

AGILENT SEAHORSE XF MITO FUEL FLEX TEST KIT

Measure Mitochondrial Fuel Usage in Live Cells

Measure Fuel Dependency and Flexibility in a Single Assay

The Agilent Seahorse XF Mito Fuel Flex Test Kit provides the only assay that is capable of measuring the dependency, capacity, and flexibility of cells to oxidize three critical mitochondrial fuels: glucose, glutamine, and fatty acids. The Seahorse XF Mito Fuel Flex Test determines the rate of oxidation of each fuel by measuring mitochondrial respiration (the oxygen consumption rate, OCR) of cells in the presence or absence of fuel pathway inhibitors, in live cells, in real time.

The Difference is Flexibility

Injection of a single inhibitor reveals how dependent the cells are on that fuel source to meet metabolic demand. Dependency indicates that the cells are unable to compensate for the blocked pathway by using other fuel pathways. Use of a combination of inhibitors measures cells' flexibility in meeting metabolic demand. Flexibility indicates that the cells have the ability to compensate for the inhibited pathway(s) by using an alternative fuel pathway for energy production.

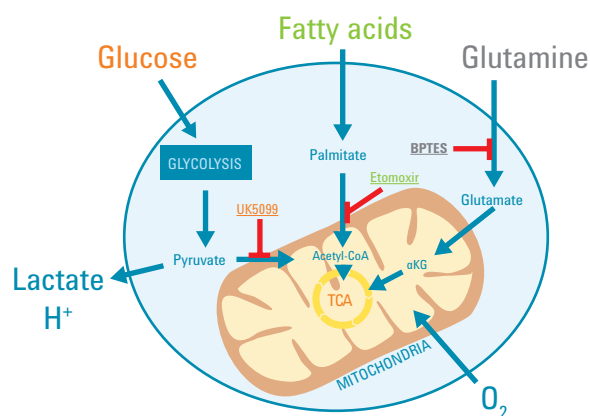


Figure 1. Fuel Pathways.



The Agilent Seahorse XF Mito Fuel Flex Test Kit:

- Interrogates three major fuel pathways: glucose, glutamine, and fatty acid
- Generates functional data in live cells in less than 2 hours
- Reports fuel dependency and fuel pathway flexibility

For more information, visit:
www.agilent.com

Agilent Seahorse XF Mito Fuel Flex Test Profile

Fuel flexibility

The cells' ability to increase oxidation of a fuel to compensate for inhibition of alternative fuel pathways.

Fuel dependency

The measurement of cells' reliance on a fuel pathway to maintain baseline respiration.

Fuel capacity

The cells' ability to use a fuel pathway to meet metabolic demand when other fuel pathways are inhibited.

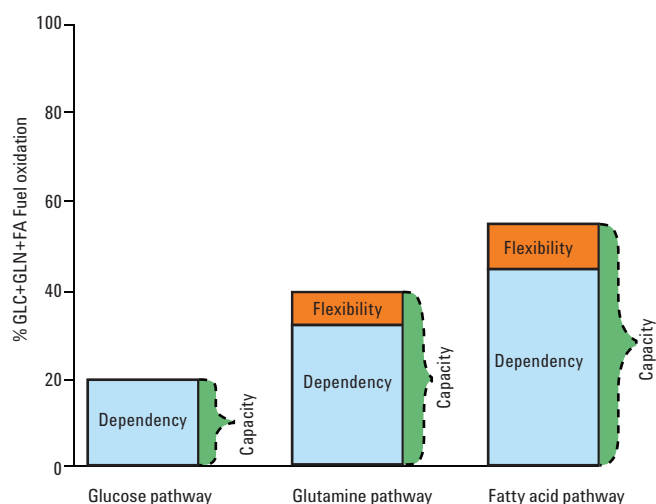


Figure 2. Fuel flexibility, dependency, and capacity.

Identify Substrate Preference by Inhibiting Multiple Fuel Pathways in a Single Assay

Pathway	Inhibitor	Target
Glucose	UK5099	Mitochondrial pyruvate carrier (MPC)
Glutamine	BPTES	Glutaminase (GLS1)
Fatty Acid	Etomoxir	Carnitine palmitoyltransferase 1A (CPT1A)

Product Information

Component	Description
Product	Agilent Seahorse XF Mito Fuel Flex Test Kit
Kit contents	Three foil pouches. Each pouch contains six vials of UK5099 or BPTES or etomoxir
Number of assays	Six XF Microplate assays
Shipping conditions	Ships at ambient temperature
Storage requirements	Store at room temperature

Kit part number	For platform(s)
103260-100	all 24- or 96-well XF Analyzers
103270-100	XFp Analyzer



For more information, visit:
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