# PDHB Blocking Peptide (C-Term) Blocking Peptide

## PRODUCT OVERVIEW

| | |
|---|---|
| **Product Name** | PDHB, Blocking Peptide |
| **Full Product Name** | PDHB Blocking Peptide (C-term) |
| **Product Gene Name** | PDHB blocking peptide |
| **Product Synonym Gene Name** | PHE1B |
| **Product Synonym Names** | Pyruvate dehydrogenase E1 component subunit beta; mitochondrial; PDHE1-B; PDHB; PHE1B |
| **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 1 mg/ml. |
| **Specificity** | The synthetic peptide sequence is selected from aa 324-336 of HUMAN PDHB |
| **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 (MBS9230169) is used for blocking the activity of PDHB antibody (MBS9215672) |
| **Molecular Weight** | 37,514 Da |
| **OMIM** | 179060 |
| **Cellular Location** | Mitochondrion matrix. |
| **Related Product Information for PDHB blocking peptide** | The pyruvate dehydrogenase complex catalyzes the overall conversion of pyruvate to acetyl-CoA and CO(2), and thereby links the glycolytic pathway to the tricarboxylic cycle. |
| **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** | MBS9230169 is a blocking peptide targeting PDHB. Also known as PDHB Blocking Peptide (C-term). |

## ADDITIONAL DETAILS

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

| | |
|---|---|
| **NCBI GI #** | 134044259 |
| **NCBI GeneID** | 5162 |
| **NCBI Accession #** | P11177.3 |
| **UniProt Primary Accession #** | P11177 |
| **UniProt Secondary Accession #** | Q6FH45; Q9BQ27; Q9UFK3; B2R7L0; B4DDD7 |
| **UniProt Related Accession #** | P11177 |
| **NCBI Official Full Name** | Pyruvate dehydrogenase E1 component subunit beta, mitochondrial |
| **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.<br><br>Protein type: Mitochondrial; Carbohydrate Metabolism - glycolysis and gluconeogenesis; EC 1.2.4.1; Oxidoreductase; Carbohydrate Metabolism - pyruvate; Carbohydrate Metabolism - citrate (TCA) cycle; Carbohydrate Metabolism - butanoate; Amino Acid Metabolism - valine, leucine and isoleucine biosynthesis<br><br>Chromosomal Location of Human Ortholog: 3p21.1-p14.2<br><br>Cellular Component: mitochondrial matrix; mitochondrion; nucleoplasm; nucleus; pyruvate dehydrogenase complex<br><br>Molecular Function: protein binding; pyruvate dehydrogenase activity<br><br>Biological Process: acetyl-CoA biosynthetic process from pyruvate; glyoxylate metabolic process; pyruvate metabolic process; regulation of acetyl-CoA biosynthetic process from pyruvate; tricarboxylic acid cycle<br><br>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 |
| **Precautions** | All of MyBioSource's Products are for scientific laboratory research purposes and are not for diagnostic, therapeutics, prophylactic or in vivo use. Through your purchase, you expressly represent and warrant to MyBioSource that you will properly test and use any Products purchased from MyBioSource in accordance with industry standards. MyBioSource and its authorized distributors reserve the right to refuse to process any order where we reasonably believe that the intended use will fall outside of our acceptable guidelines. |
| **Disclaimer** | While every efforts were made to ensure the accuracy of the information provided in this datasheet, MyBioSource will not be liable for any omissions or errors contained herein. MyBioSource reserves the right to make changes to this datasheet at any time without prior notice.<br><br>It is the responsibility of the customer to report product performance issues to MyBioSource within 30 days of receipt of the product. Please visit our Terms & Conditions page for more information. |

| | |
|---|---|
| **Product Note** | Select online data sheet information is drawn from bioinformatics databases, occasionally resulting in ambiguous or non-relevant product information. It is the responsibility of the customer to review, verify, and evaluate the information to make sure it matches their requirements before purchasing the kit. Our ELISA Kit assays are dynamic research tools and sometimes they may be updated and improved. If the format of this assay is important to you then please request the current manual or contact our technical support team with a presales inquiry before placing an order. We will confirm the current details of the assay. We cannot guarantee the sample manual posted online is the most current manual, it is intended to serve as an example only. Please refer to the instructions For Use provided with the assay kit for precise details. |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures.

**MyBioSource** | Tel: +1.858.633.0165 | Fax: +1.858.633.0166 | mybiosource.com/contact-us
Online datasheet: https://www.mybiosource.com/blocking-peptide/pdhb/9230169