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Product datasheet for RG203911

AMPK beta 1 (PRKAB1) (NM_006253) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	AMPK beta 1 (PRKAB1) (NM_006253) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	AMPK beta 1
Synonyms:	AMPK; HAMPKb
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

ORF Nucleotide Sequence:

>RG203911 representing NM_006253
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGGCAATACCAGCAGTGAGCGCGCCGCGCTGGAGCGGCATGGTGGCCATAAGACGCCCCGGAGGGACA
GCTCGGGGGGCACCAAGGACGGGGACAGGCCCAAGATCCTGATGGACAGCCCCGAAGACGCCGACCTCTT
CCACTCCGAGGAAATCAAGGCACCAGAGAAGGAGGAATTCCTGGCCTGGCAGCATGATCTGGAAGTGAAT
GATAAAGCTCCCGCCCAGGCTCGGCCAACGGTGTTTCGATGGACGGGGGGCGGAAAGGAAGTTTACTTAT
CTGGGTCCTTCAACAACTGGAGTAAACTTCCCCTCACCAGAAGCCACAATAACTTTGTAGCCATCCTGGA
TCTGCCGGAAGGAGAGCATCAGTACAAGTTCTTTGTGGATGGTCAGTGGACGCACGACCCTTCCGAGCCC
ATAGTAACCAGCCAGCTTGGCACAGTTAACAACATCATTCAAGTGAAGAAAACTGACTTTGAAGTATTTG
ATGCTTTAATGGTGGATTCCCAAAAGTGCTCCGATGTGTCTGAGCTGTCCAGTTCTCCCCCAGGACCCTA
CCATCAGGAGCCCTACGTCTGCAAACCCGAAGAGCGCTTTCGGGCACCCCCTATTCTCCCCCCACATCTC
CTCCAGGTCATCCTGAACAAGGACACGGGGATTTCCTGTGATCCAGCTTTGCTTCCTGAGCCCAATCACG
TCATGCTGAACCACCTATACGCGCTGTCTATCAAGGATGGAGTGATGGTGCTCAGCGCAACCCACCGGTA
CAAGAAGAAGTACGTCACCACCTTGTTATACAAGCCCATA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

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Protein Sequence:

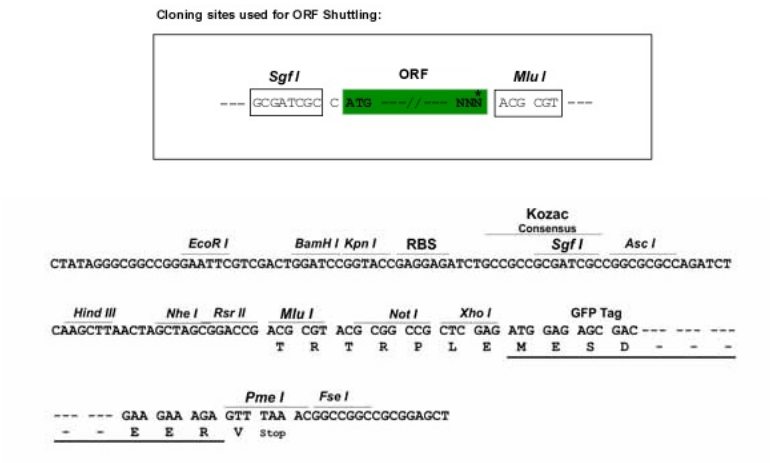
>RG203911 representing NM_006253
Red=Cloning site Green=Tags(s)

MGNTSSERAALERHGGHKTPRRDSSGGTKDGDRPKILMDSPEDADLFHSEEIKAPEKEEFLAWQHDLEVN
DKAPAQARPTVFRWTGGGKEVYLSGSFNNWSKLPLTRSHNNFVAILDLPEGEHQYKFFVDGQWTHDPSEP
IVTSQLGTVNNIIQVKKTDFEVFDALMVDSQKCSDVSELSSSPPGPYHQEPYVCKPEERFRAPPILPPHL
LQVILNKDTGISCDPALLPEPNHVMLNHLYALSIKDGVMVLSATHRYKKKYVTTLLYKPI

TRTRPLE – GFP Tag – V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_006253

ORF Size: 810 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).

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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_006253.5
RefSeq Size:	2412 bp
RefSeq ORF:	813 bp
Locus ID:	5564
UniProt ID:	Q9Y478
Cytogenetics:	12q24.23
Domains:	isoamylase_N, 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. The myristoylation and phosphorylation of this subunit have been shown to affect the enzyme activity and cellular localization of AMPK. This subunit may also serve as an adaptor molecule mediating the association of the AMPK complex. [provided by RefSeq, Jul 2008]

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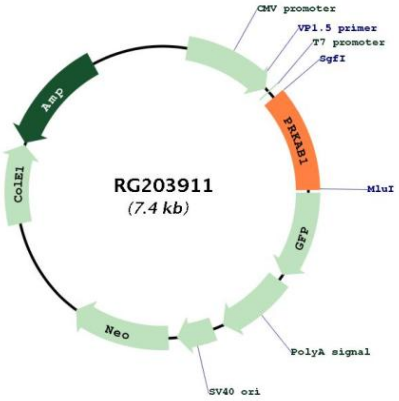
Product images:



Circular map for RG203911

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