

Product datasheet for **MC204556**

Pdk4 (NM_013743) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Pdk4 (NM_013743) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Pdk4
Synonyms:	AV005916
Mammalian Cell Selection:	Neomycin
Vector:	PCMV6-Kan/Neo (PCMV6KN)
E. coli Selection:	Kanamycin (25 ug/mL)



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Fully Sequenced ORF:

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>BC026134
CCACGCGTCCGAACCTTCACCCAGGCTCGAGCACCCGGGACCCTGGGACCACAACGCACCTTGCTCCCTC
TCGACCGCGCTCTGACCCGCAGCCCTCGCAACCCTACGGATCCTAACCACCGCCAGCCTAGGTGGGCG
TCAGGATGAAGGCAGCCCGCTTCGTGATGCGCAGCGCCAGCTCGCTGAGCAGCGCCAGCCTGGTCCCCAG
GGAGGTCGAGCTGTTCTCCCGCTACAGCCCGTCCCGCTGTCCATGAAGCAGCTGCTGGACTTTGGTTCA
GAAAATGCCTGTGAAAGAACGTCCTTTGCTTTTCTGCGGAAGAGCTGCCCGTCCGCTGGCCAATATCC
TGAAGGAGATTGACATCCTGCCTGACCCGTTAGTGAACACTCCTTCGGTGCAGCTGGTGAAGAGCTGGTA
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GCTCCAGTATCATGCAGCTTTTTATGTTTGCACCTAAAAAGCCAGTGCCTTCTGGCTGGTCCGAGGCTT
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AGCAATGGAGAGAGGGAAGCAAGAAAGGAACAGAAAGGCTGGCATCATCTATTTCCACAGGCTAACCC
AAGGGATGCTCTGTGCCCTTCTGGGGAGGGAAGGGGATGAACCTGGTAGATTTGAAAGCAGTATGGCTTC
TTCTGTGGGTCTCCCTCTTACTAGACAAGGTGAAATGATAATTCTGTCAAATTAATGTGAAATTTTTTT
CCTGCATTGTAATATTATGAGGCCTGAGTCGAGTTGAGTTTGAATTTGTATTTAATTTACAGTGACC
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TTACTTAAACCAATATCCTGAACTGTGCGTAAAGTAATAGAGAAAAGCTTTAGGGTCTCAATAGTGTC
CCTGTGTAATCAATCAAAATAGCCTTCCCTATTATTTATGAACCCATGGGAGACTTTAAACTCTTGTA
GATAGATGCTAAATGCCAGGCCACTTAACTTATTAATGTGTGAATTACATTTATGTTTTAGTTTATA
TGCAAAGAATTGTGATAATTTTATAATAAATATTTTTATTATAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
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Restriction Sites: RsrII-NotI

ACCN: NM_013743

Insert Size: 1239 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](#)

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: [BC026134](#), [AAH26134](#)

RefSeq Size: 3499 bp

RefSeq ORF: 1239 bp

Locus ID: 27273

UniProt ID: [O70571](#)

Cytogenetics: 6 2.06 cM

Gene Summary:

Kinase that plays a key role in regulation of glucose and fatty acid metabolism and homeostasis via phosphorylation of the pyruvate dehydrogenase subunits PDHA1 and PDHA2. This inhibits pyruvate dehydrogenase activity, and thereby regulates metabolite flux through the tricarboxylic acid cycle, down-regulates aerobic respiration and inhibits the formation of acetyl-coenzyme A from pyruvate. Inhibition of pyruvate dehydrogenase decreases glucose utilization and increases fat metabolism in response to prolonged fasting and starvation. Plays an important role in maintaining normal blood glucose levels under starvation, and is involved in the insulin signaling cascade. Via its regulation of pyruvate dehydrogenase activity, plays an important role in maintaining normal blood pH and in preventing the accumulation of ketone bodies under starvation. In the fed state, mediates cellular responses to glucose levels and to a high-fat diet. Regulates both fatty acid oxidation and de novo fatty acid biosynthesis. Plays a role in the generation of reactive oxygen species. Protects detached epithelial cells against anoikis. Plays a role in cell proliferation via its role in regulating carbohydrate and fatty acid metabolism.[UniProtKB/Swiss-Prot Function]