PRKAA1 cDNA

Catalog Number: ATGD0185

PRODUCT INFORMATION

Catalog number
ATGD0185

Product type
cDNA

Species
Human

NCBI Accession No.
NP_006242.5

Alternative Names
PRKAA1, 5-AMP-activated protein kinase catalytic subunit alpha-1 isoform 1, AMPK, AMPKa11

mRNA Refseq
NM_006251.5

OMIM
602739

Chromosome location
5p12

PRODUCT SPECIFICATION

Formulation
Lyophilized

Storage
Store the plasmid at -20C.

cDNA Size
1680bp

Preparation before usage
1. Centrifuge at 7000rpm for 1 minute.
2. Carefully open the vial and add 100ul of sterile water to dissolve the DNA.
Each tube contains approximately 10ug of lyophilized plasmid.

Vector description
This shuttle vector contains the complete ORF. It is inseted Apa I to Xho I. The gene insert contains multiple cloning sites which can be used to easily cut and transfer the gene and recombination site into your expression vector.

Cloning Vector
pATGen (puc19-derived cloning vector)

General Description

PRKAA1 cDNA

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PRKAA1 protein encoded by PRKAA1 belongs to the ser/thr protein kinase family. It is the catalytic subunit of the 5'-prime-AMP-activated protein kinase (AMPK). AMPK is a cellular energy sensor conserved in all eukaryotic cells. The kinase activity of AMPK is activated by the stimuli that increase the cellular AMP/ATP ratio. AMPK regulates the activities of a number of key metabolic enzymes through phosphorylation. It protects cells from stresses that cause ATP depletion by switching off ATP-consuming biosynthetic pathways. Alternatively spliced transcript variants encoding distinct isoforms have been observed.

DATA

Sequence nucleotides

ATGCGCAGACTCAGTTCCTGGAGAAAGATGGCGACAGCCGAGAAGCAGAAACACGACGGGCGGGTGAAGATCGGCCACTA
CATTCTGGGTGACACGCTGGGGGTCGGCACCTTCGGCAAAGTGAAGGTTGGCAAACATGAATTGACTGGGCATAAAGTAGC
TGTGAAGATACTCAATCGACAGAAGATTCGGAGCCTTGATGTGGTAGGAAAAATCCGCAGAGAAATTCAGAACCTCAAGCTT
TTCAGGCATCCTCATATAATTAAACTGTACCAGGTCATCAGTACACCATCTGATATTTTCATGGTGATGGAATATGTCTCAGG
AGGAGAGCTATTTGATTATATCTGTAAGAATGGAAGGCTGGATGAAAAAGAAAGTCGGCGTCTGTTCCAACAGATCCTTTCT
GGTGTGGATTATTGTCACAGGCATATGGTGGTCCATAGAGATTTGAAACCTGAAAATGTCCTGCTTGATGCACACATGAATG
CAAAGATAGCTGATTTTGGTCTTTCAAACATGATGTCAGATGGTGAATTTTTAAGAACAAGTTGTGGCTCACCCAACTATGCT
GCACCAGAAGTAATTTCAGGAAGATTGTATGCAGGCCCAGAGGTAGATATATGGAGCAGTGGGGTTATTCTCTATGCTTTAT
TATGTGGAACCCTTCCATTTGATGATGACCATGTGCCAACTCTTTTTAAGAAGATATGTGATGGGATCTTCTATACCCCTCAA
TATTTAAATCCTTCTGTGATTAGCCTTTTGAAACATATGCTGCAGGTGGATCCCATGAAGAGGGCCACAATCAAAGATATCAG
GGAACATGAATGGTTTAAACAGGACCTTCCAAAATATCTCTTTCCTGAGGATCCATCATATAGTTCAACCATGATTGATGATG
AAGCCTTAAAAGAAGTATGTGAAAAGTTTGAGTGCTCAGAAGAGGAAGTTCTCAGCTGTCTTTACAACAGAAATCACCAGGA
TCCTTTGGCAGTTGCCTACCATCTCATAATAGATAACAGGAGAATAATGAATGAAGCCAAAGATTTCTATTTGGCGACAAGC
CCACCTGATTCTTTTCTTGATGATCATCACCTGACTCGGCCCCATCCTGAAAGAGTACCATTCTTGGTTGCTGAAACACCAAG
GGCACGCCATACCCTTGATGAATTAAATCCACAGAAATCCAAACACCAAGGTGTAAGGAAAGCAAAATGGCATTTAGGAATT
AGAAGTCAAAGTCGACCAAATGATATTATGGCAGAAGTATGTAGAGCAATCAAACAATTGGATTATGAATGGAAGGTTGTAA
ACCCATATTATTTGCGTGTACGAAGGAAGAATCCTGTGACAAGCACTTACTCCAAAATGAGTCTACAGTTATACCAAGTGGA
TAGTAGAACTTATCTACTGGATTTCCGTAGTATTGATGATGAAATTACAGAAGCCAAATCAGGGACTGCTACTCCACAGAGAT
CGGGATCAGTTAGCAACTATCGATCTTGCCAAAGGAGTGATTCAGATGCTGAGGCTCAAGGAAAATCCTCAGAAGTTTCTCT
TACCTCATCTGTGACCTCACTTGACTCTTCTCCTGTTGACCTAACTCCAAGACCTGGAAGTCACACAATAGAATTTTTTGAGA
TGTGTGCAAATCTAATTAAAATTCTTGCACAATAA

Transaction Sequence

MRRLSSWRKM ATAEKQKHDG RVKIGHYILG DTLGVGTFGK VKVGKHELTG HKVAVKILNR QKIRSLDVVG KIRREIQNLK
LFRHPHIIKL YQVISTPSDI FMVMEYVSGG ELFDYICKNG RLDEKESRRL FQQILSGVDY CHRHMVVHRD LKPENVLLDA
HMNAKIADFG LSNMMSDGEF LRTSCGSPNY AAPEVISGRL YAGPEVDIWS SGVILYALLC GTLPFDDDHV PTLFKKICDG
IFYTPQYLNP SVISLLKHML QVDPMKRATI KDIREHEWFK QDLPKYLFPE DPSYSSTMID DEALKEVCEK FECSEEEVLS
CLYNRNHQDP LAVAYHLIID NRRIMNEAKD FYLATSPPDS FLDDHHLTRP HPERVPFLVA ETPRARHTLD ELNPQKSKHQ
GVRKAKWHLG IRSQSRPNDI MAEVCRAIKQ LDYEWKVVNP YYLRVRRKNP VTSTYSKMSL QLYQVDSRTY LLDFRSIDDE
ITEAKSGTAT PQRSGSVSNY RSCQRSDSDA EAQGKSSEVS LTSSVTSLDS SPVDLTPRPG SHTIEFFEMC ANLIKILAQ