**OriGene Technologies, Inc.**
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

# Product datasheet for RC201845

## AMPK gamma 1 (PRKAG1) (NM_002733) Human Tagged ORF Clone

### Product data:

| | |
|---|---|
| **Product Type:** | Expression Plasmids |
| **Product Name:** | AMPK gamma 1 (PRKAG1) (NM_002733) Human Tagged ORF Clone |
| **Tag:** | Myc-DDK |
| **Symbol:** | AMPK gamma 1 |
| **Synonyms:** | AMPKG |
| **Mammalian Cell Selection:** | Neomycin |
| **Vector:** | pCMV6-Entry (PS100001) |
| **E. coli Selection:** | Kanamycin (25 ug/mL) |

**ORF Nucleotide Sequence:**

>RC201845 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGAGACGGTCATTTCTTCAGATAGCTCCCCAGCTGTGGAAAATGAGCATCCTCAAGAGACCCCAGAAT
CCAACAATAGCGTGTATACTTCCTTCATGAAGTCTCATCGCTGCTATGACCTGATTCCCACAAGCTCCAA
ATTGGTTGTATTTGATACGTCCCTGCAGGTGAAGAAAGCTTTTTTTGCTTTGGTGACTAACGGTGTACGA
GCTGCCCCTTTATGGGATAGTAAGAAGCAAAGTTTTGTGGGCATGCTGACCATCACTGATTTCATCAATA
TCCTGCACCGCTACTATAAATCAGCCTTGGTACAGATCTATGAGCTAGAAGAACACAAGATAGAAACTTG
GAGAGAGGTGTATCTCCAGGACTCCTTTAAACCGCTTGTCTGCATTTCTCCTAATGCCAGCTTGTTTGAT
GCTGTCTCTTCATTAATTCGGAACAAGATCCACAGGCTGCCAGTTATTGACCCAGAATCAGGCAATACTT
TGTACATCCTCACCCACAAGCGCATTCTGAAGTTCCTCAAATTGTTTATCACTGAGTTCCCCAAGCCAGA
GTTCATGTCCAAGTCTCTGGAAGAGCTACAGATTGGCACCTATGCCAATATTGCTATGGTTCGCACTACC
ACCCCCGTCTATGTGGCTCTGGGGATTTTTGTACAGCATCGAGTCTCAGCCCTGCCAGTGGTGGATGAGA
AGGGGCGTGTGGTGGACATCTACTCCAAGTTTGATGTTATCAATCTGGCAGCAGAAAAGACCTACAACAA
CCTAGATGTATCTGTGACTAAAGCCTTGCAACATCGATCACATTACTTTGAGGGTGTTCTCAAGTGCTAC
CTGCATGAGACTCTGGAGACCATCATCAACAGGCTAGTGGAAGCAGAGGTTCACCGACTTGTAGTGGTGG
ATGAAAATGATGTGGTCAAGGGAATTGTATCACTGTCTGACATCCTGCAGGCCCTGGTGCTCACAGGTGG
AGAGAAGAAGCCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA


View online »

**Protein Sequence:**

>RC201845 protein sequence
Red=Cloning site Green=Tags(s)

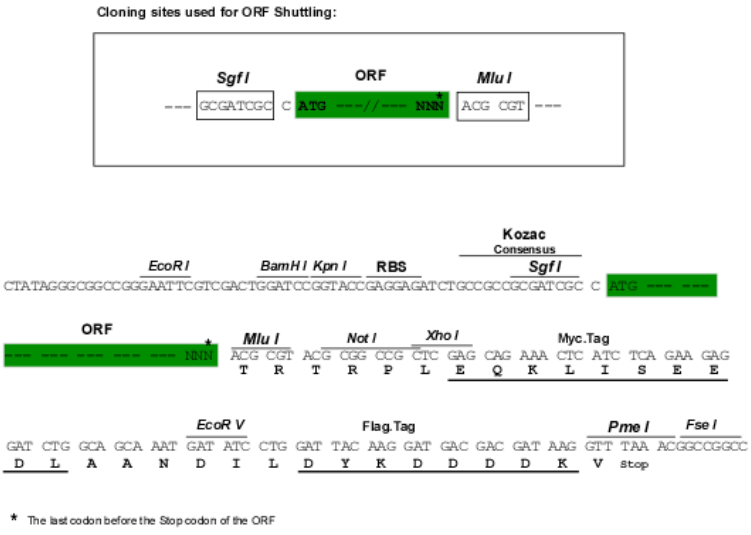
METVISSDSSPAVENEHPQETPESNNSVYTSFMKSHRCYDLIPTSSKLVVFDTSLQVKKAFFALVTNGVR
AAPLWDSKKQSFVGMLTITDFINILHRYYKSALVQIYELEEHKIETWREVYLQDSFKPLVCISPNASLFD
AVSSLIRNKIHRLPVIDPESGNTLYILTHKRILKFLKLFITEFPKPEFMSKSLEELQIGTYANIAMVRTT
TPVYVALGIFVQHRVSALPVVDEKGRVVDIYSKFDVINLAAEKTYNNLDVSVTKALQHRSHYFEGVLKCY
LHETLETIINRLVEAEVHRLVVVDENDVVKGIVSLSDILQALVLTGGEKKP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** https://cdn.origene.com/chromatograms/mk6085_f01.zip

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**




**ACCN:** NM_002733

**ORF Size:** 993 bp

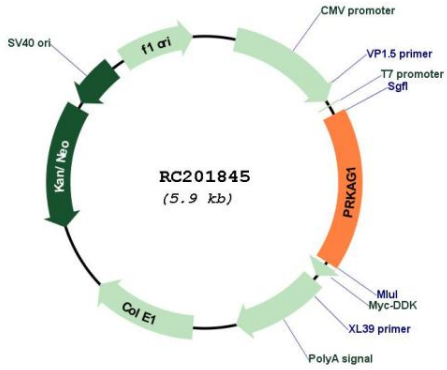
**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone 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.

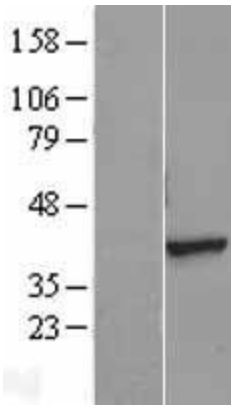
**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

| | |
|---|---|
| **Reconstitution Method:** | 1. Centrifuge at 5,000xg for 5min.<br>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.<br>3. Close the tube and incubate for 10 minutes at room temperature.<br>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.<br>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_002733.5 |
| **RefSeq Size:** | 1744 bp |
| **RefSeq ORF:** | 996 bp |
| **Locus ID:** | 5571 |
| **UniProt ID:** | P54619 |
| **Cytogenetics:** | 12q13.12 |
| **Domains:** | CBS |
| **Protein Families:** | Druggable Genome |
| **Protein Pathways:** | Adipocytokine signaling pathway, Hypertrophic cardiomyopathy (HCM), Insulin signaling pathway |
| **MW:** | 37.6 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. Alternatively spliced transcript variants encoding distinct isoforms have been observed. [provided by RefSeq, Jul 2008] |

## Product images:




Circular map for RC201845




Western blot validation of overexpression lysate (Cat# [LY400962]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC201845 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).