

Product datasheet for **RC203138**

PDHX (NM_003477) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PDHX (NM_003477) 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)



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ORF Nucleotide Sequence:

>RC203138 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGCGCCTCCTGGAGGCTGGGCTGTGATCCGCGGCTGCTGCGTTATCTTGTGGGCTTCCCTGGCCGC
 GAAGCGTAGGGCTGGTGAAGGGGCTCTTGGTGGTCTGTAAAGCCGCGGAGCTAATTGGAGATGGTTTCA
 CAGCACGCAGTGGCTTCGGGGTATCCCATTAAGATACTAATGCCATCACTGTCTCTACATGGAAGAA
 GGAACATTGTGAAATGGCTGAAAAAGGAAGGTGAAGCGGTGAGTCTGGAGATGCATTATGTGAAATTG
 AGACTGACAAAGCTGTGGTTACCTTAGATGCAAGTGTGAAATCTTGGCCAAATCGTGGTTGAAGA
 AGGAAGTAAAAATACGGCTAGGTTCACTAATTGGTTTGTAGTAGAAGAAGGAGAAGATTGGAAACAT
 GTTGAAATTCCTCAAGACGTAGGTCCTCCACCACAGTTTCAAACCTTCAGAGCCTCGCCCTCACCAG
 AACACAGATTTCCATCCCTGTCAAGAAGGAACACATACCCGGGACACTACGGTTCGGTTAAGTCCAGC
 TGCCCGCAATATTCTGAAAAACACTCACTGGATGCTAGCCAGGGCACAGCCACTGGCCCTCGGGGATA
 TCACTAAAGAGGATGCTCTCAAACCTGTCCAGTTGAAACAAACGGGCAAGATTACCGAGTCCAGACCAA
 CTCAGCCCCACAGCCACTCCACAGCACCTTCGCCCTACAGGCCACAGCTGGACCATCTTATCCCCG
 GCCTGTGATCCCACAGTATCAACTCCTGGACAACCCAATGCAGTGGGCACATCACTGAAATCCCCGCC
 AGCAATATTCGAAGATCATTGCCAAGAGATTAAGTGAATCTAAAAGTACTGTACCTCATGCATATGCTA
 CTGCTGACTGTGACCTTGGAGCTGTTTTAAAAGTTAGGCAAGATCTGGTCAAAGATGACATTAAGTATC
 AGTAAATGATTTTATCATCAAGGCAGCAGCTGTACCCTTAAACAAATGCCAGATGTTAATGTAAGCTGG
 GATGGAGAGGGCCCAAAGCAACTGCCATTTATTGACATTCAGTGGCTGTGGCAACAGTTAAAGGCTTAC
 TTAATCCAATCATAAAAGATGCTGCTGCTAAAGGTATCCAGGAAATGCTGACTGTGAAAGGCTATC
 AAAGAAAACAAGAGATGGAAAATTGTTGCCTGAAGAATACCAAGGAGGATCTTTTAGTATTTCAACTTG
 GGGATGTTTGGCATCGCAATTTACTGCAAGTATTAACCCTCCTCAGGCTGCATTTTGGCGGTTGGGA
 GGTTCGACCTGTGCTGAAGCTCACTGAGGATGAAGAGGGAAATGCCAACTGCAGCAGCGCCAGCTCAT
 AACAGTACAATGTCAAGTACAGTGTGTTGATGACGAACTGGCAACCAGGTTTCTTAAAAGTTTT
 AAAGCAAACCTAGAGAATCTATCCGACTTGCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC203138 protein sequence
 Red=Cloning site Green=Tags(s)

MAASWRLGCDPRLRLRYLVGFPGRRSVGLVKGALGWSVSRGANWRWFHSTQWLRGDPKIKILMPSLSPTMEE
 GNIVKWLKKEGEAVSAGDALCEIETDKAVVTLASDDGILAKIVVEEGSKNIRLGLSLIVEEGEDWKH
 VEIPKDVGPPPPVSKPSEPRSPPEPQISIPVKEHIPGTLRFRLSPAARNILEKHSLDASQGTATGPRGI
 FTKEDALKLVQLKQTGKITESRPTAPATPTAPSPLQATAGPSYPRVIPPVSTPGQPNVAVGTFTEIPA
 SNIRRVIAKRLTESKSTVPHAYATADCDLGAVLKVRQDLVKDDIKVSVNDFIIKAAAVTLKQMPDVNVSW
 DGEKQKLPFIDISVAVATVKGLLTPIIKDAAGKIQEIASVKALSKKARDGKLLPEEYQGGFSISNL
 GMFGIDEFTAVINPPQACILAVGRFRPVLKLTEDDEEGNAKLQQRQLITVTMSSDSRVVDELATRFLKSF
 KANLENPIRLA

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6247_b04.zip

Restriction Sites:

Sgfl-MluI

Cloning Scheme:



ACCN: NM_003477

ORF Size: 1503 bp

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](#)

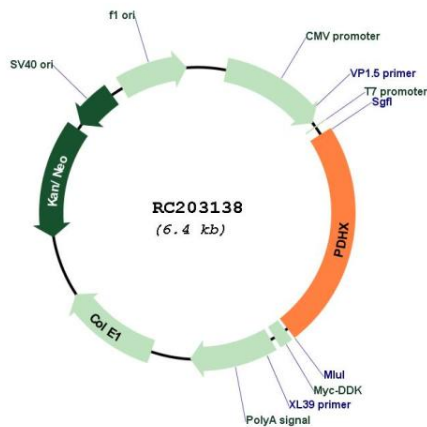
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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).

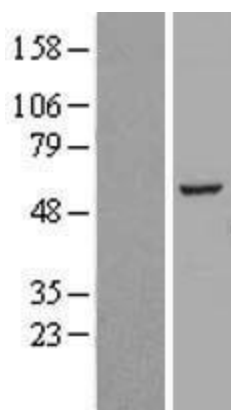
- Reconstitution Method:
1. Centrifuge at 5,000xg for 5min.
 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
 3. Close the tube and incubate for 10 minutes at room temperature.
 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid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

Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_003477.3
RefSeq Size:	2991 bp
RefSeq ORF:	1506 bp
Locus ID:	8050
UniProt ID:	O00330
Cytogenetics:	11p13
Domains:	biotin_lipoyl, 2-oxoacid_dh, e3_binding
MW:	54.1 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]

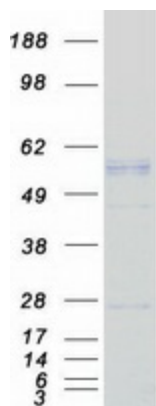
Product images:



Circular map for RC203138



Western blot validation of overexpression lysate (Cat# [LY418661]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC203138 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PDHX protein (Cat# [TP303138]). The protein was produced from HEK293T cells transfected with PDHX cDNA clone (Cat# RC203138) using MegaTran 2.0 (Cat# [TT210002]).