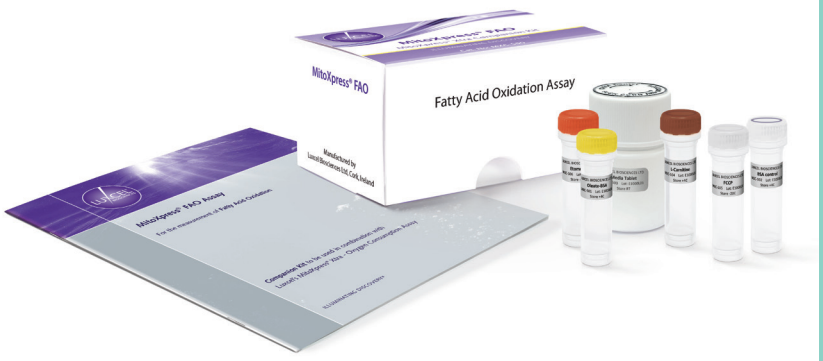
ILLUMINATING DISCOVERY®

Real-time fluorescence plate reader-based *in vitro* cell based assay kits

MitoXpress® FAO Fatty Acid Oxidation Assay

Real-time assessment of FAO driven energy generation



- **Companion kit to Luxcel Biosciences' MitoXpress® Xtra Oxygen Consumption Assay**
- **Convenient characterization of FAO-driven respiration**
- **All control compounds and media tablet included**
- **Oleate-BSA substrate provided for consistent results**

Fatty acid oxidation (FAO) is the primary metabolic pathway in a variety of tissues. In organs such as liver and skeletal muscle, FAO can provide over 75% of cellular ATP while in cardiac tissue it can be responsible for up to 90% of cellular energy requirements. FAO is also now acknowledged as a key factor in cancer metabolism and is also implicated in drug-induced microsteatosis.

Luxcel Biosciences' MitoXpress® Xtra FAO is designed for use as a companion kit with the MitoXpress® Xtra Oxygen Consumption Assay and contains all components needed for the convenient measurement of basal and maximum FAO-driven energy generation and for the distinction between utilization of exogenous and endogenous long chain fatty acids.

Using MitoXpress® FAO in conjunction with the MitoXpress® Xtra Oxygen Consumption Assay you can easily:

- Measure basal and maximum FAO-driven respiratory activity
- Delineate oxidation of exogenous, endogenous and non-long chain fatty acids
- Determine impact of various treatments on FAO
- Characterize substrate preference and metabolic phenotype

A major advantage of using Luxcel Biosciences' kits is that they are designed for use with most fluorescence plate readers and standard 96- and 384-well mitcrotitre plates!

- NO in lab waiting time for specialised equipment to become available and NO capital expenditure required

Sample FAO-driven Oxygen Consumption

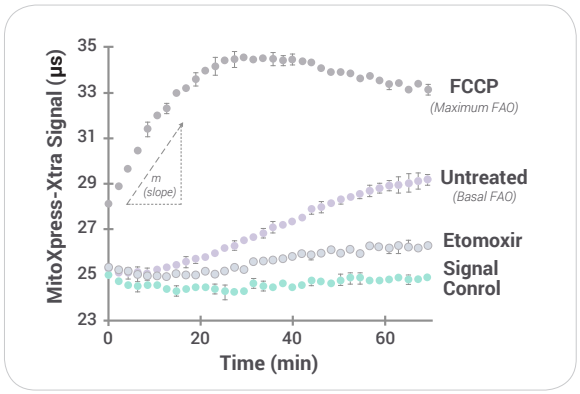


Figure 1: FAO-driven respiration in HepG2 cells, measured with Luxcel Biosciences' MitoXpress® FAO in combination with the MitoXpress® Xtra Oxygen Consumption Assay. Comparing the signal traces of untreated cells with the signal upon treatment with FCCP and Etomoxir allows the detailed delineation of maximum, endogenous, exogenous and non-long chain FAO.

Evaluate Oxidation of Exogenous and Endogenous Fatty Acids

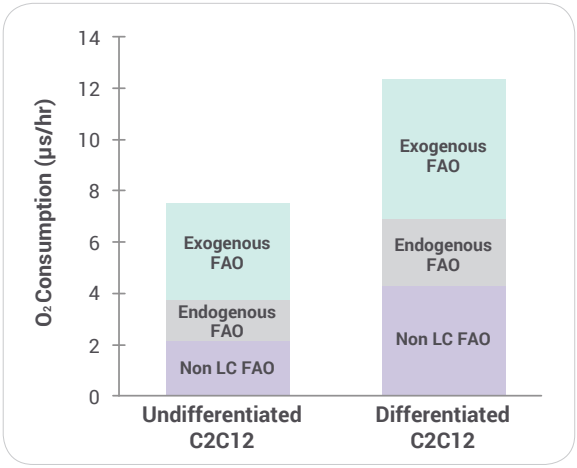


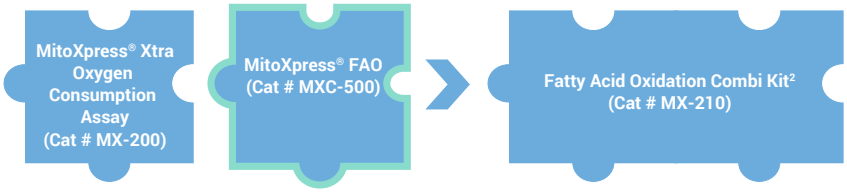
Figure 2: Maximal FAO-driven respiration of differentiated and undifferentiated C2C12 cells (FCCP treated, measured using the MitoXpress® FAO in combination with the MitoXpress® Xtra – Oxygen Consumption Assay. Data courtesy of Dr. Ben Buehrer, Zen-Bio Inc

MitoXpress® FAO Fatty Acid Oxidation Assay

Catalogue Number MXC-500[1]
Kit Component Details

Component	Item	Description
Oleate-BSA	1 vial	unsaturated C18 fatty acid conjugated to BSA
BSA control	1 vial	BSA control for use with compound treatments
Base Measurement Media Tablet	1 tablet	KHB-based Base Measurement Media provided in convenient tablet form
L-Carnitine	1 vial	Facilitates LCFA cellular uptake
FCCP	1 vial	Uncouples ETC and Fo/F1 ATPase activity
Etomoxir	1 vial	CPT1 inhibitor preventing LCFA import
User Manual	x1	Detailed instructions on assay set-up and data analysis

[1] The MitoXpress® FAO Assay is a companion kit to be used with the MitoXpress® Xtra Oxygen Consumption Assay. The kits are available separately or as a combination kit delivered together for convenience.



[2] Includes both MitoXpress® Xtra Oxygen Consumption Assay & MitoXpress® Xtra FAO Kit