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Product datasheet for RG204758

PCK1 (NM_002591) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PCK1 (NM_002591) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	PCK1
Synonyms:	PCKDC; PEPCK-C; PEPCK1; PEPCKC
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

View online »

ORF Nucleotide Sequence:

>RG204758 representing NM_002591
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCCTCCTCAGCTGCAAAACGGCCTGAACCTCTCGGCCAAAGTTGTCCAGGGAAGCCTGGACAGCCTGC
CCCAGGCAGTGAGGGAGTTTCTCGAGAATAACGCTGAGCTGTGTCAGCCTGATCACATCCACATCTGTGA
CGGCTCTGAGGAGGAGAATGGGCGGCTTCTGGGCCAGATGGAGGAAGAGGGCATCCTCAGGCGGCTGAAG
AAGTATGACAACTGCTGGTTGGCTCTCACTGACCCCAGGGATGTGGCCAGGATCGAAAGCAAGACGGTTA
TCGTCACCCAAGAGCAAAGAGACACAGTGCCCATCCCCAAAACAGGCCTCAGCCAGCTCGGTCGCTGGAT
GTCAGAGGAGGATTTTGAGAAAGCGTTCAATGCCAGGTTCCCAGGGTGCATGAAAGGTCGCACCATGTAC
GTCATCCCATTCAGCATGGGGCCGCTGGGCTCACCTCTGTCGAAGATCGGCATCGAGCTGACGGATTCGC
CCTACGTGGTGGCCAGCATGCGGATCATGACGCGGATGGGCACGCCCGTCCTGGAAGCACTGGGCGATGG
GGAGTTTGTCAAATGCCTCCATTCTGTGGGGTGCCCTCTGCCTTTACAAAAGCCTTTGGTCAACAACTGG
CCCTGCAACCCGGAGCTGACGCTCATCGCCCACCTGCCTGACCGCAGAGAGATCATCTCCTTTGGCAGTG
GGTACGGCGGGAACTCGCTGCTCGGGAAGAAGTGCTTTGCTCTCAGGATGGCCAGCCGGCTGGCCAAGGA
GGAAGGGTGGCTGGCAGAGCACATGCTGGTTCTGGGTATAACCAACCCTGAGGGTGAGAAGAAGTACCTG
GCGGCCGCATTTCCCAGCGCCTGCGGGAAGACCAACCTGGCCATGATGAACCCCAGCCTCCCCGGGTGGA
AGGTTGAGTGCGTCGGGGATGACATTGCCTGGATGAAGTTTGACGCACAAGGTCATTTAAGGGCCATCAA
CCCAGAAAATGGCTTTTTCGGTGTCGCTCCTGGGACTTCAGTGAAGACCAACCCCAATGCCATCAAGACC
ATCCAGAAGAACACAATCTTTACCAATGTGGCCGAGACCAGCGACGGGGGCGTTTACTGGGAAGGCATTG
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GGCAAATACCTGGCCCACTGGCTTAGCATGGCCCAGCACCCAGCAGCCAAACTGCCCAAGATCTTCCATG
TCAACTGGTTCCGGAAGGACAAGGAAGGCAAATTCCTCTGGCCAGGCTTTGGAGAGAACTCCAGGGTGCT
GGAGTGGATGTTCAACCGGATCGATGGAAAAGCCAGCACCAAGCTCACGCCCATAGGCTACATCCCCAAG
GAGGATGCCCTGAACCTGAAAGGCCTGGGGCACATCAACATGATGGAGCTTTTCAGCATCTCCAAGGAAT
TCTGGGAGAAGGAGGTGGAAGACATCGAGAAGTATCTGGAGGATCAAGTCAATGCCGACCTCCCCTGTGA
AATCGAGAGAGAGATCCTTGCCTTGAAGCAAAGAATAAGCCAGATG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

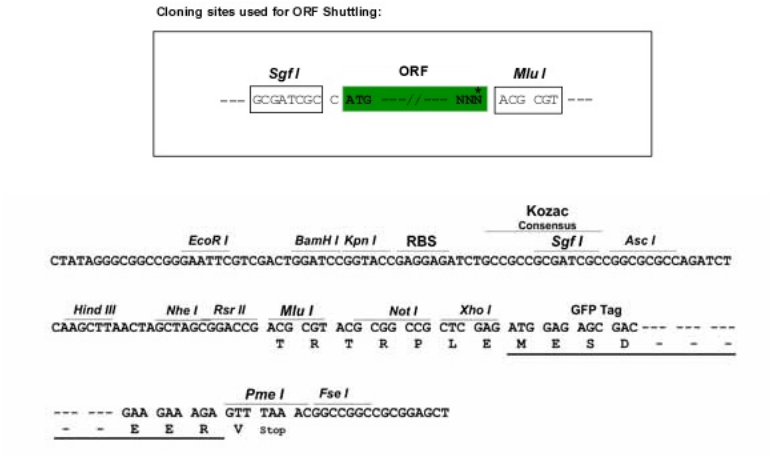
>RG204758 representing NM_002591
Red=Cloning site Green=Tags(s)

MPPQLQNGLNLSAKVVQGSLDSLPQAVREFLENNAELCQPDHIHICDGSEEENGRLLGQMEEEGILRRLK
KYDNCWLALTDPRDVARIESKTVIVTQEQRDTVPIPKTGLSQLGRWMSEEDFEKAFNARFPGCMKGRTMY
VIPFSMGPLGSPLSKIGIELTDSPYVVASMRIMTRMGTPVLEALGDGEFVKCLHSVGCPLPLQKPLVNNW
PCNPELTLIAHLPDRREIISFGSGYGGNSLLGKKCFALRMASRLAKEEGWLAEHMLVLGITNPEGEKKYL
AAAFPSACGKTNLAMMNPSLPGWKVECVGDDIAWMKFDAQGHLRAINPENGFFGVAPGTSVKTNPNAIKT
IQKNTIFTNVAETSDGGVYWEGIDEPLASGVTITSWKNKEWSSEDGEPCAHPNSRFCTPASQCPIIDAAW
ESPEGVPIEGIIFGGRRPAGVPLVYEALSWQHGVFVGAAMRSEATAAAEHKGKIIMHDPFAMRPFFGYNF
GKYLAHWLSMAQHPAAKLPKIFHVNWFRKDKEGKFLWPGFGENSRVLEWMFNRIDGKASTKLTPIGYIPK
EDALNLKGLGHINMMELFSISKEFWEKEVEDIEKYLEDQVNADLPCEIEREILALKQRISQM

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

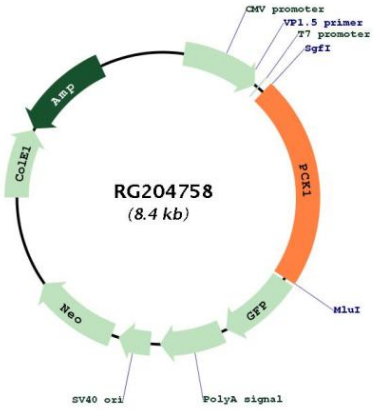
Cloning Scheme:



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.
RefSeq:	NM_002591.2, NP_002582.2
RefSeq Size:	2688 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
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 isozyme of the encoded protein also has been characterized. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RG204758