



Acylcarnitine Panel

Acylcarnitines

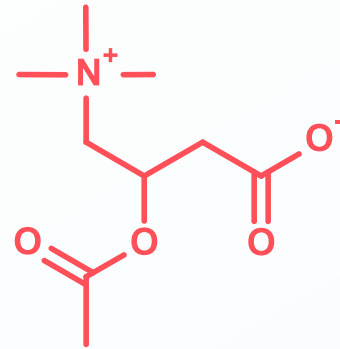
Acylcarnitines (AC) are formed from acyl-CoA and carnitine by carnitine acyltransferases. They are generally considered the transport form of fatty acids (C2-C26) and can be utilized for energy production in the mitochondria. Increased plasma concentrations have historically been used as a marker for incomplete fatty acid oxidation however fasting states can also elevate AC's. Changes in AC concentrations have been linked to various diseases such as insulin resistance and cardiovascular disease.

Applications

- ▶ Biomarkers of mitochondrial fatty acid oxidation
- ▶ Disease pathogenesis studies
- ▶ Skeletal muscle energy metabolism and myopathies
- ▶ Biopharmaceutical modulation of fatty acid synthesis
- ▶ Diagnostic biomarker research

Contact us to get started
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Acylcarnitine Panel	LLOQ*	
	Plasma	Tissue
Carnitine	1,600 ng/mL	1,600 ng/g
Acetyl Carnitine	1,000 ng/mL	1,000 ng/g
Propionyl Carnitine	30.0 ng/mL	30.0 ng/g
Butyryl Carnitine	20.0 ng/mL	20.0 ng/g
Isobutyryl Carnitine	10.0 ng/mL	10.0 ng/g
Valeryl Carnitine	5.00 ng/mL	5.00 ng/g
Isovaleryl Carnitine	5.00 ng/mL	5.00 ng/g
2-Methylbutyryl Carnitine	8.00 ng/mL	8.00 ng/g
Hexanoyl Carnitine	0.800 ng/mL	0.800 ng/g
Octanoyl Carnitine	0.800 ng/mL	0.800 ng/g
Decanoyl Carnitine	1.50 ng/mL	1.50 ng/g
Lauroyl Carnitine	2.00 ng/mL	2.00 ng/g
Myristoyl Carnitine	5.00 ng/mL	5.00 ng/g
Palmitoyl Carnitine	20.0 ng/mL	20.0 ng/g
Stearoyl Carnitine	10.0 ng/mL	10.0 ng/g
Oleoyl Carnitine	100 ng/mL	100 ng/g
Linoleoyl Carnitine	40.0 ng/mL	40.0 ng/g
3-Hydroxybutyryl Carnitine	8.00 ng/mL	8.00 ng/g

*Lower Limit of Quantitation (LLOQ) varies for each sample type

The panel is for non-GxP testing and is not for diagnostic use

Analysis Method and Instrumentation

LC-MS/MS (Agilent 1290 UHPLC/Sciex QTrap 5500)

Sample Type and Required Amounts

Sample Type	Sample Requirement
Plasma/Serum	100 - 150 µL
Tissue	50 - 100 mg
Others on request	