# **Product** Data Sheet

# **HADHB Protein, Human (GST)**

Cat. No.: HY-P71471

Synonyms: 3-ketoacyl-CoA thiolase; Acetyl CoA acyltransferase; Acetyl-CoA acyltransferase; Beta

> ketothiolase; Beta-ketothiolase; ECHB; ECHB\_HUMAN; HADH; Hadhb; beta subunit; Hydroxyacyl Coenzyme A (CoA) dehydrogenase beta subunit; MGC87480; MSTP 029; MSTP029; MTPB; TP

beta; TP-beta; TPbeta; Trifunctional enzyme subunit beta; Trifunct

Species: Human Source: E. coli

Accession: P55084 (35A-283P)

Gene ID: 3032

Molecular Weight: Approximately 53.8 kDa

#### **PROPERTIES**

AA Sequence	•
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APAVQTKTKK	TLAKPNIRNV	VVVDGVRTPF	LLSGTSYKDL
MPHDLARAAL	TGLLHRTSVP	KEVVDYIIFG	TVIQEVKTSN
VAREAALGAG	FSDKTPAHTV	TMACISANQA	$M\;T\;T\;G\;V\;G\;L\;I\;A\;S$
$G\;Q\;C\;D\;V\;I\;V\;A\;G\;G$	VELMSDVPIR	HSRKMRKLML	DLNKAKSMGQ
RLSLISKFRF	NFLAPELPAV	SEFSTSETMG	HSADRLAAAF
AVSRLEQDEY	ALRSHSLAKK	AQDEGLLSDV	VPFKVPGKDT

VTKDNGIRP

#### **Biological Activity**

The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.

#### **Appearance**

Lyophilized powder.

#### **Formulation**

Lyophilized after extensive dialysis against solution in Tris-based buffer, 50% glycerol.

#### **Endotoxin Level**

<1 EU/µg, determined by LAL method.

# Reconsititution

It is not recommended to reconstitute to a concentration less than 100  $\mu g/mL$  in ddH<sub>2</sub>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

HADHB protein serves as an integral component of the mitochondrial trifunctional enzyme, orchestrating the final three reactions within the mitochondrial beta-oxidation pathway. This crucial pathway is paramount for energy production in various tissues, breaking down fatty acids into acetyl-CoA through a series of four consecutive reactions. Specifically

tailored for long-chain fatty acids, the trifunctional enzyme operates as a heterotetrameric complex composed of two distinct subunits. HADHA, carrying 2,3-enoyl-CoA hydratase and 3-hydroxyacyl-CoA dehydrogenase activities, partners with HADHB, the focus here, which houses the 3-ketoacyl-CoA thiolase activity. This intricate collaboration underscores HADHB's pivotal role in driving the final steps of mitochondrial beta-oxidation, contributing to energy homeostasis in cellular metabolism.

Caution: Product has not been fully validated for medical applications. For research use only.

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