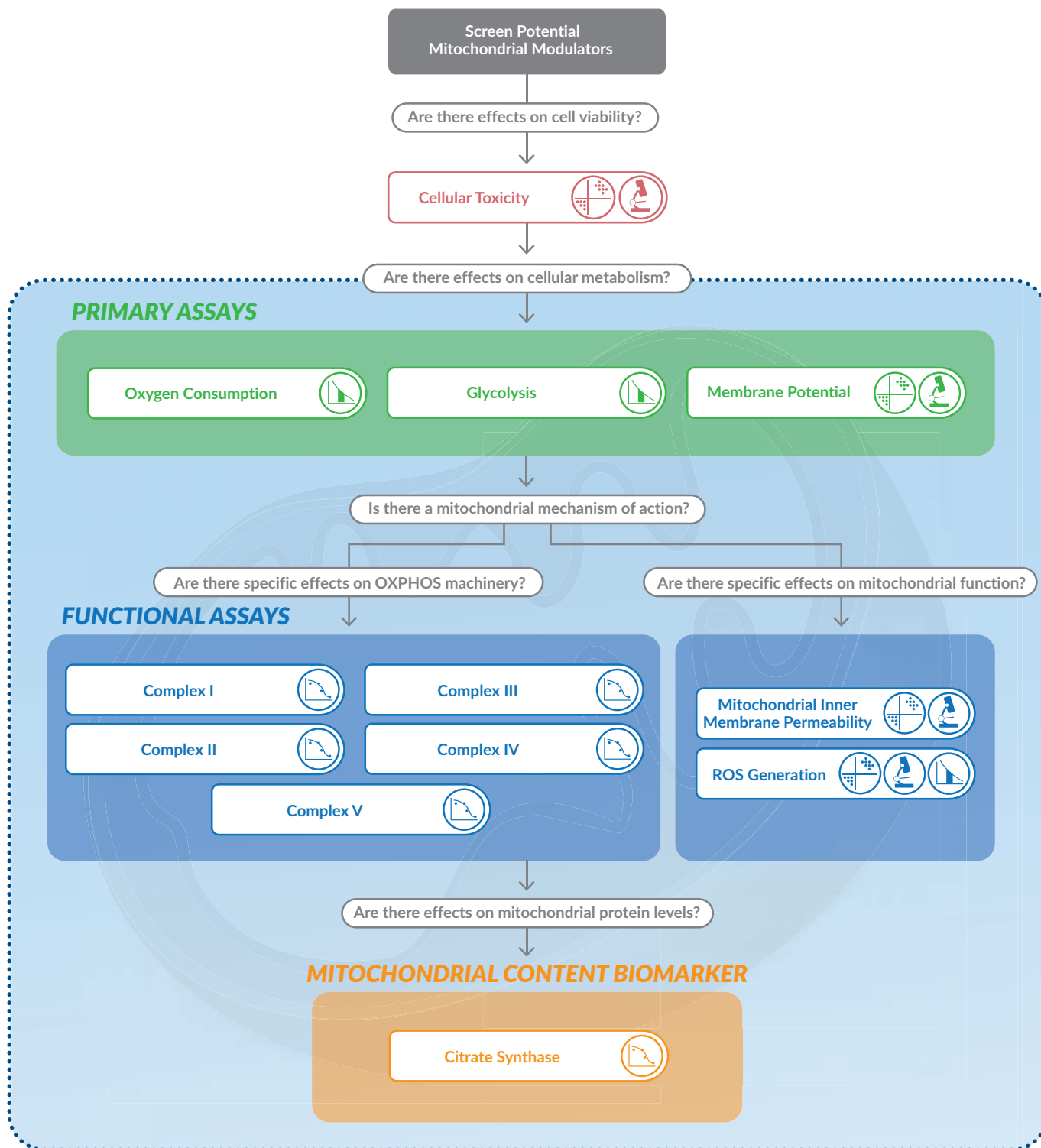


# Mitochondrial Function Assays



Cayman Chemical offers a set of assays to assess mitochondrial function and profile for compound toxicity. This encompasses a series of preliminary screens that determine mitochondrial function in intact cells followed by a series of functional assays that focus on mitochondrial function at the level of the isolated organelle.



## Assay Readouts



Flow Cytometer



Fluorescence Microscope



Colorimetric Plate Reader



Fluorescence Plate Reader or Time-Resolved Fluorescence

## CELL VIABILITY ASSAYS

### Cell Proliferation Assays

Assess the number of viable cells, loss of viable cells, or shift from proliferation to quiescence

Item No.	Product Name
10009365	MTT Cell Proliferation Assay Kit
10010199	WST-8 Cell Proliferation Assay Kit

### Cytotoxicity Assays

Monitor cell toxicity in multiple ways: Differentially label dividing and dead cells, identify autophagic vacuoles, or measure enzymes released from damaged cells

Item No.	Product Name
600140	Autophagy/Cytotoxicity Dual Staining Kit
601170	LDH Cytotoxicity Assay Kit

## PRIMARY SCREENING ASSAYS

### Oxygen Consumption Assay

Measure OCR in living cells and mitochondria without an oxygen electrode

Item No.	Product Name
600800	Oxygen Consumption Rate Assay Kit

### Glucose Metabolism Assays

Measure glucose metabolism and study modulators of cellular glucose uptake

Item No.	Product Name
10009582	Glucose Colorimetric Assay Kit
600470	Glucose Uptake Cell-Based Assay Kit
600450	Glycolysis Cell-Based Assay Kit

### Membrane Potential Assays

Simple tests to measure mitochondrial health in whole cells

Item No.	Product Name
10009172	JC-1 Mitochondrial Membrane Potential Assay Kit
701560	JC-1 Mitochondrial Membrane Potential Flow Cytometry Assay Kit
701310	TMRE Mitochondrial Membrane Potential Assay Kit

## FUNCTIONAL ASSAYS

### ETC Activity Assays

Measure ETC activity or screen compounds for ETC inhibition

Item No.	Product Name
700930	MitoCheck® Complex I Activity Assay Kit
700940	MitoCheck® Complex II Activity Assay Kit
700950	MitoCheck® Complex II/III Activity Assay Kit
700990	MitoCheck® Complex IV Activity Assay Kit
701000	MitoCheck® Complex V Activity Assay Kit

### Mitochondrial Protein Activity Assay

Determine citrate synthase activity from isolated mitochondria, tissue, or cell homogenates

Item No.	Product Name
701040	MitoCheck® Citrate Synthase Activity Assay Kit

### Mitochondrial Inner Membrane Permeability Assay

Utilizes a calcein/cobalt technique multiplexed with TMRE

Item No.	Product Name
601430	Mitochondrial PT Pore Assay Kit

### ROS Generation and Detoxification Assays

Detect ROS and measure the activity of an antioxidant

Item No.	Product Name
707002	Catalase Assay Kit
600050	Hydrogen Peroxide Cell-Based Assay Kit
601520	ROS Detection Cell-Based Assay Kit (DCFDA)
601290	ROS Detection Cell-Based Assay Kit (DHE)

### Mitochondrial ROS Detection Assay Kit

Item No. 701600

- Measures mitochondrial ROS directly in living cells
- Includes antimycin A as a positive control
- Flow cytometry, fluorescence, and plate-based methods

To view a complete list of our Mitochondrial Function Assays, visit us online at [www.caymanchem.com](http://www.caymanchem.com)

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