

Product datasheet for **RG200354**

PCK2 (NM_004563) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PCK2 (NM_004563) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	PCK2
Synonyms:	PEPCK; PEPCK-M; PEPCK2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG200354 representing NM_004563
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGGCCGCATTGTACCGCCTGGCTGCGGCTTAAGTGGCATGGGCTGAGCCCTTGGGCTGGCCATCAT
 GCCGTAGCATCCAGACCCTGCGAGTGCTTAGTGGAGATCTGGCCAGCTTCCCACTGGCATTGAGATTT
 TGTAGAGCACAGTGCCCGCTGTGCCAACCAGAGGGCATCCACATCTGTGATGGAAGTGGAGCTGAGAA
 ACTGCCACACTGACCCTGCTGGAGCAGCAGGGCCTCATCCGAAAGCTCCCCAAGTACAATAACTGCTGGC
 TGGCCCGCACAGACCCCAAGGATGTGGCAGAGTATAGAGCAAGACGGTGATTGTAAGTCTTCTCAGCG
 GGACACGGTACCCTCCCGCTGGTGGGCGCCGTGGCAGCTGGCAACTGGATGTCCCACTGATTTTC
 CAGCGAGCTGTGGATGAGAGTTTCCAGGCTGCATGCAGGGCCGACCATGTATGTGCTTCCATTACGA
 TGGTCTGTGGCTCCCGCTGTCCGCATCGGGTGCAGCTCACTGACTCAGCCTATGTGGTGGCAAG
 CATGCGTATTATGACCCGACTGGGGACACTGTGCTTCCAGCCCTGGGAGATGGTGAATTTGTCAAGTGT
 CTGCACTCCGTGGCCAGCCCTGACAGGACAAGGGGAGCCAGTGAAGCCAGTGGCCGTGCAACCCAGAGA
 AAACCCGATTGGCCACGTGCCCGACCAGCGGGAGATCATCTCCTTCGGCAGCGGCTATGGTGGCAACTC
 CCTGCTGGGAAGAAGTCTTTGCCCTACGCATCGCCTCTCGGCTGGCCCGGATGAGGGCTGGCTGGCA
 GAGCAGTGTGATCCTGGGCATCACCAGCCCTGCAGGGAAGAAGCGCTATGTGGCAGCCGCTTCCCTA
 GTGCTGTGGCAAGCAACCTGGCTATGATGCGGCTGCACTGCCAGGCTGAAAGTGGAGTGTGTGGG
 GGATGATATTGCTGGATGAGGTTTACAGTGAAGTGCAGTCCGGGCCATCAACCCTGAGAAGCGCTTC
 TTTGGGTTGCCCTGGTACCTCTGCCACCACCAATCCCAACCCATGGTACAATCCAGAGTAACTA
 TTTTACCAATGTGGCTGAGACCAGTGTGGTGGCGTACTGGGAGGGCATTGACCAGCCTCTTCCACT
 TGGTGTACTGTGACCTCCTGGCTGGGCAACCCCTGAAACCTGGTGACAAGGAGCCCTGTGCACATCCC
 AACTCTCGATTTTGTGCCCGGCTCGCCAGTGCCCATCATGGACCCAGCCTGGGAGGCCCCAGAGGGTG
 TCCCCATTGACGCCATCATCTTTGGTGGCCGAGACCCAAAGGGTACCCTGGTATACGAGGCCTTCAA
 CTGGCGTCATGGGGTGTGTGGGCAGCGCCATGCGCTCTGAGTCCACTGCTGCAGCAGAACACAAAGGG
 AAGATCATCATGCACGACCCATTTGCCATGCGGCCCTTTTTGGCTACAACCTCGGGCACTACCTGGAAC
 ACTGGCTGAGCATGGAAGGGCGCAAGGGGGCCAGCTGCCCGTATCTTCCATGTCAACTGGTCCGGCG
 TGACGAGGCAGGGCACTTCTGTGGCCAGGCTTTGGGAGAATGCTCGGGTGTAGACTGGATCTGCCGG
 CGTTAGAGGGGAGGACAGTGCCCGAGAGACACCCATTGGGCTGGTGCACAAAGGAAGGAGCCTTGGATC
 TCAGCGGCTCAGAGCTATAGACACCCTCAGCTGTTCTCCCTCCCAAGGACTTCTGGGAACAGGAGGT
 TCGTGACATTCGAGCTACCTGACAGAGCAGGTCAACCAGGATCTGCCAAAGAGGTGTTGGCTGAGCTT
 GAGGCCCTGGAGAGACGTGTGCACAAAATG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG200354 representing NM_004563
 Red=Cloning site Green=Tags(s)

