

Product datasheet for **RG222787**

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:	TurboGFP
Symbol:	AMPK gamma 3
Synonyms:	AMPKG3; SMGMQTL
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG222787 representing NM_017431
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCCGCGATCGCC

ATGGAGCCCGGGCTGGAGCACGCACTGCGCAGGACCCCTTCTGGAGCAGCCTTGGGGTCTGAGCATC
 AAGAGATGAGCTTCTAGAGCAAGAAAACAGCAGCTCATGGCCATCACCAGCTGTGACCAGCAGCTCAGA
 AAGAATCCGTGGGAAACGGAGGGCCAAAGCCTTGAGATGGACAAGGCAGAAGTCGGTGGAGGAAGGGGAG
 CCACCAGGTCAGGGGGAAGGTCCCGGTCCAGGCCAGCTGCTGAGTCCACCGGGCTGGAGGCCACATTCC
 CCAAGACCACACCCTTGCTCAAGCTGATCCTGCCGGGTGGGCACTCCACCAACAGGGTGGGACTGCCT
 CCCCTCTGACTGTACAGCCTCAGCTGCAGGCTCCAGCACAGATGATGTGGAGCTGGCCACGGAGTCCCA
 GCCACAGAGGCCCTGGGAGTGTAGCTAGAAGGCCTGCTGGAAGAGAGGCCCTGCCCTGTGCCTGTCCCGC
 AGGCCCATTTCCAAGCTGGGCTGGGATGACGAACTGCGGAAACCCGGCGCCAGATCTACATGCGCTT
 CATGCAGGAGCACACCTGCTACGATGCCATGGCAACTAGCTCCAAGCTAGTCATCTTCGACACCATGCTG
 GAGATCAAGAAGGCCTTCTTTGCTCTGGTGGCCAACGGTGTGCGGGCAGCCCTCTATGGGACAGCAAGA
 AGCAGAGCTTTGTGGGATGCTGACCATCACTGACTTCATCCTGGTGTGCATCGTACTACAGGTCCTCC
 CCTGGTCCAGATCTATGAGATTGAACAATAAGATTGAGACCTGGAGGGAGATCTACCTGCAAGGCTGC
 TTCAAGCCTCTGGTCTCCATCTCTCCTAATGATAGCCTGTTTGAAGCTGTCTACACCCTCATCAAGAACC
 GGATCCATCGCCTGCCTGTTCTTGACCCGGTGTGAGGCAACGTAATCCACATCCTCACACACAAACGCT
 GCTCAAGTTCTCGACATCTTTGGTTCCTGCTGCCCGGCCCTCCTTCTCTACCGCACTATCCAAGAT
 TTGGGCTCGGCACATTCGAGACTTGGCTGTGGTGTGGAGACAGCACCATCCTGACTGCACCTGGACA
 TCTTTGTGGACCGCGTGTGCTGCACTGCCTGTGGTCAACGAATGTGGTCAAGGTCAGGTCAGGCTATTTC
 CCGCTTTGATGTGATTACCTGGCTGCCAGCAACCTACAACCACCTGGACATGAGTGTGGGAGAGGCC
 CTGAGGCAGAGGACACTATGCTGGAGGAGTCTTTCTGCCAGCCCCAGAGACTTGGGGGAAGTGA
 TCGACAGGATTGCTCGGGAGCAGGTACACAGGCTGGTGTAGTGGACGAGACCCAGCATCTCTTGGGCGT
 GGTCTCCCTCTCCGACATCCTTCAGGCACTGGTGTCTAGCCCTGCTGGCATCGATGCCCTCGGGCC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG222787 representing NM_017431
 Red=Cloning site Green=Tags(s)

MEPGLHALRRTPSWSSLGGSEHQEMSFLQENSSSWPSPAVTSSSERIRGKRRAKALRWTRQKSVEEGE
 PPGQEGPRSRPAAESTGLEATFPKTTPLAQADPAGVGPPTGWDCLPSDCTASAAGSSTDDVELATEFP
 ATEAWECELEGLLEERPALCLSPQAPFPKLGWDELRRKPGAQIYMRFMQEHTCYDAMATSSKLVIFDTML
 EIKKAFFALVANGVRAAPLWDSKKQSFVGM LITDFILVLHRYRSPLVQIYEIEQHKIETWREIYLQGC
 FKPLVSI SPNDSLFEAVYTLIKNRIHRLPVLDPVSGNVLHILTHKRLKFLHIFGSLPRPSFLYRTIQD
 LGIGTFRDLAVVLETAPILTALDIFVDRRVSALPVVNECGQVVGLYSRFDVIHLAAQQTYNHLDMSVGEA
 LRQRTLCLLEGVLSQPHESLGEVIDRIAREQVHRLVLDVETQHLLGVVSLSDILQALVLSGAGIDALGA

TRTRPLE – GFP Tag – V

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

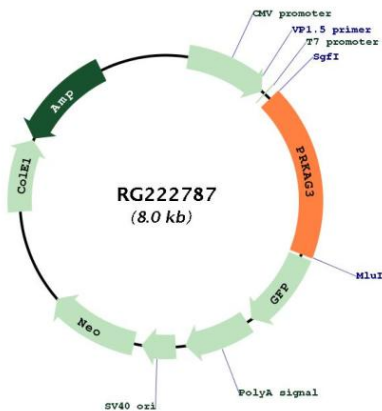
RefSeq ORF: 1470 bp

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
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 RG222787