PDHB Blocking Peptide – The purity is >90%,tested by HPLC and MS. Purity

PRODUCT OVERVIEW

Product Name	PDHB, Blocking Peptide
Full Product Name	PDHB Blocking Peptide
Product Gene Name	PDHB blocking peptide
Product Synonym Names	DKFZp564K0164; mitochondrial; ODPB_HUMAN; pdhB; PDHBD; PDHE1 B; PDHE1-B; PHE1B; Pyruvate dehydrogenase (lipoamide) beta; Pyruvate dehydrogenase E1 beta polypeptide; Pyruvate dehydrogenase E1 component subunit beta; Pyruvate dehydrogenase E1 component subunit beta mitochondrial
Form/Format	Synthetic peptide was lyophilized with 100% acetonitrile and is supplied as a powder. Reconstitute with 0.1 ml DI water for a final concentration of 10 mg/ml.
Purity/Purification	The purity is >90%,tested by HPLC and MS.
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C.
Antibody/Peptide Pairs	PDHB peptide (MBS9621152) is used for blocking the activity of PDHB antibody (MBS9603675)
Molecular Weight	37,514 Da
OMIM	gene 614111
Supply Chain Verification	Manufactured in a lab with traceable raw materials manufactured on site. Coordinated product portfolio of antibodies, pairs, conjugates, recombinant proteins, and immunoassay materials available, please inquire.
Notes	For phospho antibody, we provide phospho peptide (0.5mg) and non-phospho peptide (0.5mg)
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for PDHB blocking peptide	Blocking/Control
Related Product Information for PDHB blocking peptide	Blocking peptides are peptides that bind specifically to the target antibody and block antibody binding. These peptide usually contains the epitope recognized by the antibody. Antibodies bound to the blocking peptide no longer bind to the epitope on the target protein. This mechanism is useful when non-specific binding is an issue, for example, in Western blotting (immunoblot) and immunohistochemistry (IHC). By comparing the staining from the blocked antibody versus the antibody alone, one can see which staining is specific; Specific binding will be absent from the western blot or immunostaining performed with the neutralized antibody.
Other Notes	Small volumes of PDHB blocking peptide vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for PDHB purchase	MBS9621152 is a blocking peptide targeting PDHB.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for PDHB. It may not necessarily be applicable to this product.

NCBI GI #	156564403
NCBI GeneID	5162
NCBI Accession #	NP_000916.2
UniProt Primary Accession #	P11177
UniProt Secondary Accession #	Q6FH45; Q9BQ27; Q9UFK3; B2R7L0; B4DDD7

UniProt Related Accession #	P11177
GenBank Nucleotide #	NM_000925.3
NCBI Official Full Name	pyruvate dehydrogenase E1 component subunit beta, mitochondrial isoform 1
NCBI Official Synonym Full Names	pyruvate dehydrogenase (lipoamide) beta
NCBI Official Symbol	PDHB
NCBI Official Synonym Symbols	PDHBD; PHE1B; PDHE1-B
UniProt Protein Name	Pyruvate dehydrogenase E1 component subunit beta, mitochondrial
Protein Family	Pyruvate dehydrogenase E1 component
UniProt Gene Name	PDHB
UniProt Synonym Gene Names	PHE1B; PDHE1-B
UniProt Entry Name	ODPB_HUMAN
NCBI Protein Information	pyruvate dehydrogenase E1 component subunit beta, mitochondrial
NCBI Summary for PDHB	The pyruvate dehydrogenase (PDH) complex is a nuclear-encoded mitochondrial multienzyme complex that catalyzes the overall conversion of pyruvate to acetyl-CoA and carbon dioxide, and provides the primary link between glycolysis and the tricarboxylic acid (TCA) cycle. The PDH complex is composed of multiple copies of three enzymatic components: pyruvate dehydrogenase (E1), dihydrolipoamide acetyltransferase (E2) and lipoamide dehydrogenase (E3). The E1 enzyme is a heterotetramer of two alpha and two beta subunits. This gene encodes the E1 beta subunit. Mutations in this gene are associated with pyruvate dehydrogenase E1-beta deficiency. Alternatively spliced transcript variants have been found for this gene. [provided by RefSeq, Mar 2012]
UniProt Comments for PDHB	PDHB: the beta subunit of pyruvate dehydrogenase (PDH), a mitochondrial matrix enzyme that catalyzes the oxidative decarboxylation of pyruvate, producing acetyl-CoA and CO2. A key enzyme in controlling the balance between lipid and glucose oxidation depending on substrate availability. The pyruvate dehydrogenase (PDH) holoenzyme is a multi-enzyme complex (PDHC) that contains 20-30 copies of pyruvate decarboxylase tetramers (2 alpha:2 beta)(E1), 60 copies of dihydrolipoamide acetyltransferase (E2), six homodimers of dihydrolipoamide dehydrogenase (E3), plus E3 binding proteins. Defects in PDHB are a cause of pyruvate dehydrogenase E1 component deficiency (PDHE1 deficiency), the most common enzyme defect in patients with primary lactic acidosis. It is associated with variable clinical phenotypes ranging from neonatal death to prolonged survival complicated by developmental delay, seizures, ataxia, apnea, and in some cases to an X-linked form of Leigh syndrome (LS). Two alternatively spliced human isoforms have been described. Protein type: Carbohydrate Metabolism - citrate (TCA) cycle; Amino Acid Metabolism - valine, leucine and isoleucine biosynthesis; EC 1.2.4.1; Carbohydrate Metabolism - pyruvate; Oxidoreductase; Carbohydrate Metabolism - glycolysis and gluconeogenesis; Mitochondrial; Carbohydrate Metabolism - butanoate Chromosomal Location of Human Ortholog: 3p21.1-p14.2 Cellular Component: nucleoplasm; mitochondrion; mitochondrial matrix; pyruvate dehydrogenase complex; nucleus Molecular Function: protein binding; pyruvate dehydrogenase activity; pyruvate dehydrogenase (acetyl-transferring) activity Biological Process: cellular metabolic process; acetyl-CoA biosynthetic process from pyruvate; tricarboxylic acid cycle; glucose metabolic process; regulation of acetyl-CoA biosynthetic process from pyruvate; pyruvate metabolic process Disease: Pyruvate Dehydrogenase E1-beta Deficiency
Research Articles on PDHB	**1.** Data indicate that (pro)renin receptor ATP6PA2 interacts with the E1 beta subunit of pyruvate dehydrogenase and controlling its protein stability

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