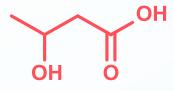




β-Hydroxybutyrate (BHB) Assay



β-Hydroxybutyrate

β-Hydroxybutyrate (BHB, 3-hydroxybutyrate) is an endogenous ketone body that accumulates during periods of fasting, calorie restriction and prolonged exercise. It is created via a multi-step process involving the break-down of fatty acids into acetyl CoA, conversion to acetoacetate and reduction to β-hydroxybutyrate in the liver. BHB is the primary ketone found in the blood and is necessary for brain function especially when glucose is unavailable. It also provides neuroprotective benefits, such as relieving oxidative stress and inhibition of apoptotic pathway in cells.

Applications

- Metabolic diseases including type 2 diabetes
- Alzheimer's disease
- Mental health
- Parkinson's disease
- Nutritional research (e.g. weight loss/ obesity studies)

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β-Hydroxybutyrate	LLOQ*		
Assay	Plasma	Tissue	
β-Hydroxybutyrate	1.00 μg/mL	2.00 μg/g	

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

Analysis Method and Instrumentation

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

Sample Type and Required Amounts

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

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