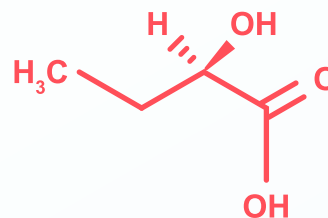




# Insulin Resistance Panel



Insulin resistance is a critical pathophysiological state underlying several chronic conditions, including type-2 diabetes, cardiovascular disease (CVD), hypertension, and polycystic ovarian syndrome. Insulin resistance is evident when glucose builds up in the blood stream instead of being absorbed by the body's cells. It is a result of a diminished response to the hormone insulin at the whole body, organ, or cellular level.

A panel of biomarkers comprised of a small organic acid ( $\alpha$ -hydroxybutyric acid (AHB)), 2 lipids (oleic acid and linoleoyl-glycero-phosphocholine (LGPC)) and insulin identifies insulin resistance with a single fasting blood sample and may have value as an early indicator of risk for the development of pre-diabetes and type-2 diabetes (Cobb J. et al., 2013).

## Applications

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

Analyte	LLOQ
	EDTA Plasma
2-Hydroxybutyric acid	0.500 $\mu\text{g/mL}$
Oleic acid	10.0 $\mu\text{g/mL}$
LGPC	2.50 $\mu\text{g/mL}$
Insulin	2 $\mu\text{U/mL}$

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
Fasting EDTA Plasma	0.5 mL
Others on request	

Cobb J, et al. A novel fasting blood test for insulin resistance and prediabetes. Journal of Diabetes Science and Technology. 2013; 7(1):100

Contact us to get started  
[info@metabolon.com](mailto:info@metabolon.com)

+1 (919) 572-1711  
[metabolon.com](http://metabolon.com)  
 617 Davis Drive, Suite 100, Morrisville, NC, 27560  
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