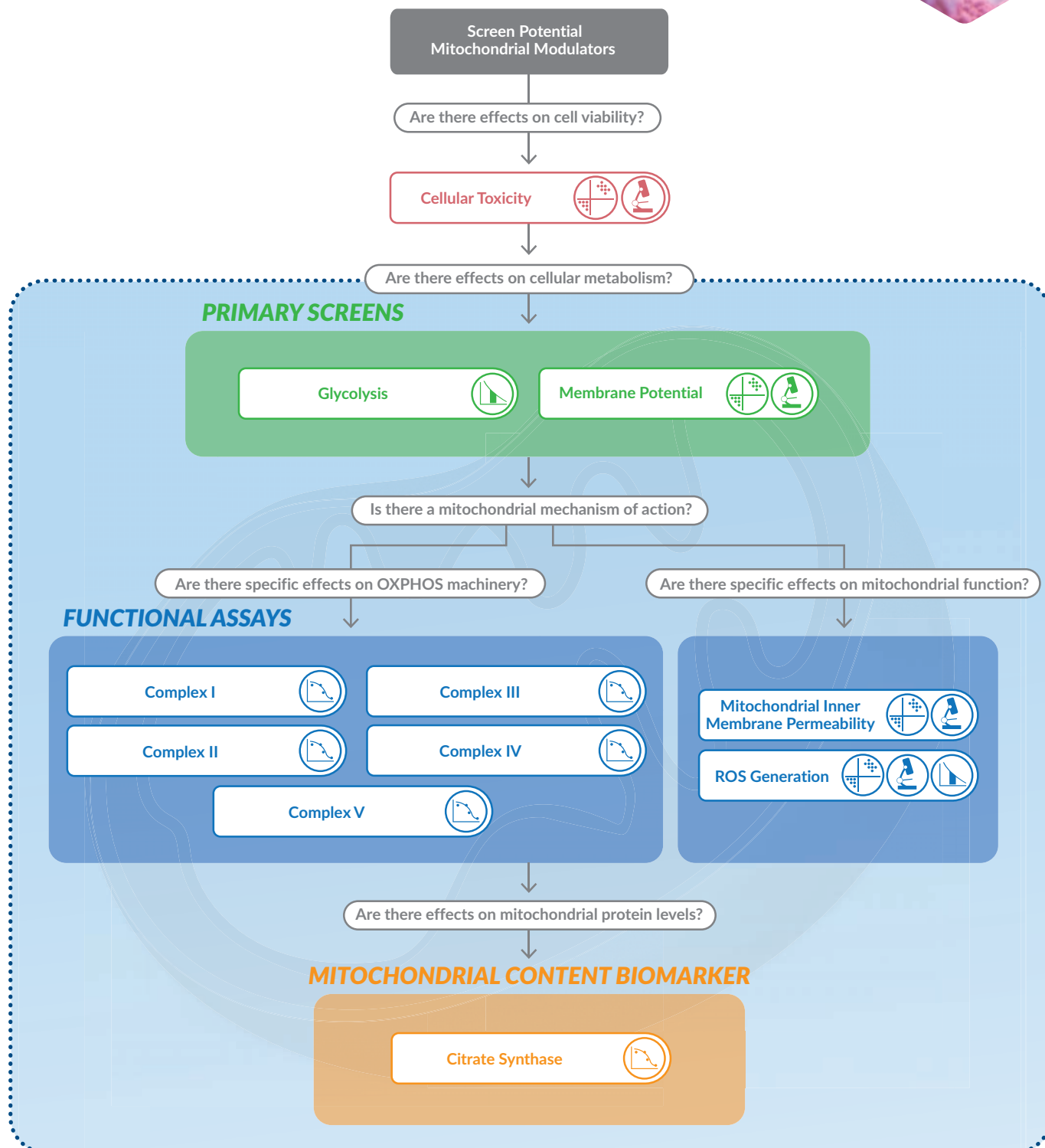


# Mitochondrial Function Assays

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
10008883	WST-1 Cell Proliferation Assay Kit
10010199	WST-8 Cell Proliferation Assay Kit
10010200	XTT 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
600120	7-AAD/CFSE Cell-Mediated Cytotoxicity Assay Kit
600140	Autophagy/Cytotoxicity Dual Staining Kit
601170	LDH Cytotoxicity Assay Kit
601430	Mitochondrial PT Pore Assay Kit

## PRIMARY SCREENING ASSAYS

### 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
700300	Glucose-6-Phosphate Dehydrogenase Activity Assay Kit
700750	Glucose-6-Phosphate Fluorometric 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
- Plate-based colorimetric measurement
- Suitable for HTS

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

- Measure inner mitochondrial membrane integrity and mitochondrial membrane potential by multiplexing a calcein/cobalt technique 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)

Isolate intact, functional mitochondria using the **MitoCheck® Mitochondrial (Tissue) Isolation Kit**  
· Item No. 701010



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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