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# Product datasheet for RC205127

## PDK1 (NM_002610) Human Tagged ORF Clone

### Product data:

| | |
|---|---|
| **Product Type:** | Expression Plasmids |
| **Product Name:** | PDK1 (NM_002610) Human Tagged ORF Clone |
| **Tag:** | Myc-DDK |
| **Symbol:** | PDK1 |
| **Mammalian Cell Selection:** | Neomycin |
| **Vector:** | pCMV6-Entry (PS100001) |
| **E. coli Selection:** | Kanamycin (25 ug/mL) |

**ORF Nucleotide Sequence:**

>RC205127 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGAGGCTGGCGCGGCTGCTTCGCGGAGCCGCCTTGGCCGGCCCGGGCCCGGGGCTGCGCGCCGCCGGCT
TCAGCCGCAGCTTCAGCTCGGACTCGGGCTCCAGCCCGGCGTCCGAGCGCGGCGTTCCGGGCCAGGTGGA
CTTCTACGCGCGCTTCTCGCCGTCCCCGCTCTCCATGAAGCAGTTCCTGGACTTCGGATCAGTGAATGCT
TGTGAAAAGACCTCATTTATGTTTCTGCGGCAAGAGTTGCCTGTCAGACTGGCAAATATAATGAAAGAAA
TAAGTCTCCTTCCAGATAATCTTCTCAGGACACCATCCGTTCAATTGGTACAAAGCTGGTATATCCAGAG
TCTTCAGGAGCTTCTTGATTTTAAGGACAAAAGTGCTGAGGATGCTAAAGCTATTTATGACTTTACAGAT
ACTGTGATACGGATCAGAAACCGACACAATGATGTCATTCCCACAATGGCCCAGGGTGTGATTGAATACA
AGGAGAGCTTTGGGGTGGATCCTGTCACCAGCCAGAATGTTCAGTACTTTTTGGATCGATTCTACATGAG
TCGCATTTCAATTAGAATGTTACTCAATCAGCACTCTTTATTGTTTGGTGGAAAAGGCAAAGGAAGTCCA
TCTCATCGAAAACACATTGGAAGCATAAATCCAAACTGCAATGTACTTGAAGTTATTAAAGATGGCTATG
AAAATGCTAGGCGTCTGTGTGATTTGTATTATATTAACTCTCCCGAACTAGAACTTGAAGAACTAAATGC
AAAATCACCAGGACAGCCAATACAAGTGGTTTATGTACCATCCCATCTCTATCACATGGTGTTTGAACTT
TTCAAGAATGCAATGAGAGCCACTATGGAACACCATGCCAACAGAGGTGTTTACCCCCCTATTCAAGTTC
ATGTCACGCTGGGTAATGAGGATTTGACTGTGAAGATGAGTGACCGAGGAGGTGGCGTTCCTTTGAGGAA
AATTGACAGACTTTTCAACTACATGTATTCAACTGCACCAAGACCTCGTGTTGAGACCTCCCGCGCAGTG
CCTCTGGCTGGTTTTGGTTATGGATTGCCCATATCACGTCTTTACGCACAATACTTCCAAGGAGACCTGA
AGCTGTATTCCCTAGAGGGTTACGGGACAGATGCAGTTATCTACATTAAGGCTCTGTCAACAGACTCAAT
AGAAAGACTCCCAGTGTATAACAAAGCTGCCTGGAAGCATTACAACACCAACCACGAGGCTGATGACTGG
TGCGTCCCCAGCAGAGAACCCAAAGACATGACGACGTTCCGCAGTGCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:**

>RC205127 protein sequence
Red=Cloning site Green=Tags(s)