MAALYRPLRLNWHGLSPLGWPSRSIQTLRVLSGDLGQLPTGIRDFVEHSARLCQPEGIHCIDGTEAEN
 TATLTLLEQQGLIRKLPKYNNCWLARTDPKDVARVESKTVIVTPSQRDVPLPPGGARGQLGNWMSPADF
 QRAVDERFPGCMQGRMYVLPFSMGPVGSPLSRIGVQLTDSAYVVASMRIMTRLGTPVLQALGDGDFVKC
 LHSVQPLTGQEPVSQWPCNPEKTLIGHVPDQREIISFGSGYGGNSLLGKKCFALRIASRLARDEGWLA
 EHMLILGITSPAGKKRYVAAAFPSACGKTNLAMMRPALPGWKVECVGDDIAWMRFDSEGRRLAINPENGF
 FGVAPGTSATTNPAMATIQSNTIFTNVAETSDGGVYWEGIDQPLPPGVTVTSWLKPKWPGDKEPCAHP
 NSRFCAPARQCPIMDPAWEAPEGVPIDAIIFGRRPKGVPLVYEAFNWRHGVFVGSAMRSESTAAAHEHG
 KIIMHDPFAMRPFYGFYNGHYLEHWSMEGRKGAQLPRIFHVNWFRRDEAGHFLWPGFGENARVLDWICR
 RLEGEDSARETPIGLVPKEGALDLSGLRAIDTTQLFSLPKDFWEQEVDRIRSYLEQVQNDLPKEVLAEL
 EALERRVHKM

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



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                                Kozac
                                Consensus
                                Sgf I   Asc I
EcoR I   BamH I Kpn I   RBS
CTATAGGGCGCCGGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCCGCCGATCGCCGGCGCCAGATCT

Hind III   Nhe I   Rsr II   Mlu I   Not I   Xho I   GFP Tag
CAAGCTTAAGTACTAGCTAGCGGACCG   ACG CGT   ACG CGG   CCG CTC   GAG ATG   GAG AGC   GAC -----
                                     T   R   T   R   P   L   E   M   E   S   D   -   -   -

Pme I   Fse I
----- GAA GAA AGA GTT TAA ACGGCCGGCCGGGAGCT
- - - E E R V Stop
  
```

ACCN: NM_004563

ORF Size: 1920 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_004563.4](#)

RefSeq Size: 2221 bp

RefSeq ORF: 1923 bp

Locus ID: 5106

UniProt ID: [Q16822](#)

Cytogenetics: 14q11.2-q12

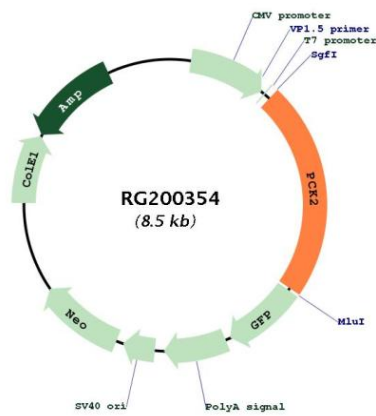
Domains: PEPCK

Protein Families: ES Cell Differentiation/IPS

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 encodes a mitochondrial enzyme that catalyzes the conversion of oxaloacetate to phosphoenolpyruvate in the presence of guanosine triphosphate (GTP). A cytosolic form of this protein is encoded by a different gene and is the key enzyme of gluconeogenesis in the liver. Alternatively spliced transcript variants have been described. [provided by RefSeq, Apr 2014]

Product images:



Circular map for RG200354