

## Product datasheet for **RC228205**

### PDHX (NM\_001166158) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	PDHX (NM_001166158) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PDHX
Synonyms:	DLDBP; E3BP; OPDX; PDHXD; PDX1; proX
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC228205 representing NM_001166158 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCGGCCTCCTGGAGGCTGGGCTGTGATCCGCGGCTGCTGCGTTATCTTGTGGGCTTCCCCGGCCGCC  
GAAGCGTAGGGCTGGTGAAGGGGGCTCTGGGTGGTCTGTAAGCCGCGGAGCTAATTGGAGATGGTTTCA  
CAGCACGCAGTGGCTTCGGGGTATCCCATTAAGATACTAATGCCATCACTGTCTCCTACAATGGAAGAA  
GAAAACATTGTAAATGGCTGAAAAAGGAAGTGAAGCGGTGAGTCTGGAGATGCATTATGTAAATTG  
AGACTGACAAAGCTGTGGTTACCTTAGATGCAAGTATGATGGAATCTTGCCAAAATCGTGCAAAATGCC  
AGATGTTAATGTAAGCTGGGATGGAGAGGGCCAAAGCAACTGCCATTTATTGACATTTCACTGGCTGTG  
GCAACAGATAAAGGCTTACTTACTCCAATCATAAAAGATGCTGCTGCTAAAGGTATCCAGGAAATTGCTG  
ACTCTGTAAGGCTCTATCAAAGAAAGCAAGAGATGAAAAATTGTTGCCTGAAGAATACCAAGGAGGATC  
TTTTAGTATTTCCAAGTGGGGATGTTTGGCATCGACGAATTTACTGCAGTGATTAACCCCTCTCAGGCC  
TGCATTTTGGCGGTTGGGAGTTCCGACCTGTGCTGAAGTCACTGAGGATGAAGAGGAAATGCCAAAC  
TGCAGCAGCGCCAGCTCATAACAGTCACAATGTCAAGTACAGTCGAGTGGTTGATGACGAACTGGCAAC  
CAGGTTTCTTAAAAGTTTAAAGCAAACCTAGAGAATCCTATCCGACTTGCC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC228205 representing NM\_001166158  
Red=Cloning site Green=Tags(s)

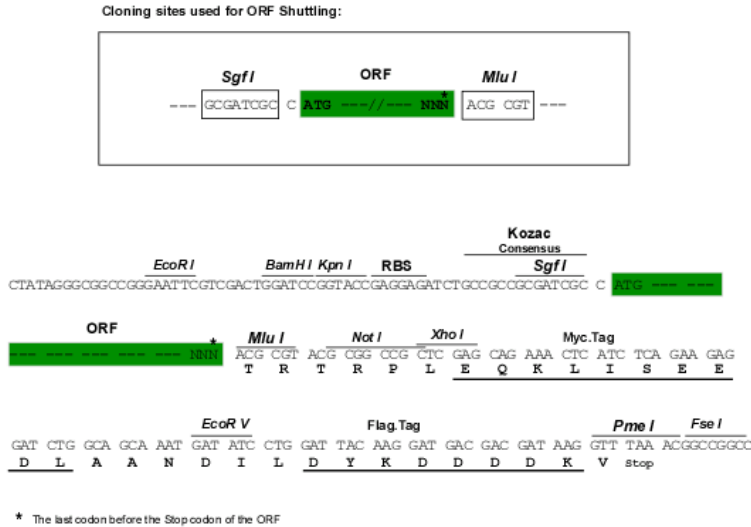
MAASWRLGCDPRLLRYLVGFPGRRSVGLVKGALGWSVSRGANWRWFHSTQWLRGDPKILMPSLSPTMEE  
 GNIYKWLKKEGEAVSAGDALCEIETDKAVVTLASDDGILAKIVQMPDVNVSWDGEQKLPFIDISVAV  
 ATKGLLTPIIKDAAAKGIQEIADSVKALSKKARDGKLLPEEYQGGFSISNLGMFGIDEFTAVINPPQA  
 CILAVGRFRPVLKLTDEEEGNAKLQQRQLITVTMSSDSRVVDELATRFLKSFKANLENPIRLA

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk8048\\_f05.zip](https://cdn.origene.com/chromatograms/mk8048_f05.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_001166158

**ORF Size:** 822 bp

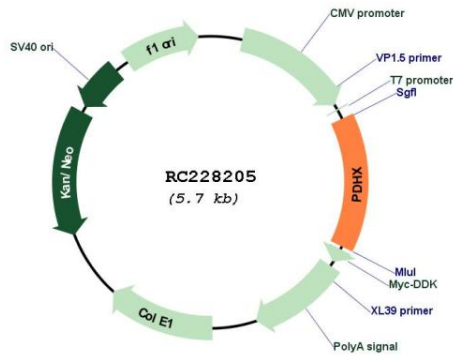
**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone 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 clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

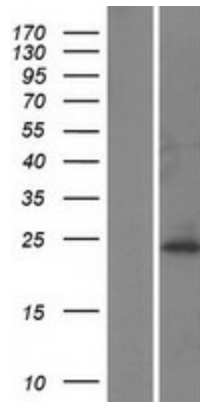
**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

<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><a href="#">NM_001166158.1</a></u> , <u><a href="#">NP_001159630.1</a></u>
<b>RefSeq ORF:</b>	825 bp
<b>Locus ID:</b>	8050
<b>UniProt ID:</b>	<u><a href="#">O00330</a></u>
<b>Cytogenetics:</b>	11p13
<b>MW:</b>	29.91 kDa
<b>Gene Summary:</b>	<p>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]</p>

Product images:



Circular map for RC228205



Western blot validation of overexpression lysate (Cat# [LY431233]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC228205 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).