

Product datasheet for **RC204758**

PCK1 (NM_002591) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PCK1 (NM_002591) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PCK1
Synonyms:	PCKDC; PEPCK-C; PEPCK1; PEPCKC
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC204758 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGCCTCCTCAGCTGCAAAACGGCCTGAACCTCTCGGCCAAAGTTGTCCAGGGAAGCCTGGACAGCCTGC
 CCCAGGCAGTGAGGGAGTTTCTCGAGAATAACGCTGAGCTGTGTACGCCTGATCACATCCACATCTGTGA
 CCGCTCTGAGGAGGAGAATGGGCGGCTTCTGGCCAGATGGAGGAAGAGGGCATCCTCAGCGCGCTGAAG
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 CCTACGTGGTGGCCAGCATGCGGATCATGACGCGGATGGGCACGCCCGTCTGGAAGCACTGGGCGATGG
 GGAGTTTGTCAAATGCCTCCATTCTGTGGGGTGCCTCTGCCTTTACAAAAGCCTTTGGTCAACAACCTGG
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 GGTACGGCGGAACTCGCTGCTCGGGAAGAAGTCTTGTCTCAGGATGGCCAGCCGGCTGGCCAAAGGA
 GGAAGGGTGGCTGGCAGAGCACATGCTGGTTCTGGGTATAACCAACCCTGAGGGTGAAGAAGTACCTG
 GCGGCCGATTTCCAGCGCCTGCGGGAAGACCAACCTGGCCATGATGAACCCAGCCTCCCCGGGTGGA
 AGGTTGAGTGCCTCGGGATGACATTGCCTGGATGAAGTTTGACGCACAAGGTCATTTAAGGGCCATCAA
 CCCAGAAAATGGCTTTTTCGGTGTGCTCCTGGGACTTCAAGTGAAGACCAACCCCAATGCCATCAAGACC
 ATCCAGAAGAACAACATCTTTACCAATGTGGCCGAGACCAGCAGCGGGGGCGTTTACTGGGAAGGCATTG
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 GGCAAATACCTGGCCACTGGCTTAGCATGGCCAGCACCAGCAGCCAAACTGCCCAAGATCTTCCATG
 TCAACTGGTTCGGAAGGACAAGGAAGGCAAAATCCTCTGGCCAGGCTTTGGAGAGAACTCCAGGGTGT
 GGAGTGGATGTTCAACCGGATCGATGAAAAGCCAGCACCAAGCTCACGCCCATAGGCTACATCCCCAAG
 GAGGATGCCCTGAACCTGAAAGGCTGGGGCACATCAACATGATGGAGCTTTTACAGCATCTCCAAGGAAT
 TCTGGGAGAAGGAGGTGGAAGACATCGAGAAGTATCTGGAGGATCAAGTCAATGCCGACCTCCCCTGTGA
 AATCGAGAGAGAGATCCTTGCCTTGAAGCAAAGAATAAGCCAGATG

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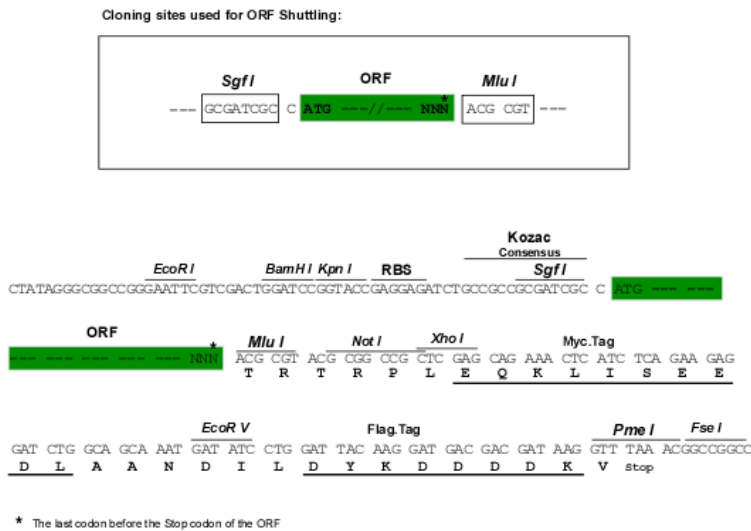
Protein Sequence:

>RC204758 protein sequence
 Red=Cloning site Green=Tags(s)

