

## Product datasheet for **SC326840**

### PDHX (NM\_001166158) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	PDHX (NM_001166158) Human Untagged Clone
Tag:	Tag Free
Symbol:	PDHX
Synonyms:	DLDBP; E3BP; OPDX; PDHXD; PDX1; proX
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>SC326840 representing NM_001166158. Blue=Insert sequence Red=Cloning site Green=Tag(s)

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GCTCGTTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGGCGGCTCCTGGAGGCTGGGCTGTGATCCGCGGCTGCTGCGTTATCTTGTGGGCTTCCCGGCCG
CGAAGCGTAGGGCTGGTGAAGGGGCTCTGGGTGGTCTGTAAGCCGCGGAGCTAATTGGAGATGGTTT
CACAGCACGCAGTGGCTTCGGGGTATCCCATTAAGATACTAATGCCATCACTGTCTCTACAATGGAA
GAAGGAAACATTGTGAAATGGCTGAAAAAGGAAGGTGAAGCGGTGAGTGTGGAGATGCATTATGTGAA
ATTGAGACTGACAAAGCTGTGGTTACCTTAGATGCAAGTATGATGGAATCTTGGCCAAAATCGTGCAA
ATGCCAGATGTTAATGTAAGCTGGGATGGAGAGGGCCAAAGCAACTGCCATTTATTGACATTTTCAGTG
GCTGTGGCAACAGATAAAGGCTTACTTACTCCAATCATAAAAGATGCTGCTGCTAAAGGTATCCAGGAA
ATTGCTGACTCTGTAAAGCTCTATCAAAGAAAGCAAGAGATGGAAAATTGTTGCCTGAAGAATACCAA
GGAGGATCTTTTAGTATTTCCAACCTTGGGGATGTTTGGCATCGACGAATTTACTGCAGTGATTAACCT
CCTCAGGCCTGCATTTTGGCGGTTGGGAGGTTCCGACCTGTGCTGAAGCTCACTGAGGATGAAGAGGGA
AATGCCAACTGCAGCAGCGCCAGCTCATAACAGTCACAAATGTCAAGTACAGTGCAGTGCAGTGGTTGATGAC
GAACTGGCAACCAGGTTTCTTAAAAGTTTTAAAGCAAACCTAGAGAATCCTATCCGACTTGCCTAG
ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGAT
TACAAGGATGACGACGATAAGGTTTAAACGGCCGCGC
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Restriction Sites:	Sgfl-MluI
ACCN:	NM_001166158
Insert Size:	825 bp



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<b>OTI Disclaimer:</b>	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
<b>OTI Annotation:</b>	This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
<b>Components:</b>	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.</li></ol>
<b>RefSeq:</b>	<u>NM_001166158.1</u>
<b>RefSeq Size:</b>	2310 bp
<b>RefSeq ORF:</b>	825 bp
<b>Locus ID:</b>	8050
<b>UniProt ID:</b>	<u>O00330</u>
<b>Cytogenetics:</b>	11p13
<b>MW:</b>	29.9 kDa

**Gene Summary:**

The pyruvate dehydrogenase (PDH) complex is located in the mitochondrial matrix and catalyzes the conversion of pyruvate to acetyl coenzyme A. The PDH complex thereby links glycolysis to Krebs cycle. The PDH complex contains three catalytic subunits, E1, E2, and E3, two regulatory subunits, E1 kinase and E1 phosphatase, and a non-catalytic subunit, E3 binding protein (E3BP). This gene encodes the E3 binding protein subunit; also known as component X of the pyruvate dehydrogenase complex. This protein tethers E3 dimers to the E2 core of the PDH complex. Defects in this gene are a cause of pyruvate dehydrogenase deficiency which results in neurological dysfunction and lactic acidosis in infancy and early childhood. This protein is also a minor antigen for antimitochondrial antibodies. These autoantibodies are present in nearly 95% of patients with the autoimmune liver disease primary biliary cirrhosis (PBC). In PBC, activated T lymphocytes attack and destroy epithelial cells in the bile duct where this protein is abnormally distributed and overexpressed. PBC eventually leads to cirrhosis and liver failure. Alternative splicing results in multiple transcript variants encoding distinct isoforms.[provided by RefSeq, Oct 2009]

Transcript Variant: This variant (3) lacks multiple in-frame exons in the central coding region, compared to variant 1, resulting in a protein (isoform 3) that lacks 227 aa, compared to isoform 1. Sequence Note: The RefSeq transcript and protein were derived from transcript and genomic sequence to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on alignments.