

Product datasheet for **SC321608**

PDHX (NM_003477) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PDHX (NM_003477) Human Untagged Clone
Tag:	Tag Free
Symbol:	PDHX
Synonyms:	DLDBP; E3BP; OPDX; PDHXd; PDX1; proX
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC (PS100020)
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF:

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>OriGene sequence for NM_003477.1
GGGGGGGCAGCCAGTGAGAAGGCCGTC AAGATGGCGGCCTCCTGGAGGCTGGGCTGTGAT
CCGCGGCTGTGCGTTATCTTGTGGGCTTCCCTGGCCGCCGAAGCGTAGGGCTGGTGAAG
GGGGCTCTTGGGTGGTCTGTAAGCCGCGGAGCTAATTGGAGATGGTTTCACAGCACGCAG
TGGCTTCGGGGTATCCCATTAAAGATACTAATGCCATCACTGTCTCTACAATGGAAGAA
GGAAACATTGTGAAATGGCTGAAAAAGGAAGGTGAAGCGGTGAGTGTGGAGATGCATTA
GTGAAATTGAGACTGACAAAGCTGTGGTTACCTTAGATGCAAGTGTGATGGAATCTTG
GCCAAAATCGTGGTTGAAGAAGGAAGTAAAAATATACGGCTAGGTTCACTAATTGGTTTG
ATAGTAGAAGAAGGAGAAGATTGAAACATGTTGAAATCCCAAAGACGTAGGTCCTCCA
CCACCAGTTTCAAACCTTCAGAGCCTCGCCCCTACCAGAACCACAGATTTCCATCCCT
GTCAAGAAGGAACACATACCCGGGACACTACGGTTCGGTTAAGTCCAGCTGCCCGCAAT
ATTCTGAAAAACACTCACTGGATGCTAGCCAGGGCACAGCCACTGGCCCTCGGGGGATA
TTCATAAAGAGGATGCTCTCAAACCTGTCCAGTTGAAACAAACGGCAAGATTACCGAG
TCCAGACCAACTCCAGCCCCACAGCCACTCCCACAGCACCTTCGCCCTACAGGCCACA
GCTGGACCATCTTATCCCGGCCTGTGATCCCACAGTATCAACTCCTGGACAACCCAAT
GCAGTGGGCACATTCAGTAAATCCCGCCAGCAATATTCGAAGAGTCATTGCCAAGAGA
TTAACTGAATCTAAAAGTACTGTACCTCATGCATATGCTACTGCTGACTGTGACCTTGA
GCTGTTTTAAAGTTAGGCAAGATCTGGTCAAAGATGACATTAAGTATCAGTAAATGAT
TTTATCATCAAGGCAGCAGCTGTTACCCTTAAACAAATGCCAGATGTTAATGTAAGCTGG
GATGGAGAGGGCCCAAAGCAACTGCCATTTATTGACATTCAGTGGCTGTGGCAACAGTT
AAAGGCTTACTTACTCCAATCATAAAAGATGCTGCTGCTAAAGGTATCCAGGAAATGCT
GACTCTGTAAGGCTCTATCAAAGAAAGCAAGAGATGGAAAATGTTGCCTGAAGAATAC
CAAGGAGGATCTTTTAGTATTTCCAACCTTGGGGATGTTTGGCATCGACGAATTTACTGCA
GTGATTAACCCTCCTCAGGCCTGCATTTTGGCGGTTGGGAGGTTCCGACCTGTGCTGAAG
CTCACTGAGGATGAAGAGGGAAATGCCAACTGCAGCAGCGCCAGCTCATAACAGTCACA
ATGTCAAGTGACAGTCGAGTGGTTGATGACGAACTGGCAACCAGGTTTCTTAAAAGTTTT
AAAGCAAACCTAGAGAATCCTATCCGACTTGCCTAGTCTCAAAGATAAGAAGTTGGTGT
TCAGCTTAGTTGATTCAGTAGTTGTTACCAAGAAACATATGTTATAGGAAAACAACTGG
TATTTAAGTATGAAGTGGATGAAATGTTTATTTAAGGTGAAAGCATTGACCCAGG
GTGCTTTCATCTTCAATTTGGGTTAATGTTATAGAAATAAATGATGATAAACTCTAACT
AATAAAGGAAAGAGAATATTTGGTTACTCAGATCCATTTTAACTCTGGTGCTGTATAA
AGGGAATATTAAGTATGATAATCAAAGTATATGTTTGGCTCATTTGAGCATTGTTGGA
ATATTTGAGAATGTATGATACATGTAAAATTAATAAACTATTAGAAGTACCATAAAT
ATGTTGAAGGTAGAAGTATCTTCAAAGAGATGGCCATTAAGTAGCAGTGGGACCTCAC
TTTTACAAGCACTGCTCTAGATACTTGAAGAATTTAATATGTACAGAAGTTTATTCTG
GATAATAAATAAATAAGGATCACACTGTATTAGGGGTTATGGCAACATTATTGAATTTT
TATGTACATAAAGCCATATGTTTAGGGTGGTTTCTATCTGTCTTGTGTTTTCACTTATA
ACACTGTGAACCTCTAAAGAAAGAGGATAAAAAGAAGCATGAATGAAAAGAATGACATTCC
AAAAAAAAAAAAAAAAAAAAAAAAAAAAA
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Restriction Sites:

Please inquire

ACCN:

NM_003477

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: 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.

Components: 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).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
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.

RefSeq: [NM_003477.1](#), [NP_003468.1](#)

RefSeq Size: 2365 bp

RefSeq ORF: 1506 bp

Locus ID: 8050

UniProt ID: [O00330](#)

Cytogenetics: 11p13

Domains: biotin_lipoyl, 2-oxoacid_dh, e3_binding

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 (1) encodes the longest isoform (1). Sequence Note: 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.