MPPQLQNLNLSAKVVQGSLSLDPQAVREFLENNALCQPDHIHICDGSEEENGRLLGQMEEEGILRRLK
 KYDNCWLALTDPRDVARIKSTVIVTQEQRDTVPIPKTGLSQLGRWMSEEDFEKAFNARFPGCMKGRMTY
 VIPFSMGPLGSPLSKIGIELTDSYVVASMRIMTRMGTPVLEALGDGEFVKCLHVSVCPLPLQKPLVNNW
 PCNPELTLIAHLPDRREIISFGSGYGGNSLLGKKCFALRMASRLAKEEGLAEHMLVLGITNPEGEKKYL
 AAAPFSACGKTNLMMNPSLPGWKVECVGDDIAWMKFDAQGHRLAIPENGFVAPGTSVKTNPNAIKT
 IQKNTIFTNVAETSDGGVYWEIDEPLASGVTITSWKNKEWSSEDGEPCAHPNSRFCTPASQCPIIDA
 AWESPEGVPIEGIFGRRPAGVPLVYEALSWQHGVFVGAAMRSEATAAAEHKGIIMHDPFAMRPFYGNF
 GKYLAWHLMAQHPAAKLPKIFHVNWFRKDKGKFLWPGFGENSRVLEWMFNRIDKASTKLTPIGYIPK
 EDALNLKGLGHINMELFISISKEFEWEVEDIEKYLEQVNADLPCEIEREILALKQRISQM

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6208_d06.zip
 Restriction Sites: SgfI-MluI
 Cloning Scheme:



ACCN: NM_002591

ORF Size: 1866 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.

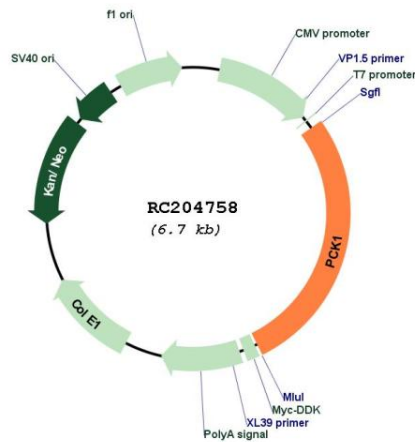
Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_002591.4](#)

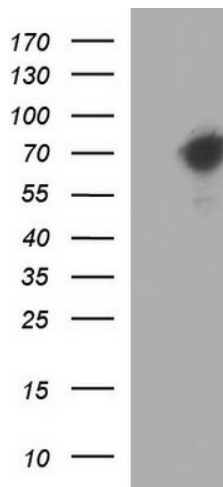
RefSeq Size: 2692 bp

RefSeq ORF:	1869 bp
Locus ID:	5105
UniProt ID:	P35558
Cytogenetics:	20q13.31
Domains:	PEPCK
Protein Families:	Druggable Genome
Protein Pathways:	Adipocytokine signaling pathway, Citrate cycle (TCA cycle), Glycolysis / Gluconeogenesis, Insulin signaling pathway, Metabolic pathways, PPAR signaling pathway, Pyruvate metabolism
MW:	69.2 kDa
Gene Summary:	This gene is a main control point for the regulation of gluconeogenesis. The cytosolic enzyme encoded by this gene, along with GTP, catalyzes the formation of phosphoenolpyruvate from oxaloacetate, with the release of carbon dioxide and GDP. The expression of this gene can be regulated by insulin, glucocorticoids, glucagon, cAMP, and diet. Defects in this gene are a cause of cytosolic phosphoenolpyruvate carboxykinase deficiency. A mitochondrial isozyyme of the encoded protein also has been characterized. [provided by RefSeq, Jul 2008]

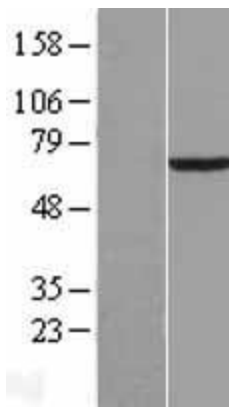
Product images:



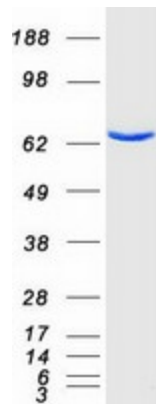
Circular map for RC204758



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY PCK1 (Cat# RC204758, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-PCK1 (Cat# [TA590679]). Positive lysates [LY419231] (100ug) and [LC419231] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY419231]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC204758 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PCK1 protein (Cat# [TP304758]). The protein was produced from HEK293T cells transfected with PCK1 cDNA clone (Cat# RC204758) using MegaTran 2.0 (Cat# [TT210002]).