

IVD Protein, Human (sf9, His)

Cat. No.:	HY-P73857
Synonyms:	Isovaleryl-CoA dehydrogenase, mitochondrial; IVD
Species:	Human
Source:	Sf9 insect cells
Accession:	P26440-1 (H33-H426)
Gene ID:	3712
Molecular Weight:	Approximately 43 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 µm filtered solution of 50 mM Tris, 100 mM NaCl, pH 8.0, 10% Glycerol. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/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

Isovaleryl-CoA dehydrogenase (IVD) is a crucial enzyme in the leucine catabolic pathway, catalyzing the conversion of isovaleryl-CoA/3-methylbutanoyl-CoA to 3-methylbut-2-enoyl-CoA. This enzymatic step is a key intermediate in the breakdown of leucine. In addition to its primary role in leucine metabolism, IVD exhibits the ability to oxidize other saturated short-chain acyl-CoA thioesters, including pentanoyl-CoA, hexenoyl-CoA, and butenoyl-CoA, albeit to a lesser extent. These broader substrate capabilities suggest that IVD may contribute to the oxidation of various short-chain fatty acids, expanding its metabolic role beyond leucine catabolism. The multifunctional nature of IVD underscores its importance in maintaining metabolic homeostasis by participating in the degradation of diverse acyl-CoA substrates (adapted from the provided passage).

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA