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 RC208766

AMPK beta 2 (PRKAB2) (NM_005399) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	AMPK beta 2 (PRKAB2) (NM_005399) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	AMPK beta 2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC208766 representing NM_005399
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGGAAACACCACCAGCGACCGGGTGTCCGGGGAGCGCCACGGCGCCAAGGCTGCACGCTCCGAGGGCG
CAGGCGGCCATGCCCCGGGGAAGGAGCACAAGATCATGGTGGGGAGTACGGACGACCCCAGCGTGTTCAG
CCTCCCTGACTCCAAGCTCCCTGGGGACAAAGAGTTTGTATCATGGCAGCAGGATTTGGAGGACTCCGTA
AAGCCCACACAGCAGGCCCGGCCCACTGTTATCCGCTGGTCTGAAGGAGGCAAGGAGGTCTTCATCTCTG
GGTCCTTCAACAATTGGAGCACCAAGATTCCACTGATTAAGAGCCATAATGACTTTGTTGCCATCCTGGA
CCTCCCTGAGGGAGAGCACCAATACAAGTTCTTTGTGGATGGACAGTGGGTTCATGATCCATCAGAGCCT
GTGGTTACCAGTCAGCTTGGCACAATTAACAATTTGATCCATGTCAAGAAATCTGATTTTGAGGTGTTCG
ATGCTTTAAAGTTAGATTCTATGGAAAGTTCTGAGACATCTTGTAGAGACCTTTCCAGCTCACCCCCAGG
GCCTTATGGTCAAGAAATGTATGCGTTTCGATCTGAGGAAAGATTCAAATCCCCACCCATCCTTCCTCCT
CATCTACTTCAAGTTATTCTTAACAAAGACACTAATATTTCTTGTGACCCAGCCTTACTCCCTGAGCCCA
ACCATGTTATGCTGAACCATCTCTATGCATTGTCCATTAAGGACAGTGTGATGGTCCTTAGCGCAACCCA
TCGCTACAAGAAGAAGTATGTTACTACTCTGCTATACAAGCCCATT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

View online »

Protein Sequence:

>RC208766 representing NM_005399
Red=Cloning site Green=Tags(s)

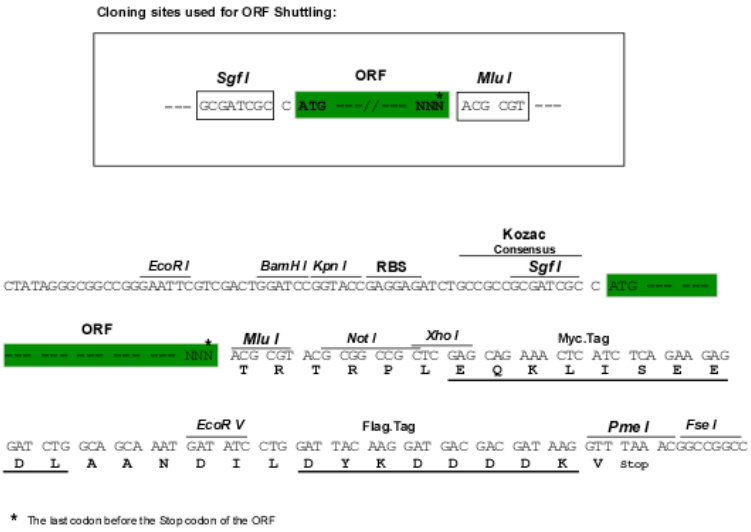
MGNTTSDRVSGERHGAKAARSEGAGGHAPGKEHKIMVGSTDDPSVFSLPDSKLPGDKEFVSWQQDLEDSV
KPTQQARPTVIRWSEGGKEVFISGSFNNWSTKIPLIKSHNDFVAILDLPEGEHQYKFFVDGQWVHDPSEP
VVTSQLGTINNLIHVKKSDFEVFDALKLDSMESSETSCRDLSSSPPGPYGQEMYAFRSEERFKSPPILPP
HLLQVILNKDTNISCDPALLPEPNHVMLNHLYALSIKDSVMVLSATHRYKKKYVTTLLYKPI

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mg3128_c01.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_005399

ORF Size: 816 bp

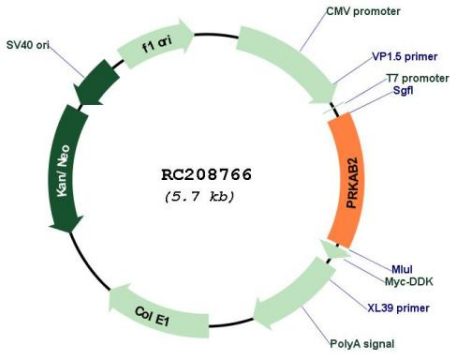
OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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

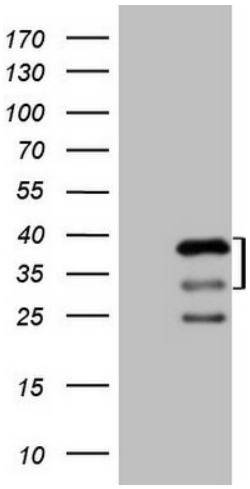
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_005399.5
RefSeq Size:	5431 bp
RefSeq ORF:	819 bp
Locus ID:	5565
UniProt ID:	O43741
Cytogenetics:	1q21.1
Domains:	AMPKBI
Protein Families:	Druggable Genome
Protein Pathways:	Adipocytokine signaling pathway, Hypertrophic cardiomyopathy (HCM), Insulin signaling pathway
MW:	30.1 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 may be a positive regulator of AMPK activity. It is highly expressed in skeletal muscle and thus may have tissue-specific roles. Multiple alternatively spliced transcript variants have been found for this gene. [provided by RefSeq, Jul 2013]

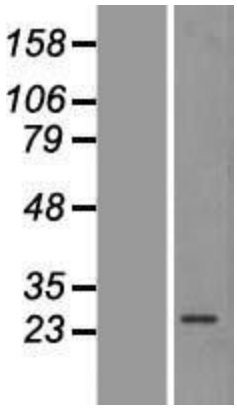
Product images:



Circular map for RC208766



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY PRKAB2 (Cat# RC208766, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-PRKAB2 (Cat# [TA808333])(1:2000). Positive lysates [LY417329] (100ug) and [LC417329] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY417329]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC208766 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).