex II to be determined without the need to isolate mitochondria or pre-incubate with antibodies. As complex II oxidizes succinate, electrons are passed to an analog of ubiquinone and then on to DCPIP, which, when oxidized, absorbs in the 600 nm range. The absorbance of DCPIP will decrease upon reduction. Complex II activity is measured as a decrease in absorbance at 600 nm over time. To prevent interference from other ETC complexes, rotenone (1 μ M), antimycin A (10 μ M), and potassium cyanide (2 mM) are present as inhibitors (not supplied). For the use of this kit with other types of tissue mitochondria, please see Mitochondrial (Tissue) Isolation Kit.

Description

Complex II (succinate dehydrogenase/co-enzyme Q reductase) is one of the major sites of electron entry into the mitochondrial electron transport chain (ETC). Complex II catalyzes the oxidation of succinate to fumarate, and in the process reduces ubiquinone (Q) to ubiquinol (QH₂). Ultimately, oxidation of succinate will lead to reduction of O₂, the terminal step in mitochondrial respiration. In addition to the implied mitochondrial dysfunction, inhibition of complex II has also been linked to oncogenesis. This assay is designed so that direct inhibitory effects on complex II can be observed. Activity of succinate dehydrogenase can be inhibited using atpenin A5, TTFA, and malonate.

Usage

Please read these instructions carefully before beginning this assay. For research use only. Not for human or diagnostic use. NOTE: It is recommended that gloves be worn at all time when working with isolated mitochondria and mitochondrial inhibitors.

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Storage	Stability: 1 year;Storage: -80°C;This kit will perform as specified if stored as directed in the Materials Supplied section and used before the expiration date indicated on the outside of the box.
Kit Components	Kit will arrive packaged as a -80°C kit. For best results, remove components and store as stated below.Mitochondrial Complex II Activity Assay Buffer: 2 vials/10 ml, -20°C;Ubiquinone Assay Reagent: 1 vial/100 μ -80°C;DCPIP Assay Reagent: 1 vial/700 μ g, -20°C;Bovine Heart Mitochondria Assay Reagent: 1 vial/100 μ l -80°C;Succinate Assay Reagent: 1 vial/100 μ l -20°C;Half Volume 96-Well Clear Plate: 1 plate, Room temperature

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