

## Product datasheet for **RC228947**

### **PDP1 (NM\_001161781) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	PDP1 (NM_001161781) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PDP1
Synonyms:	PDH; PDP; PDPC; PPM2A; PPM2C
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC228947 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGCCAGCACCAACTCAACTGTTTTTCTCTCATCCGTAACGTGGAAGTGCAGGATCTATGGCACTG  
 CATGTTACTGCCACCACAACATCTCTGTTGTTCTCATCGTACATTCTCAGAGTCGACTGAGATACAC  
 ACCTCATCCAGCATATGCTACCTTTTGCAGGCCAAAGGAGAACTGGTGGCAGTACACCCAAGGAAGGAGA  
 TATGCTTCCACACCACAGAAATTTACCTCACACCTCCACAAGTCAATAGCATCCTTAAAGCTAATGAAT  
 ACAGTTTCAAAGTGCCAGAATTTGACGGCAAAAATGTCAGTTCTATCCTTGGATTTGACAGCAATCAGCT  
 GCCTGCAATGCACCCATTGAGGACCGGAGAAGTGCAGCAACCTGCTGCAGACCAGAGGGATGCTTTTG  
 GGGGTTTTGATGGCCATGCAGTTGTGCTTGTCCCAGGCAGTCAGTAAAAGACTCTTTTATTATATTG  
 CTGTCTCTTTGTACCCCATGAGACTTTGCTAGAGATTGAAAATGCAGTGGAGAGCGGCCGGCACTGCT  
 ACCCATCTCCAGTGGCACAAGCACCCCAATGATTACTTTAGTAAGGAGGCATCCAAATGTAATTAAC  
 AGCTTGAGGACTTACTGGCAAGAGCTTATAGACCTCAACACTGGTGGAGTGCAGTGCATGATGTTAAGG  
 AGGCTCTAATTAATGCCTTCAAGAGGCTTGATAATGACATCTCCTTGGAGGCGCAAGTTGGTGCCTAA  
 TTCTTTTCTCAACTACCTGGTGCCTCGAGTGGCATTCTTCTGGAGCCACTGCTTGTGTGGCCCATGTGGAT  
 GGTGTTGACCTTCATGTGGCCAACTACTGGCGATAGCAGAGCCATGCTGGGTGTGCAGGAAGAGGACGGCT  
 CATGGTCAGCAGTCACGCTGTCTAATGACCACAATGCTCAAAATGAAAGAGAAGTACAACGGCTGAAAT  
 GGAACATCAAAGAGTGAGGCCAAGAGTGTGCGTAAACAGGATCGGCTGCTTGGCTTGTGATGCCATTT  
 AGGGCATTGGAGATGTAAGTTCAAATGGAGCATTGACCTTCAAAGAGAGTGTAGAATCTGGCCAG  
 ACCAGTTGAATGACAATGAATATACCAAGTTTATCCTCTCAATATCACACACCTCCTTACTCTACTGTC  
 TGAGCCAGAGGTAACCTACCACCGATTAAGGCCACAGGATAAGTTTCTGGTGTGGCTACTGATGGGTTG  
 TGGGAGACTATGCATAGGCAGGATGTGGTTAGGATTGTGGGTGAGTACCTAACTGGCATGCATACCAAC  
 AGCCAATAGCTGTTGGTGGCTACAAGGTGACTCTGGGACAGATGCATGGCCTTTTAAACAGAAAGGAGAAC  
 CAAAATGTCTCGGTATTTGAGGATCAGAACGCAGCAACCCATCTCATTCCGCCACGCTGTGGCAACAAC  
 GAGTTTGGGACTGTTGATCATGAGCGCCTCTCTAAAATGCTTAGTCTTCTGAAGAGCTTGTCTGAATGT  
 ACAGAGATGACATTACAATCATTGTAGTTCAGTTCAATTCTCATGTTGTAGGGCGTATCAAACCAAGA  
 A

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC228947 protein sequence  
 Red=Cloning site Green=Tags(s)

