

Product datasheet for **RG224953**

PRKAG2 (NM_016203) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PRKAG2 (NM_016203) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	PRKAG2
Synonyms:	AAKG; AAKG2; CMH6; H91620p; WPWS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG224953 representing NM_016203
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGGAAGCGCGTTATGGACACCAAGAAGAAAAAGATGTTTCCAGCCCAGCGGGAGCGCGCAAGA
 AAAATGCCAGCCAGAAGAGGCGTTCGCTGCGCGTGACACATTCGGACCTGAGCTCCTTCGCCATGCCGCT
 CCTGGACGGAGACCTGGAGGGTTCGGAAAGCATTCTCTCGAAAAGGTGGACAGCCCTTCGGCCCGGGC
 AGCCCTCCAAAGGGTCTTCTCCAGAGGCCCCAGCCCGCCCTCCAGCCCATGTCTGCACCTGTGA
 GGCCCAAGACCAGCCCGGCTCTCCAAAACCGTGTCCCGTCTCTACCAGGAGTCCCGCCACGCTC
 CCCTCGACGCATGAGCTTCAGTGGGATCTTCGCTCCTCTCAAAGAGTCTTCCCCAACTCCAACCT
 GCTACCTCGCCCGGGGCATCAGTTTTTCTCCGCTCCAGAAAACCTCCGGCTCTCTCTCTCCGT
 CAACCCACCCAAGTGACCAAGCAGCACAGTTTCCCCTGGAATCCTAAGCACGAGCCTGAACGGT
 AGAGAATCGCATCTATGCCTCGTCTTCCCCCGGACACAGGGCAGAGTTCTGCCGTCTCTCCAG
 AGCCCGACAGGCTCCACTGGCATCACCGACACACTATGCTCCCTCAAAGCCGCGGCGTGGCGGCGG
 CCCTGGGACCCGCGGAAGCCGGCATGCTGGAGAAGCTGGAGTTCGAGGACGAAGTAGAAGACTCAGAAA
 TGGTGTTTACATGCGATTCATGAGGTACACAAGTGTATGACATCGTTCCAACAGTTCAAAGCTTGT
 GTCTTTGATACTACATTACAAGTAAAAAGGCCTTCTTTGCTTTGGTAGCCAACGGTGTCCGAGCAGCGC
 CACTGTGGGAGAGTAAAAACAAAGTTTTGTAGGAATGCTAACAATTACAGATTCATAAATACTACA
 TAGATACTATAAATCACCTATGGTACAGATTTATGAATTAGAGGAACATAAAATTGAAACATGGAGGGAG
 CTTTATTTACAAGAAACATTTAAGCCTTTAGTGAATATATCTCCAGATGCAAGCCTTTCGATGCTGAT
 ACTCCTTGATCAAAAATAAAATCCACAGATTGCCCGTTATTGACCCTATCAGTGGGAATGCATTTATAT
 ACTTACCACAAAAGAATCCTCAAGTTCCTCCAGCTTTTTATGTCTGATATGCCAAAGCCTGCCTTCATG
 AAGCAGAACCTGGATGAGCTTGGAATAGGAACGTACCACAACATTGCCTTCATACATCCAGACACTCCCA
 TCATCAAAGCCTTGAACATATTTGTGGAAGACGAATATCAGCTCTGCCTGTGTGGATGAGTCAGGAAA
 AGTTGTAGATATTTATCCAAATTTGATGTAATTAATCTTGCTGCTGAGAAAACATAAATAACCTAGAT
 ATCACGGTGACCCAGGCCCTTCAGCACCGTTCACAGTATTTGAAAGTGTGTGAAGTCAATAAGCTGG
 AAATACTGGAGACCATCGTGGACAGAATAGTAAGAGCTGAGGTCCATCGGCTGGTGGTAAATGAAGC
 AGATAGTATTGTGGTATATTTCCCTGTCCGACATTCTGCAAGCCTGATCCTCACACCAGCAGGTGCC
 AAACAAAAGGAGACAGAAACGGAG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG224953 representing NM_016203
 Red=Cloning site Green=Tags(s)

MGSVMDTKKKKDVSSPGSGGKKNASQKRRSLRVHIPDLSSFAMPLLDGDLESGKHSSRKVDSPPFGPG
 SPSKGFFSRGPQPRPSSPMSAPVRPKTSPGSPKTVFPFSYQESPPRSPRMSFSGIFRSSSKESPNSNP
 ATSPGGIRFFSRKTSGLSSSPSTPTQVTKQHTFPLESYKHEPERLENRIYASSPPDTGQRFCPSSFQ
 SPTRPPLASPTHYAPSKAAALAAALGPAEAGMLEKLEFEDEVEDSESGVYMRFMRSKCYDIVPTSSKLV
 VFDTTLQVKKAFFALVANGVRAAPLWESKKQSFVGM LITDFINILHRYKSPMVQIYELEEHK IETWRE
 LYLQETFKPLVNI SPDASLFDVYSLIKNKIHR LPVIDPISGNALYIL THKRILKFLQLFMSDMPKPAFM
 KQNLDELGIGTYHNI AF IHPDTP I IKALNIF VERRISALPVVDESGKVVDIYSKFDVINLAAEKYNNLD
 ITVTQALQHR SQYFEGVVKCNKLEILETIVDRIVRAEVHRLVVVNEADSI VGIISLSDILQALILTPAGA
 KQKETETE

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_016203

ORF Size: 1704 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_016203.2](#), [NP_057287.2](#)

RefSeq Size: 2062 bp

RefSeq ORF: 1710 bp

Locus ID: 51422

UniProt ID: [Q9UGJ0](#)

Cytogenetics: 7q36.1

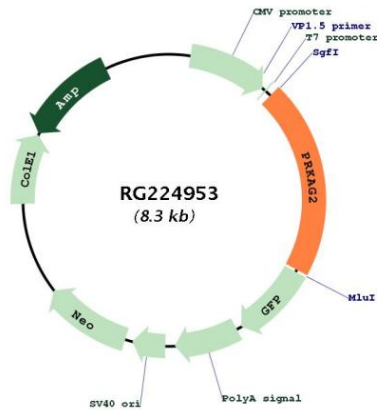
Domains: CBS

Protein Families: Druggable Genome

Protein Pathways: Adipocytokine signaling pathway, Hypertrophic cardiomyopathy (HCM), Insulin signaling pathway

Gene Summary: AMP-activated protein kinase (AMPK) is a heterotrimeric protein composed of a catalytic alpha subunit, a noncatalytic beta subunit, and a noncatalytic regulatory gamma subunit. Various forms of each of these subunits exist, encoded by different genes. AMPK is an important energy-sensing enzyme that monitors cellular energy status and functions by inactivating key enzymes involved in regulating de novo biosynthesis of fatty acid and cholesterol. This gene is a member of the AMPK gamma subunit family. Mutations in this gene have been associated with Wolff-Parkinson-White syndrome, familial hypertrophic cardiomyopathy, and glycogen storage disease of the heart. Alternate transcriptional splice variants, encoding different isoforms, have been characterized. [provided by RefSeq, Jan 2015]

Product images:



Circular map for RG224953