

Product datasheet for **RG228457**

PDP1 (NM_001161780) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PDP1 (NM_001161780) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	PDP1
Synonyms:	PDH; PDP; PDPC; PPM2A; PPM2C
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG228457 representing NM_001161780
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGTGTGTGTGTCCCGGGCCAGACGAATTGGAATCCAGTCAGAAGTCCAGCCTGCCACTGTTCTCTG
 ATGCCATGCCAGACCAACTCAACTGTTTTTCCCTCATCCGTAAGTGTGAAGTGAAGCAGGATCTATGG
 CACTGCATGTTACTGCCACCACAAACATCTCTGTTGTTCCCTCATCGTACATTCCCTCAGAGTCGACTGAGA
 TACACACCTCATCCAGCATATGCTACCTTTTGCAGGCCAAAGGAGAACTGGTGGCAGTACACCCAAGGAA
 GGAGATATGCTTCCACACCACAGAAATTTACCTCACACCTCCACAAGTCAATAGCATCCTTAAAGCTAA
 TGAATACAGTTTCAAAGTGCCAGAATTTGACGGCAAAAATGTCAGTTCTATCCTTGGATTGACAGCAAT
 CAGCTGCCTGCAAATGCACCCATTGAGGACCGGAGAAGTGCAGCAACCTGCTTGCAGACCAGAGGGATGC
 TTTTGGGGTTTTTGGATGGCCATGCAGGTTGTGCTTGTCCAGGCAGTCAGTGAAGACTCTTTTATTA
 TATTGCTGTCTTTGTTACCCCATGAGACTTTGCTAGAGATTGAAAATGCAGTGGAGAGCGGCCGGCA
 CTGCTACCCATTCTCCAGTGGCACAAGCACCCCAATGATTACTTTAGTAAGGAGGCATCCAAATTGACT
 TTAACAGCTTGAGGACTTACTGGCAAGACTTATAGACCTCAACACTGGTGGTGGTGGTGGTGGTGGTGGT
 TAAGGAGGCTCTAATTAATGCCTTCAAGAGGCTTGATAATGACATCTCCTTGGAGGCGCAAGTTGGTGGT
 CCTAATCTTTTTCTCAACTACCTGGTGGTTCGAGTGGCATTCTTCTGGAGCCACTGCTTGTGTGGCCATG
 TGGATGGTGTGACCTTCATGTGGCCAATACTGGCGATAGCAGAGCCATGCTGGGTGTGCAGGAAGAGGA
 CGGCTCATGGTCAGCAGTCACGCTGTCTAATGACCACAATGCTCAAAATGAAAGAGAAGTGAACCGCTG
 AAATTGGAACATCAAAGAGTGAAGGCAAGAGTGTGCGTAAACAGGATCGGCTGCTTGGCTTGGTGGTGC
 CATTTAGGGCATTGGAGATGTAAGTTCAAATGGAGCATTGACCTTCAAAGAGAGTGAAGAATCTGG
 CCCAGACCAGTTGAATGACAATGAATATACCAAGTTTATTCTCCTAATTATCACACACCTCCTTATCTC
 ACTGCTGAGCCAGAGGTAACCTACCACCGATTAAGGCCACAGGATAAGTTTCTGGTGTGGTGGTGGTGGT
 GGTTGTGGGAGACTATGCATAGGCAGGATGTGGTTAGGATTGTGGGTGAGTACCTAACTGGCATGCATCA
 CCAACAGCCAATAGCTGTTGGTGGCTACAAGGTGACTCTGGGACAGATGCATGGCCTTTTAAACAGAAAGG
 AGAACCAAAATGCTCCTCGGTATTTGAGGATCAGAACGCAGCAACCCATCTCATTCCGCCACGCTGTGGCA
 ACAACGAGTTTGGGACTGTTGATCATGAGCGCCTCTCTAAATGCTTAGTCTTCTGAAGAGCTTGTCTCG
 AATGTACAGAGATGACATTACAATCATTGTAGTTCAGTTCAATTCTCATGTTGTAGGGGCGTATCAAAAC
 CAAGAA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG228457 representing NM_001161780
 Red=Cloning site Green=Tags(s)

MCVCPGPRRIGIPVRSSSLPLFSDAMPAPTQLFFPLIRNCELSRIYGTACYCHHKHLCCSSSYIPQSRLR
 YTPHPAYATFCRPKENWQYTQGRRYASTPQKFYLTTPQVNSILKANEYSFKVPEFDGKNVSSILGFDSN
 QLPANAPIEDRRSAATCLQTRGMLLGVFDGHAGCACSQAVSERLFYIIAVSLLPHETLLEIENAVESGRA
 LLPILQWQHKPNDFYSKEASKLYFNLSLRTYVQELIDLNTGESTDIDVKEALINAFKRLDNDISLEAQVGD
 PNSFLNLYLVRVAFSGATACVAHVDGVDLHVANTGDSRAMLGVQEEDGSWSAVTLSDHNAQNERELERL
 KLEHPKSEAKSVVKQDRLLGLLMPFRAFQVDFKWSIDLQKRVIESGPDQLNDNEYTKFIPPNYHTPPYL
 TAEPEVTYHRLRPQDKFLVLAIDGLWETMHRQDVVRIVGEYLTGMHHQPIAVGGYKVTLGQMHGLLTER
 RTKMSSVFEDQNAATHLIRHAVGNNEFGTVDHERLSKMLSLPEELARMYRDDITIIIVVQFNSHVVGAYQN
 QE

TRTRPLE - GFP Tag - V

Restriction Sites:

SgfI-MluI

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:	<ol style="list-style-type: none">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_001161780.2
RefSeq Size:	4247 bp
RefSeq ORF:	1689 bp
Locus ID:	54704
UniProt ID:	Q9P0J1
Cytogenetics:	8q22.1
Protein Families:	Druggable Genome, Phosphatase
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 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]