MPAPTQLFFPLIRNCELSRIYGTACYCHHKHLCCSSSYIPQSRLRYTPHPAYATFCRPKENWWQYTOGRR  
 YASTPQKFYLTPPQVNSILKANEYSFKVPEFDGKNVSSILGFDSNQLPANAPIEDRRSAATCLQTRGMLL  
 GVFDGHAGCACSQAVSERLFYYIAVSLLPHELTLEIENAVESGRALLPILQWHKHPNDYFSKEASKLYFN  
 SLRTRYWQELIDLNTGESTDIDVKEALINAFKRLDNDISLEAQVGDPNFLNYLVLRVAFSGATACVAHVD  
 GVDLHVANTGDSRAMLGVQEEDGSWSAVTLSNDHNAQNERELERLKEHPKSEAKSVVKQDRLLGLLMPF  
 RAFGDVKFKWSIDLQKRVIESGPDQLNDNEYTKFIPPNYHTPPYLTAPEVITYHRLRPQDKFLVLATDGL  
 WETMHRQDVVRIVGEYLTGMHHQQPIAVGGYKVTLGQMHGLLTERRTKMSSVFEDQNAATHLIRHAVGNN  
 EFGTVDHERLSKMLSLPEELARMYRDDITIIIVQFNHSHVVGAYQNQE

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6269\\_h10.zip](https://cdn.origene.com/chromatograms/mk6269_h10.zip)

**Restriction Sites:**

Sgfl-MluI

Cloning Scheme:



ACCN: NM\_001161781

ORF Size: 1611 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).

- 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\\_001161781.2](#)

RefSeq Size: 4234 bp

RefSeq ORF: 1614 bp

Locus ID: 54704

UniProt ID: [Q9P0J1](#)

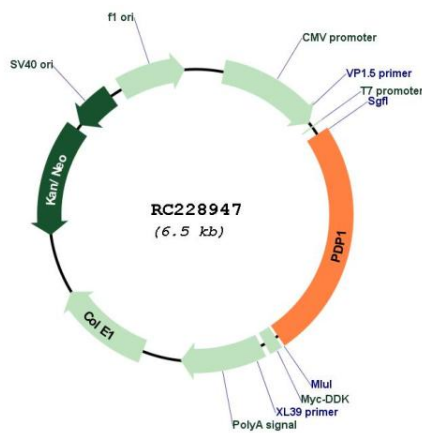
**Cytogenetics:** 8q22.1

**Protein Families:** Druggable Genome, Phosphatase

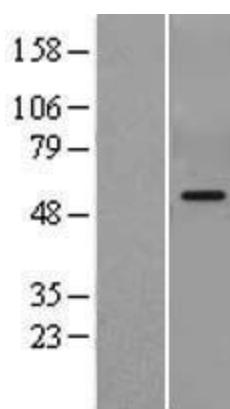
**MW:** 61.1 kDa

**Gene Summary:** Pyruvate dehydrogenase (E1) is one of the three components (E1, E2, and E3) of the large pyruvate dehydrogenase complex. Pyruvate dehydrogenase kinases catalyze phosphorylation of serine residues of E1 to inactivate the E1 component and inhibit the complex. Pyruvate dehydrogenase phosphatases catalyze the dephosphorylation and activation of the E1 component to reverse the effects of pyruvate dehydrogenase kinases. Pyruvate dehydrogenase phosphatase is a heterodimer consisting of catalytic and regulatory subunits. Two catalytic subunits have been reported; one is predominantly expressed in skeletal muscle and another one is is much more abundant in the liver. The catalytic subunit, encoded by this gene, is the former, and belongs to the protein phosphatase 2C (PP2C) superfamily. Along with the pyruvate dehydrogenase complex and pyruvate dehydrogenase kinases, this enzyme is located in the mitochondrial matrix. Mutation in this gene causes pyruvate dehydrogenase phosphatase deficiency. Multiple alternatively spliced transcript variants encoding different isoforms have been identified.[provided by RefSeq, Jun 2009]

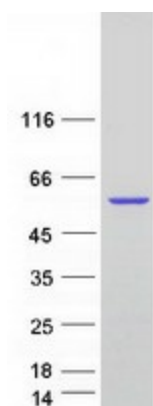
**Product images:**



Circular map for RC228947



Western blot validation of overexpression lysate (Cat# [LY431974]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC228947 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PDP1 protein (Cat# [TP328947]). The protein was produced from HEK293T cells transfected with PDP1 cDNA clone (Cat# RC228947) using MegaTran 2.0 (Cat# [TT210002]).