abcam

Product datasheet

MitoTox™ Complex I OXPHOS Activity Assay Kit ab109903

13 References 1 Image

Overview

Product name	MitoTox™ Complex I OXPHOS Activity Assay Kit
Detection method	Colorimetric
Sample type	Inhibitor compounds
Assay type	Quantitative
Assay time	5h 00m
Product overview	MitoTox™ Complex I OXPHOS Activity Assay (ab109903) is designed for testing the direct inhibitory effect of compounds on Complex I activity in only 5 hours. Complex I extracted from the provided bovine heart mitochondria (a rich source of Complex I) is immunocaptured by specific antibodies on the plate. Complex I activity can be observed as decrease in absorbance at OD 340 nm. The intra-assay and inter-assay variation of this assay are both < 10%. Inhibitory effects of compounds on Complex I activity can be tested in two different ways: 1. Screening format, where up to 23 compounds can be tested at a single concentration in triplicate; 2. Dose response (IC_{50}) format, where two compounds known to affect Complex I activity can be tested at 11 different data points in triplicate. Testing for mitochondrial function has become a key aspect of drug discovery. Mitochondria can be affected by drug treatment, resulting into cardio- and hepatotoxic side effects that can lead to drug withdrawal from the market. Therefore, there is increasing emphasis on testing the impact on mitochondria early on in the drug development process to reduce failure rates during preclinical and clinical phases.
Notes	Store Phospholipids, Bovine heart mitochondria, Ubiquinone and Activity Buffer at -80°C. Store all other components at 4°C. **Related products** Review the **mitochondrial assay guide**, or the full **metabolism assay guide** to learn about more assays for metabolites, metabolic enzymes, mitochondrial function, and oxidative stress, and also how to assay metabolic function in live cells using your plate reader.
Platform	Microplate reader

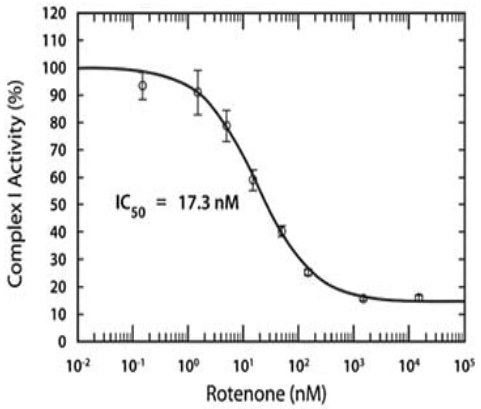
Properties

Properties

Storage instructions Please refer to protocols.

Components	96 tests
12-channel reagent reservoirs	2 units
1X Mito Buffer	1 x 5ml
20X Wash Buffer	1 x 5ml
Bovine heart mitochondria	1 x 360µl
Complex I Activity Buffer	1 x 24ml
Detergent	1 x 100µl
Phospholipids	1 x 6ml
Pre-coated 96-well microplate	1 unit
Ubiquinone 1	1 x 60µl

Images



MitoTox™ Complex I OXPHOS Activity Assay (ab109903)

Typical dose response curve for rotenone. Assay was performed following the Dose Response Assay Procedure using rotenone, a well known Complex I inhibitor. Rotenone was prepared in DMSO to generate a 10 mM stock. Starting with a 50 µM final concentration in well, 1:10 serial dilutions of rotenone were generated.

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