

Product datasheet for **SC321678**

PDK1 (NM_002610) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PDK1 (NM_002610) Human Untagged Clone
Tag:	Tag Free
Symbol:	PDK1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC (PS100020)
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF:

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>OriGene sequence for NM_002610.3
GAAACCTGGCGTACTGGCTGTGGCTTCTCTAGCGGGACTCGGCATGAGGCTGGCGCGGCT
GCTTCGCGGAGCCGCTTGGCCGGCCCGGGCCCGGGGCTGCGCGCCGCGGCTTCAGCCG
CAGCTTCAGCTCGGACTCGGGCTCCAGCCCGGCGTCCGAGCGCGGCGTTCGGGCCAGGT
GGACTTCTACGCGCGCTTCTCGCCGTCCCGCTCTCCATGAAGCAGTTCCTGGACTTCGG
ATCAGTGAATGCTTGTGAAAAGACCTCATTATGTTTCTGCGGCAAGAGTTCCTGTCTAG
ACTGGCAATATAATGAAAGAAATAAGTCTCCTCCAGATAATCTTCTCAGGACACCATC
CGTTCAATTGGTACAAAGCTGGTATATCCAGAGTCTTCAGGAGCTTCTTGATTTTAAGGA
CAAAAGTGCTGAGGATGCTAAAGCTATTTATGACTTTACAGATACTGTGATACGGATCAG
AAACCGACACAATGATGTCATTCCACAATGGCCAGGGTGTGATTGAATACAAGGAGAG
CTTTGGGGTGGATCCTGTACCAGCCAGAATGTTCACTACTTTTTGGATCGATTCTACAT
GAGTCGCATTTCAATTAGAATGTTACTCAATCAGCACTCTTTATTGTTTGGTGGAAAAGG
CAAAGGAAGTCCATCTCATCGAAAACACATTGGAAGCATAAATCCAAACTGCAATGACT
TGAAGTTATTAAGATGGCTATGAAAATGCTAGGCGTCTGTGTGATTTGTATTATATTA
CTCTCCCGAACTAGAACTGAAGAACTAAATGCAAAATCACCAGGACAGCCAATACAAGT
GGTTTATGTACCATCCCATCTCTATCACATGGTGTGTTGAACTTTTCAAGAATGCAATGAG
AGCCACTATGGAACACCATGCCAACAGAGGTGTTACCCCTATTCAAGTTCATGTCAC
GCTGGGTAAATGAGGATTTGACTGTGAAGATGAGTGACCGAGGAGGTGGCGTTCCTTTGAG
GAAAATTGACAGACTTTTCAACTACATGTATTCAACTGCACCAAGACCTCGTGTGAGAC
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ACAATACTTCCAAGGAGACCTGAAGCTGTATCCCTAGAGGGTACGGGACAGATGCAGT
TATCTACATTAAGGCTCTGTCAACAGACTCAATAGAAAGACTCCAGTGTATAACAAAGC
TGCTGGAAGCATTACAACACCAACCAGGAGCTGATGACTGGTGCCTCCCGCAGCAGAGA
ACCCAAAAGACATGACGAGTTCGCGAGTGCCTAGACACACTTGGGACATCGGAAAATCCA
AATGTGGCTTTTGTATTAATTTGGAAGTGTGGCCAGAGTTGCTCAGAATTGGAGCAGA
GCCTGAGACGTATCTGCAGATCCTGTCATCAGCTGGCAAGTCCAGGAGACTGTGTCATTT
AGAGACTGTGTTGTAGTTATCCCTCAACATCTTCTAAGGTGGCAGGAAATAATATTGGA
AATAACATTTTAAAGTAAAAATTTAAAGTTTAAAGAAGAGTTTTGCCACTTAAACAGGG
GAGCTTTGTCTGGAAAATACACTGAGTTGAAACACTTCATCCTTGAAGGATTATATAAG
ATGAACAGTTGTGATAAATGTGTAGATTAGAGGGATGTGAATGGGAGTTAGTCCAGTGC
CCTCATTTAAGAGGCCAAGATCCTGATTCAGAGGAGGCATCCTTTGCCAGAGCTGCTTA
GCTAATCTGACCAAAATGTTGGGAAAAATGTCTCACCTAACCCACTATTCTTAATTATGG
ATTTTGTGAAAAACAATAGAACATGTTAATGAGTAATTTATATTAGTTCGATGTATTACA
ATTTTTAGCTTTAAATTACAGTTTTCTTATAATGTTGAAATGTTTTAGAATCCTTTGAA
TCTAAGTATTTGTTTCTAAATGAAACATTTGTACAACATTTGATGTTTTTACTTATGAA
ATATTCTCTCCCAAGAAAATTTAACTTTTTCTCTATTTAAAAGCTAAGAAATGT
TTTTAAAGAAAAATGAAATATCTTCTTTAGCTTATTTTTAAGGTAAAACAGCTTTTTA
CTCTGTTATTGTGGTAAATGGACAGAATATTACATACAAAAATATTCTGGGAGAGCTTTTT
CCTAGTTGGTTTTAAATCATTGTGCCACCTGAAAGTTTTTAGATTTTATAGGAGCTAAT
TTGTCCACCAGCATTAAATGTAACACAGTGTAGTTATGAAAATATATTGAAGGACAGGAAG
TGGACACGAAGTGATTTTTGTAACCTGAGCAGTTAATGAATGTGCCAACATTTTCTAGGA
AGGGACAGCAAGAATATTCTGCTCTGTAGTTAAAATACTGGCTGGCTTTTGATGTCTTCA
TGCTTAATTGTGATCACTTTCTTGCACTGTGATGTTTTACGTGAATATGTTGAAGTAGA
AGTCTACCATATTATTTATAAAATGTTTTCTGTATGGCAATAAACTGAAAACATGGATC
AACCTTCTTTGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
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Restriction Sites:

Please inquire

ACCN:

NM_002610

OTI Disclaimer:	<p>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.</p> <p>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</p>
OTI Annotation:	<p>This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.</p>
Components:	<p>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).</p>
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_002610.3 , NP_002601.1
RefSeq Size:	4576 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

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]

Transcript Variant: This variant (2) lacks an in-frame exon in the coding region, compared to variant 1. The resulting isoform (2) lacks an internal segment, compared to isoform 1.

Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.