

BBOX1 Protein, Human (sf9, His-GST)

Cat. No.:	HY-P76163
Synonyms:	Gamma-butyrobetaine dioxygenase; Gamma-BBH; BBH; BBOX
Species:	Human
Source:	Sf9 insect cells
Accession:	O75936 (M1-N387)
Gene ID:	8424
Molecular Weight:	Approximately 65 kDa.

PROPERTIES

Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μ m filtered solution of 20 mM Tris, 500 mM NaCl, 10% Glycerol, pH 8.0. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/ μ g, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μ g/mL in ddH ₂ O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	BBOX1 (gamma-butyrobetaine dioxygenase 1) is an enzyme that catalyzes the formation of L-carnitine from gamma-butyrobetaine. This enzymatic process is a key step in the biosynthesis of L-carnitine, an essential compound involved in the transport of fatty acids into mitochondria for beta-oxidation. By converting gamma-butyrobetaine into L-carnitine, BBOX1 contributes to the regulation of carnitine levels, which play a crucial role in energy metabolism. L-carnitine serves as a cofactor in the transport of long-chain fatty acids across the mitochondrial membrane, facilitating their utilization as a source of energy. It has to succinctly outline BBOX1's specific role in the biosynthesis of L-carnitine, emphasizing its importance in cellular metabolism and energy homeostasis.
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Caution: Product has not been fully validated for medical applications. For research use only.

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