

Product datasheet

MitoTox™ Complex V OXPHOS Activity Assay Kit ab109907

[19 References](#) [2 Images](#)

Overview

Product name	MitoTox™ Complex V OXPHOS Activity Assay Kit
Detection method	Colorimetric
Sample type	Inhibitor compounds
Assay type	Direct
Assay time	4h 00m
Species reactivity	Reacts with: Rat, Cow, Human Does not react with: Mouse

Product overview MitoTox™ Complex V OXPHOS Activity Assay Kit (ab109907) is designed for testing the direct inhibitory effect of compounds on Complex V activity in only 4 hours. Complex V extracted from the provided bovine heart mitochondria (a rich source of Complex V) is immunocaptured by specific antibodies on the plate. Complex V 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 (IC₅₀) format, where two compounds known to affect Complex V 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 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.

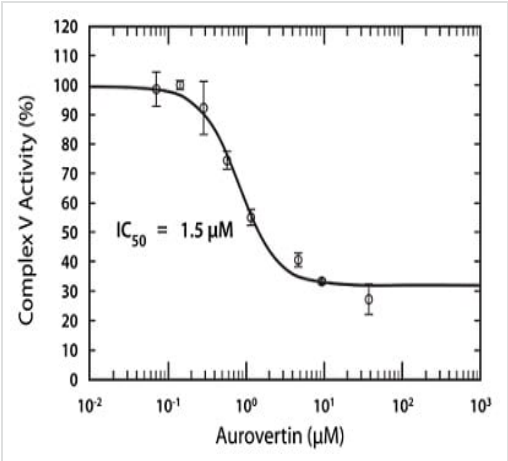
Platform Microplate reader

Properties

Storage instructions Please refer to protocols.

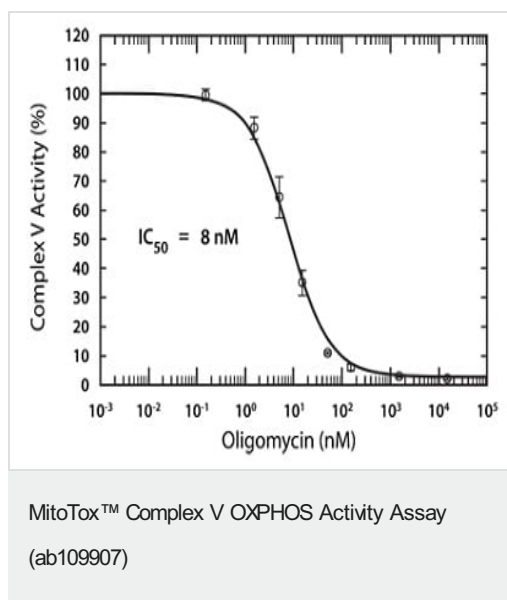
Components	96 tests
12-channel reagent reservoirs	2 units
1X Mito Buffer	1 x 5ml
20X Wash Buffer	1 x 5ml
Bovine heart mitochondria	1 x 360µl
Complex V Activity Buffer	1 x 24ml
Detergent	1 x 100µl
Phospholipids	1 x 6ml
Pre-coated 96-well microplate	1 unit

Images



Dose response curve for aurovertin, a non-competitive inhibitor of Complex V.

MitoTox™ Complex V OXPHOS Activity Assay
(ab109907)



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

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