

Product datasheet for **SC116791**

AMPK beta 2 (PRKAB2) (NM_005399) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	AMPK beta 2 (PRKAB2) (NM_005399) Human Untagged Clone
Tag:	Tag Free
Symbol:	PRKAB2
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Cell Selection:	None
Fully Sequenced ORF:	>OriGene ORF sequence for NM_005399 edited

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ATTCGGCACCCAGCTTTATTGGTGGCCTGATCTGCAGAACAGCCATCACATCAGTGGCCCT
TGGAGGAGGGGAGCGCATCGCCCGAGGTGGTCCCCGACGAGCTGCAGCCATGGGAAACACC
ACCAGCGACCCGGGTGTCCGGGGAGCGCCACGGCGCCAAGGCTGCACGCTCCGAGGGCGCA
GGCGGCCATGCCCGGGGAAGGAGCACAAAGATCATGGTGGGGAGTACGGACGACCCACAGC
GTGTTTCAGCCTCCCTGACTCCAAGCTCCCTGGGGACAAAGAGTTTGTATCATGGCAGCAG
GATTTGGAGGACTCCGTAAAGCCACACAGCAGGCCCGGCCACTGTTATCCGCTGGTCT
GAAGGAGGCAAGGAGGTCTTCACTCTCTGGTCCCTCAACAATTGGAGACCAAGATTCCA
CTGATTAAGAGCCATAATGACTTTGTTGCCATCCTGGACCTCCCTGAGGGAGAGCACCAA
TACAAGTTCTTTGTGGATGGACAGTGGGTTTCATGATCCATCAGAGCCTGTGGTTACCAAGT
CAGCTTGGCACAAATTAACAATTTGATCCATGTCAAGAAATCTGATTTTGAGGTGTTTCGAT
GCTTTAAAGTTAGATTCTATGGAAAGTTCTGAGACATCTTGTAGAGACCTTTCCAGCTCA
CCCCCAGGGCCTTATGGTCAAGAAATGTATGCGTTTCGATCTGAGGAAAGATTCAAATCC
CCACCCATCCTTCTCCTCATCTACTTCAAGTTATTCTTAACAAAGACACTAATATTTCT
TGTGACCCAGCCTTACTCCCTGAGCCCAACCATGTTATGCTGAACCATCTCTATGCATTG
TCCATTAAGGACAGTGTGATGGTCCTTAGCGCAACCCATCGCTACAAGAAGAAGTATGTT
ACTACTCTGCTATACAAGCCATTTGAAGGGATCCCTTCTTGCCTCTAAGGATTCAGGAG
AAGCATCTCCCTTGCAATTTCTGGACTGAACCAAGTCTTACCTGAGACTGGAAGGCTGATTT
GCTTTGAGGCTGATATGTGTGTTTCAGAGCCTCTGAGTAGGATGCTCTGCTTTTGCAATTT
GATTGCAGATGAGAGCTTTATGAGTTTACCGAATTTATTTTAAGAAAAAAA
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5' Read Nucleotide Sequence: >OriGene 5' read for NM_005399 unedited
TGCAGAATTTTGTAAACGACTCACTATTAGGGCGGCCGCGATTTCGGCACCAGCTTTATT
GGTGGCCCTGATCTGCAGAACAGCCATCACATCAGTGGCCCTTGGAGGAGGGAGCGCATCG
CCCCAGGTGGTCCCCGACGAGCTGCAGCCATGGGAAACACCACCAGCGACCGGGTGTCCG
GGGAGCGCCACGGCGCAAGGCTGCACGCTCCGAGGGCGCAGGCGGCCATGCCCCGGGGA
AGGAGCACAAAGATCATGGTGGGGAGTACGGACGACCCAGCGTGTTCAGCCTCCCTGACT
CCAAGCTCCCTGGGGACAAGAGTTTGTATCATGGCAGCAGGATTTGGAGGACTCCGTAA
AGCCACACAGCAGGCCCGCCACTGTTATCCGCTGGTCTGAAGGAGGCAAGGAGGTCT
TCATCTCTGGGTCTTCAACAATTGGAGCACCAAGATTCCAAGTATTAAGAGCCATAATG
ACTTTGTTGCCATCCTGGACCTCCCTGAGGGAGAGCACCAATACAAGTTCTTTGTGGATG
GACAGTGGGTTTCATGATCCATCAGAGCCTGTGGTTACCAGTACAGCTTGGCACAATTAACA
ATTTGATCCATGTCAAGAAATCTGATTTTGGAGTGTTCGATGCTTTAAAGTTAGATTCTA
TGGAAAGTTCTGAGACATCTGTAGAGACCTTCCAGCTACCCCCAGGGCCTTATGGTC
AAGAAATGTATGCGTTTCGATCTGAGGAAAGATCAAATNCCCACCCATCCTTTCTNCTC
ATCTACTTCAAGTTATTCTTAACAAAACACTAATTTNTCTTGTGACCCAGCCTTACTCCC
TGAGCCAAACCATGTATGCTGAACCATCTCTATGCATTGTCCATTAGGNACAGTGTGAT
GGTTCTTTAGCGCACCATCGCTACAGAAGAAGTATGTAATACTCTGCTTACAAGCCATTN
GAAGGATCCCTTCTTGCT

