



# Agilent Seahorse XF Mito Tox Assay Kit

A direct functional assay for accurate identification of mitochondrial toxicity

## Agilent Seahorse XF Mito Tox Assay kit provides:

- Streamlined assay workflow and parameters to identify mitochondrial toxicity with high sensitivity and specificity
- Simplified assay design and standardized mito tox parameters to reduce time-to-conclusions
- Data quality and assay performance assessment for each assay to ensure data confidence

## A standardized solution to detect mitochondrial toxicity

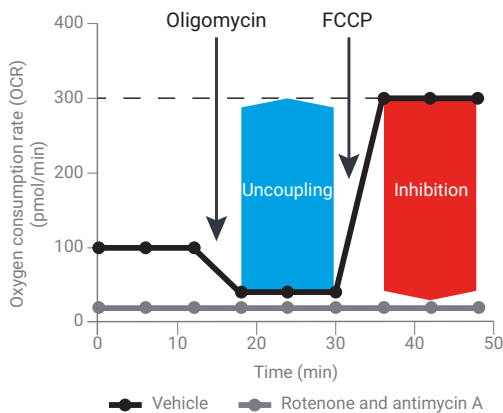
Mitochondrial toxicity (mito tox) is known as a common cellular mechanism behind the adverse drug reactions that cause liver and cardiac injuries, leading to drug attrition or black-box warnings. Agilent now offers the Seahorse XF Mito Tox Assay kit that is integrated with the XF Pro analyzer to allow identification of drug-induced mitochondrial toxicity through direct functional measurements of mitochondrial oxygen consumption rates (OCR). The kit also features a streamlined workflow supported by enhanced software tools to provide a complete solution that allows users to obtain robust results and actionable conclusions quickly and minimize assay development needs. It is ideally suited for assessing drug-induced mitochondrial toxicity.

## Simplified assay design and workflow to improve overall assay throughput

The Agilent Seahorse XF mito tox assay is adapted from the XF cell mito stress test, the fundamental assay for interrogating mitochondrial function. This refined assay includes sequential injections of oligomycin and FCCP, with a separate experimental group pre-exposed with rotenone/antimycin A as an assay control. This design allows for a slightly shorter assay runtime compared to the XF cell mito stress test, while still delivering essential information. The XF mito tox assay, when used together with enhanced software tools, reports two mito tox indices that identify the magnitude and potential type of toxicity (inhibition or uncoupling). Assay performance metrics (Z' value) are also calculated and reported for every assay.

## Enhanced Wave Pro and Seahorse Analytics deliver a complete solution for assessing drug-induced mitochondrial toxicity

The Seahorse XF Mito Tox Assay kit integrates seamlessly with Wave Pro and Seahorse Analytics software at every step of the assay workflow. These software features greatly simplify the entire XF assay experience, from assay design or template creation to data interpretation, facilitating decision making in the context of drug discovery and development.



Seahorse XF mito tox assay profile, showing the respiration parameters used for assessing the type and magnitude of mitochondrial toxicity.

## Product information

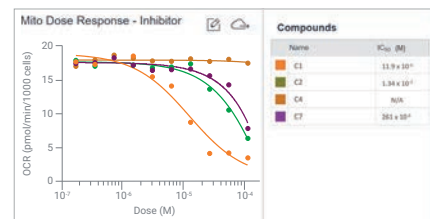
Each Seahorse XF Mito Tox Assay kit contains six (6) single-use pouches. Each pouch contains one (1) vial each of oligomycin (63 nmol), FCCP (72 nmol), and rotenone/antimycin A (5.4 nmol), sufficient for one full-plate assay in 96-well format.

The XF Mito Tox Assay kit is shipped at ambient temperature, stored at room temperature, and is only compatible with the XF Pro analyzer.

Seahorse XF DMEM Medium, pH 7.4 and XF supplements (glucose, pyruvate, and glutamine) are recommended for optimal results.

Product Description	Compatible Analyzer	Part Number
Seahorse XF Mito Tox Assay kit, 6 assays	XF Pro analyzer	103595-100
<b>Related products</b>		
Seahorse XF Pro M FluxPak, 18 assays	XF Pro analyzer	103775-100
Seahorse XF Pro M FluxPak Mini, 6 assays	XF Pro analyzer	103777-100
Seahorse XF Pro M Cell Culture Plates, 6 assays	XF Pro analyzer	103774-100
Seahorse XF DMEM Medium, pH 7.4, 500 mL*	All analyzers	103575-100
Seahorse XF 1.0 M Glucose Solution, 50 mL	All analyzers	103577-100
Seahorse XF 100 mM Pyruvate Solution, 50 mL	All analyzers	103578-100
Seahorse XF 200 mM Glutamine Solution, 50 mL	All analyzers	103579-100

\* This medium can also be purchased together with the supplements/substrates listed in this table as bundled products (part number 103680-100).



Seahorse XF mito tox assay output. Top: Inhibitor heat map from a compound library screen. Bottom: 10-point dose response curves and IC<sub>50</sub> values for inhibitors.

Learn more.

[www.agilent.com/chem/discoverxf](http://www.agilent.com/chem/discoverxf)

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