

Product datasheet for **RG201845**

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:	TurboGFP
Symbol:	AMPK gamma 1
Synonyms:	AMPKG
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG201845 representing NM_002733 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGAGACGGTCATTTCTTCAGATAGCTCCCCAGCTGTGGAAAATGAGCATCCTCAAGAGACCCAGAAT
CCAACAATAGCGTGTATACTTCCCTTCATGAAGTCTCATCGCTGCTATGACCTGATCCCACAAGCTCCAA
ATTGGTTGATTTGATACGTCCCTGCAGGTGAAGAAAGCTTTTTTGGCTTTGGTGACTAACGGTGTACGA
GCTGCCCTTTATGGGATAGTAAGAAGCAAAGTTTTGTGGCATGCTGACCATCACTGATTTTCATCAATA
TCCTGCACCGCTACTATAAATCAGCCTTGGTACAGATCTATGAGCTAGAAGAACAAGATAGAACTTG
GAGAGAGGTGATCTCCAGGACTCCTTTAAACCGCTTGTCTGCATTTCTCCTAATGCCAGCTTGTTTGAT
GCTGTCTCTTCATTAATTCGGAACAAGATCCACAGGCTGCCAGTATTGACCCAGAATCAGGCAACTACT
TGTACATCCTCACCCACAAGCGCATTCTGAAGTTCCTCAAATTGTTTACTCACTGAGTTCCTCAAGCCAGA
GTTTCATGTCCAAGTCTCTGGAAGAGCTACAGATTGGCACCTATGCCAATATTGCTATGGTTTCGCACTACC
ACCCCGTCTATGTGGCTCTGGGATTTTTGTACAGCATCGAGTCTCAGCCCTGCCAGTGGTGGATGAGA
AGGGGCGTGTGGTGGACATCTACTCCAAGTTTGATGTTATCAATCTGGCAGCAGAAAAGACCTACAACAA
CCTAGATGTATCTGTGACTAAAGCCTTGCAACATCGATCACATTACTTTGAGGGTGTCTCAAGTGCTAC
CTGCATGAGACTCTGGAGACCATCATCAACAGGCTAGTGAAGCAGAGGTTCCACGACTTGTAGTGGTGG
ATGAAAATGATGTGGTCAAGGGAATTGTATCACTGTCTGACATCCTGCAGGCCCTGGTGTACACAGGTGG
AGAGAAGAAGCCC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG201845 representing NM_002733
 Red=Cloning site Green=Tags(s)

METVISSDSSPAVENEHPQETPESNNSVYTSFMKSHRCYDLIPTSSKLVVFDTSLVQVKAFFALVTNGVR
 AAPLWDSKKQSFVGM L T I TDF INILHRYK SAL VQIYELEEHIETWREVYLQDSFKPLVCISPNASLFD
 AVSSLIRNKIHR L PVIDPESGNTLYIL THKRILKFLKLF I TEFPKPEFMSKSLEELQIGTYANIAMVRTT
 TPVYVALGIFVQHRVSALPVVDEKGRVVDIYSKFDVINLAAEKT YNNLDVSVTKALQHRSHYFEGVLKCY
 LHETLETIINRLVEAEVHRLVVVDENDVVKGIVSLSDILQALVLTGGEKKP

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_002733

ORF Size: 993 bp

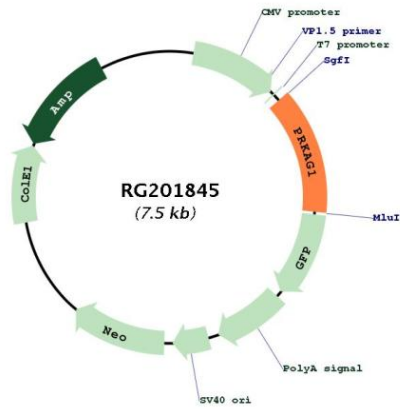
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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:	<ol style="list-style-type: none">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_002733.5
RefSeq Size:	1707 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
Gene Summary:	<p>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]</p>

Product images:



Circular map for RG201845