Central Carbon Metabolism & Energy Panel

PRECION™

About Central Carbon Metabolism & Energy Panel

Central carbon metabolism, also known as the central carbon metabolic network, refers to a series of biochemical pathways that interconnect catabolic and anabolic processes in living cells.

The key central pathways are glycolysis, pentose phosphate cycle and tricarboxylic acid cycle. This metabolic network converts carbon-containing molecules, such as sugars, fatty acids and amino acids into energy as well as precursor molecules necessary for cell growth, proliferation, and survival.

Applications

- Metabolic clinical research
- Nutrition research
- Genetic engineering
- Bioprocess engineering

Key Advantages - Reproducible Results

- Fully quantitative LC-MS/MS method with minimum of 6 to 8 calibrators per metabolite
- Wide range of sample matrices
- Proprietary technology facilitates low level quantitation in plasma/serum samples
- Matching stable labelled internal standards for each analyte
- Analyte panel customizable with additional metabolites such as isocitrate and other organic acids
- Calibrator and quality control sample precision (% CV) typically <10%

Analytical Method and Instrumentation

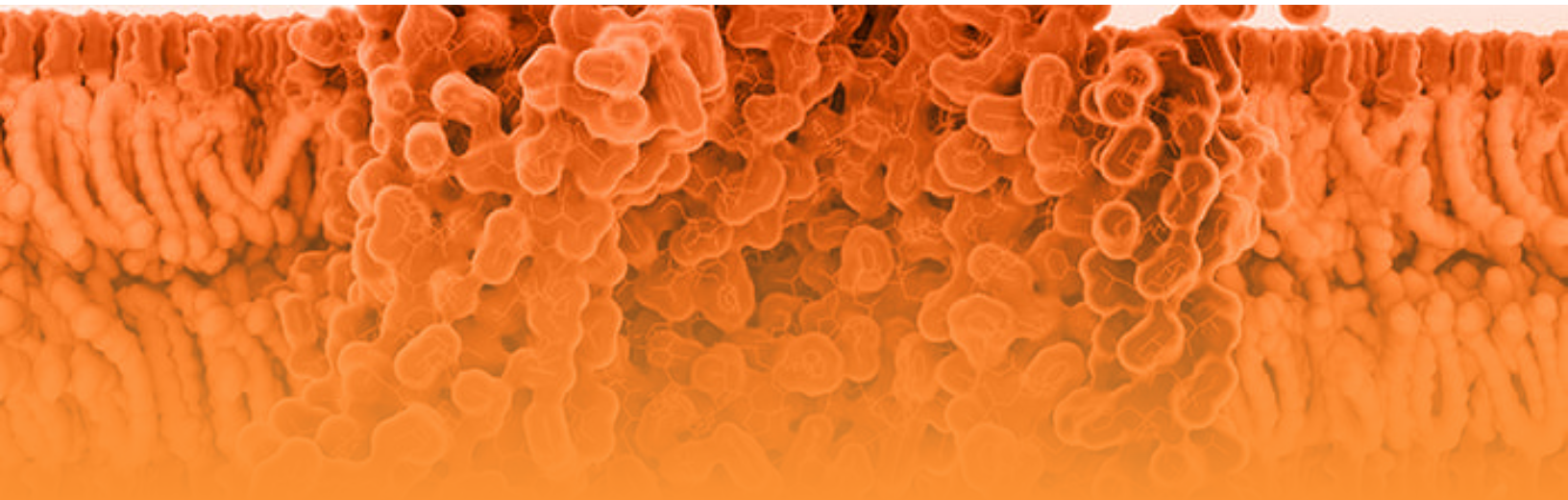
- Analysis by LC-MS/MS
- Sciex Exion UHPLC, coupled to a Sciex 5500+ Triple Quadrupole Mass Spectrometer

Panel Analytes

Measured Metabolites	
pyruvate	lactate
citrate	α-ketoglutarate
succinate	malate
fumarate	isocitrate*
other organic acids*	
*available for customization	

Sample Requirements

Sample Matrix	Sample Amount
Plasma/Serum	100 - 200 µL
Bacterial Cultures	200 - 500 µL
Urine	200 - 500 µL
Others upon request	



2500 Gateway Centre Blvd. Suite 500, Morrisville, NC 27560
info@precion.com

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