

Product datasheet for **RC222787**

AMPK gamma 3 (PRKAG3) (NM_017431) Human Tagged ORF Clone

Product data:

| | |
|---------------------------|--|
| Product Type: | Expression Plasmids |
| Product Name: | AMPK gamma 3 (PRKAG3) (NM_017431) Human Tagged ORF Clone |
| Tag: | Myc-DDK |
| Symbol: | AMPK gamma 3 |
| Synonyms: | AMPKG3; SMGMQTL |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-Entry (PS100001) |
| E. coli Selection: | Kanamycin (25 ug/mL) |



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ORF Nucleotide Sequence:

>RC222787 representing NM_017431
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGGAGCCCGGGCTGGAGCAGCAGCTGCGCAGGACCCCTTCTGGAGCAGCCTTGGGGTCTGAGCATC
 AAGAGATGAGCTTCTAGAGCAAGAAAACAGCAGCTCATGGCCATCACCGCTGTGACCAGCAGCTCAGA
 AAGAATCCGTGGGAAACGAGGGCCAAAGCCTTGAGATGGACAAGGCAGAAGTCGGTGGAGGAAGGGGAG
 CCACCAGGTGAGGGGAAGGTCCCGGTCCAGGCCAGCTGCTGAGTCCACCGGGCTGGAGGCCACATTCC
 CCAAGACCACACCCTTGCTCAAGCTGATCCTGCCGGGTGGGACTCCACCAACAGGGTGGGACTGCCT
 CCCCTGACTGTACAGCCTCAGCTGCAGGCTCCAGCACAGATGATGTGGAGCTGGCCACGGAGTCCCA
 GCCACAGAGGCCCTGGGAGTGTGAGCTAGAAGGCCTGCTGGAAGAGAGGCCCTGCCCTGTGCCTGTCCCGC
 AGGCCCATTTCCAAGCTGGGCTGGGATGACGAAGTCCGAAACCCGGCGCCAGATCTACATGCGCTT
 CATGCAGGAGCACACCTGCTACGATGCCATGGCAACTAGCTCCAAGCTAGTCATCTTCGACACCATGCTG
 GAGATCAAGAAGGCCCTTCTTGCTCTGGTGGCCAACGGTGTGCGGGCAGCCCTCTATGGGACAGCAAGA
 AGCAGAGCTTTGTGGGATGCTGACCATCACTGACTTCATCCTGGTGTGCATCGCTACTACAGTCCCC
 CCTGGTCCAGATCTATGAGATTGAACAACATAAGATTGAGACCTGGAGGGAGATCTACCTGCAAGGCTGC
 TTCAAGCCTCTGGTCTCCATCTCTCCTAATGATAGCCTGTTTGAAGCTGTCTACACCCTCATCAAGAACC
 GGATCCATCGCCTGCCTGTTCTTGACCCGGTGTGAGGCAACGTAATCCACATCCTCACACACAAACGCT
 GCTCAAGTTCCTGCACATCTTTGGTCCCTGCTGCCCGGCCCTCTTCTCTACCGACTATCCAAGAT
 TTGGGCATCGGCACATTCGAGACTTGGCTGTGGTGTGGAGACAGCACCCATCCTGACTGCACCTGGACA
 TCTTTGTGGACCGCGTGTGCTGCACTGCCTGTGGTCAACGAATGTGGTCAAGTGTGGTCAAGTGTGGT
 CCGCTTTGATGTGATTCACCTGGCTGCCAGCAACCTACAACCACCTGGACATGAGTGTGGGAGAAGCC
 CTGAGGCAGAGGACACTATGCTGGAGGAGTCTTTCTGCCAGCCCCACGAGACTTGGGGGAAGTGA
 TCGACAGGATTGCTCGGGAGCAGGTACACAGGCTGGTGTAGTGGACGAGACCCAGCATCTCTTGGGCGT
 GGTCTCCCTCTCCGACATCCTTCAGGCACTGGTGTGCTCAGCCCTGCTGGCATCGATGCCCTCGGGCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC222787 representing NM_017431
 Red=Cloning site Green=Tags(s)

MEPGLHALRRTPSWSSLGGSEHQEMSFLQENSSWSPAVTSSSERIRGKRRAKALRWTRQKSVEEGE
 PPGQEGEGRSRPAAESTGLEATFPKTTPLAQADPAGVGTPTTGWDCPLPSDCTASAAGSSTDDVELATEFP
 ATEAWECELEGLLEERPALCLSPQAPFPKLGWDELKPKGAQIYMRFMQEHTCYDAMATSSKLVIFDTML
 EIKKAFFALVANGVRAAPLWDSKKQSFVGLTITDFILVLHRYRSPLVQIYEIEQHKIETWREIYLQGC
 FKPLVSI SPNDSLFEAVYTLIKNRIHRLPVLDPVSGNVLHILTHKRLKFLHIFGSLPRPSFLYRTIQD
 LGIGTFRDLAVVLETAPILTALDIFVDRRVSALPVVNECGQVVGLYSRFDVIHLAAQQTYNHLDMSVGEA
 LRQRTLCEGLVSCQPHESLGEVIDRIAREQVHRLVLVDETQHLLGVVSLSDILQALVLS PAGIDALGA

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6044_c06.zip

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_017431

ORF Size: 1467 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_017431.3](#)

RefSeq Size: 2299 bp

RefSeq ORF: 1470 bp

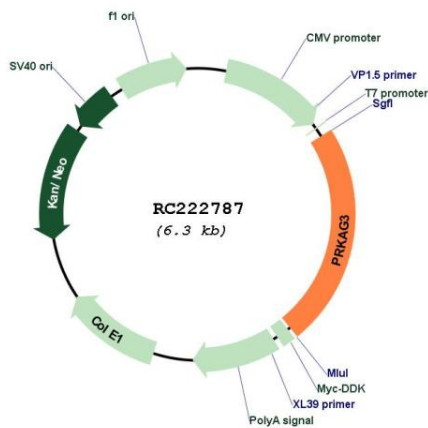
Locus ID: 53632

UniProt ID: [Q9UGI9](#)

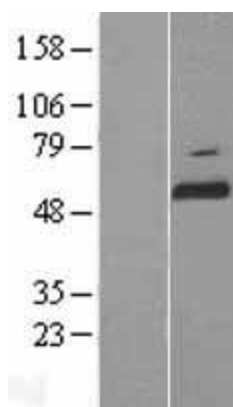
Cytogenetics: 2q35

| | |
|--------------------------|--|
| Domains: | CBS |
| Protein Families: | Druggable Genome |
| Protein Pathways: | Adipocytokine signaling pathway, Hypertrophic cardiomyopathy (HCM), Insulin signaling pathway |
| MW: | 54.1 kDa |
| 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 is one of the gamma regulatory subunits of AMPK. It is dominantly expressed in skeletal muscle. Studies of the pig counterpart suggest that this subunit may play a key role in the regulation of energy metabolism in skeletal muscle. [provided by RefSeq, Jul 2008] |

Product images:



Circular map for RC222787



Western blot validation of overexpression lysate (Cat# [LY413786]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC222787 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).