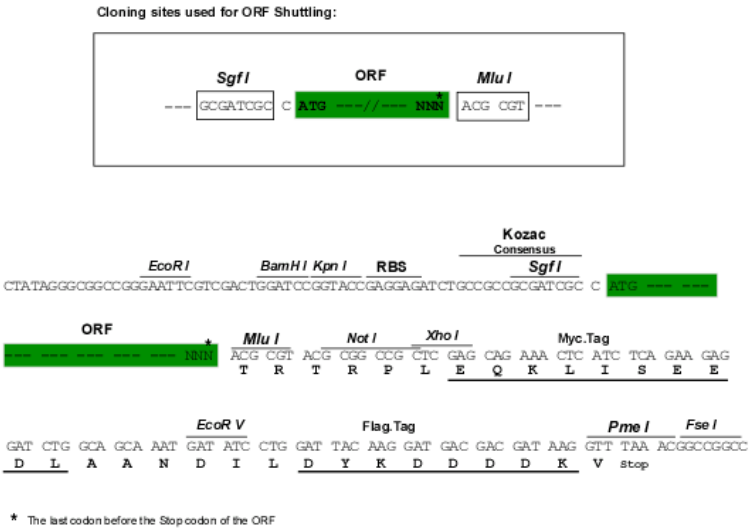
MRLARLLRGAALAGPGPGLRAAGFSRSFSSDSGSSPASERGVPGQVDFYARFSPSPLSMKQFLDFGSVNA
CEKTSFMFLRQELPVRLANIMKEISLLPDNLLRTPSVQLVQSWYIQSLQELLDFKDKSAEDAKAIYDFTD
TVIRIRNRHNDVIPTMAQGVIEYKESFGVDPVTSQNVQYFLDRFYMSRISIRMLLNQHSLLFGGKGKGSP
SHRKHIGSINPNCNVLEVIKDGYENARRLCDLYYINSPELELEELNAKSPGQPIQVVYVPSHLYHMVFEL
FKNAMRATMEHHANRGVYPPIQVHVTLGNEDLTVKMSDRGGGVPLRKIDRLFNYMYSTAPRPRVETSRAV
PLAGFGYGLPISRLYAQYFQGDLKLYSLEGYGTDAVIYIKALSTDSIERLPVYNKAAWKHYNTNHEADDW
CVPSREPKDMTTFRSA

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** https://cdn.origene.com/chromatograms/mk6197_f09.zip

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**




**ACCN:** NM_002610

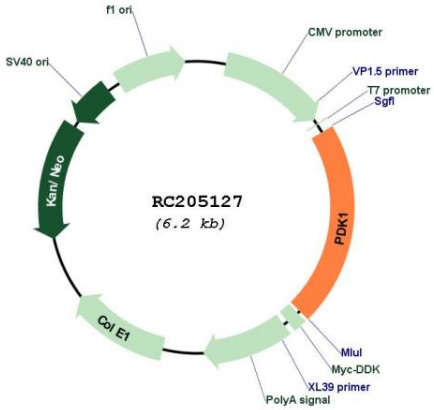
**ORF Size:** 1308 bp

**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.

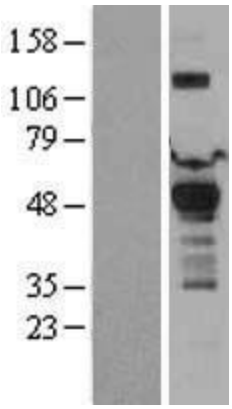
The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in 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.<br>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.<br>3. Close the tube and incubate for 10 minutes at room temperature.<br>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.<br>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_002610.5 |
| **RefSeq Size:** | 4674 bp |
| **RefSeq ORF:** | 1311 bp |
| **Locus ID:** | 5163 |
| **UniProt ID:** | Q15118 |
| **Cytogenetics:** | 2q31.1 |
| **Domains:** | HATPase_c |
| **Protein Families:** | Druggable Genome, Protein Kinase |
| **Protein Pathways:** | Fc epsilon RI signaling pathway, Neurotrophin signaling pathway, T cell receptor signaling pathway |
| **MW:** | 49.2 kDa |
| **Gene Summary:** | Pyruvate dehydrogenase (PDH) is a mitochondrial multienzyme complex that catalyzes the oxidative decarboxylation of pyruvate and is one of the major enzymes responsible for the regulation of homeostasis of carbohydrate fuels in mammals. The enzymatic activity is regulated by a phosphorylation/dephosphorylation cycle. Phosphorylation of PDH by a specific pyruvate dehydrogenase kinase (PDK) results in inactivation. Multiple alternatively spliced transcript variants have been found for this gene. [provided by RefSeq, Jun 2013] |

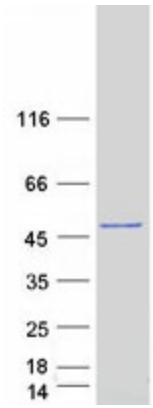
## Product images:




Circular map for RC205127




Western blot validation of overexpression lysate (Cat# [LY400922]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC205127 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).




Coomassie blue staining of purified PDK1 protein (Cat# [TP305127]). The protein was produced from HEK293T cells transfected with PDK1 cDNA clone (Cat# RC205127) using MegaTran 2.0 (Cat# [TT210002]).