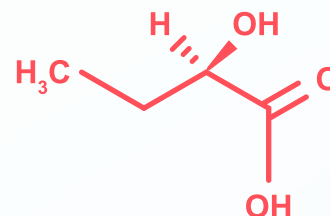




Impaired Glucose Tolerance Panel



Impaired Glucose Tolerance is a prediabetic state of hyperglycemia that is associated with insulin resistance and an increased risk of cardiovascular pathology (Barr, 2007). The condition occurs when blood glucose levels remain high for an extended period after oral ingestion of glucose but not high enough to be diagnosed as type 2 diabetes.

Impaired Glucose Tolerance can be assessed with a single fasted blood draw by measuring a panel of selected metabolites comprised of two small organic acids (α -hydroxybutyric acid (AHB) and 4-methyl-2-oxopentanoic acid (4MOP)), 2 lipids (oleic acid and linoleoyl glycerophosphocholine (LGPC)), a ketone body (β -hydroxybutyric acid (BHBA)), an amino acid (serine), a vitamin (pantothenic acid (vitamin B5)), and glucose (Cobb, 2015).

Applications

- ▶ Diabetes
- ▶ Cardiovascular diseases
- ▶ Health & wellness

Analyte	LLOQ
	EDTA Plasma
Serine	2.50 $\mu\text{g/mL}$
2-Hydroxybutyric acid	0.500 $\mu\text{g/mL}$
4-Methyl-2-oxopentanoic acid	0.500 $\mu\text{g/mL}$
Oleic acid	10.0 $\mu\text{g/mL}$
LGPC	2.50 $\mu\text{g/mL}$
3-Hydroxybutyric acid	1.00 $\mu\text{g/mL}$
Pantothenate	0.0100 $\mu\text{g/mL}$
Glucose	10 mg/dL

This panel is for Research Use Only and is not to be used for diagnostic purposes.

Analysis Method and Instrumentation

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

Sample Type and Required Amounts

Sample Type	Sample Requirement
Fasting EDTA Plasma	$\geq 500 \mu\text{L}$
Others on request	

Cobb J, et al. A Novel Test for IGT Utilizing Metabolite Markers of Glucose Tolerance. *Journal of Diabetes Science and Technology*. 2015; 9(1):69

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