3' Read Nucleotide Sequence: >OriGene 3' read for NM_005399 unedited
NNCCGGTTTATCTATGNNACCGCGCCGCATNCTAGNGATCGATTTTTTTTTTTTTTTTTT
TGCTGTATAATACTTTTTATTAAGTTTTATGGGAAAAACCCACAACATNTTCTGTATGT
ATCATATCATATAATTTCCAGGTGTGTCAGAGTCCAGTGACAAATTACGTTTGAAGAACA
GCTTTAAATCCACTCTGTCTGCCACTCCTTTATGAAATATTGAAAAGCAGCTCTGTAC
CTCAGCATTAAAGTTACAAAAAGCACCATTAAAAAGAGGACTCACATATTTAATTCCT
TCAAAGTAGTCTTATCTCTCCTTTCTGACAGACACAGAGCTGCACTCATTGAAAATGCTG
CCGTGTAATACCAACCAACATGCTCCAATGTACCAAAATTCAAAACAAGTCTCATTATGA
GACCCGTGTAGTGATTAGGACTAACCAACAACAGTGAGCTTTGGCTGTCTAAAACCACA
AGCTGGGTTAGGTAAGTGTTTTGTACAGGGGAACAGAAAAGAAGTAAGATCATCAATACC
TAATATATGACTTAATGTAGGTATCCCTTGACCATTTAACCTGACACCTACAAAATCCAT
AGTGTTTAGTATTTACACCAATCTTACTGCAAAAGTGTGTGCTACATACAATCAATTC
AAGTAACTCCAATAATTTGGAATAATAAAAAATTAATTTGTAACAAAGCTTATTCA
CTTCAAAGCACAAGTGAAGAAAGCAATCCAGACAAAGCCAAACTAGAATCCTAGAGCG
ATTCCATTGCTAAGAATTGGACTCTACAAGTAATAGACTTGAGTNTTCTCTTTTTCTCT
TCCTTCTTAATTTAATTTTGTCTTTACTCTAAAGTTTGGGTTTCATGCAGAAATCCAGTCC
TTCTATCCCATGTGATTGCAC

Restriction Sites: NotI-NotI

ACCN: NM_005399

Insert Size: 5270 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](#)

RefSeq: [NM_005399.3](#), [NP_005390.1](#)

RefSeq Size: 5431 bp

RefSeq ORF: 819 bp

Locus ID: 5565

UniProt ID: [O43741](#)

Domains: AMPKBI

Protein Families: Druggable Genome

Protein Pathways: Adipocytokine signaling pathway, Hypertrophic cardiomyopathy (HCM), Insulin signaling pathway

Gene Summary: The protein encoded by this gene is a regulatory subunit of the AMP-activated protein kinase (AMPK). AMPK is a heterotrimer consisting of an alpha catalytic subunit, and non-catalytic beta and gamma subunits. AMPK is an important energy-sensing enzyme that monitors cellular energy status. In response to cellular metabolic stresses, AMPK is activated, and thus phosphorylates and inactivates acetyl-CoA carboxylase (ACC) and beta-hydroxy beta-methylglutaryl-CoA reductase (HMGCR), key enzymes involved in regulating de novo biosynthesis of fatty acid and cholesterol. This subunit may be a positive regulator of AMPK activity. It is highly expressed in skeletal muscle and thus may have tissue-specific roles. Multiple alternatively spliced transcript variants have been found for this gene. [provided by RefSeq, Jul 2013]

Transcript Variant: This variant (1) encodes a functional protein. 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.