*h*AMPK α1 VersaClone cDNA

Catalog Number: RDC2339

Specifications:

Gene:	*h*PRKAA1
Accession:	NP_006242
Insert size:	1693bp
Concentration:	10µg at 0.2µg/µL

Description

This shuttle vector contains the complete ORF for the gene of interest, along with a Kozak consensus sequence for optimal translation initiation. It is inserted NotI to AscI. The gene insert is flanked with convenient multiple cloning sites which can be used to easily cut and transfer the gene cassette into your desired expression vector.

Preparation and Storage

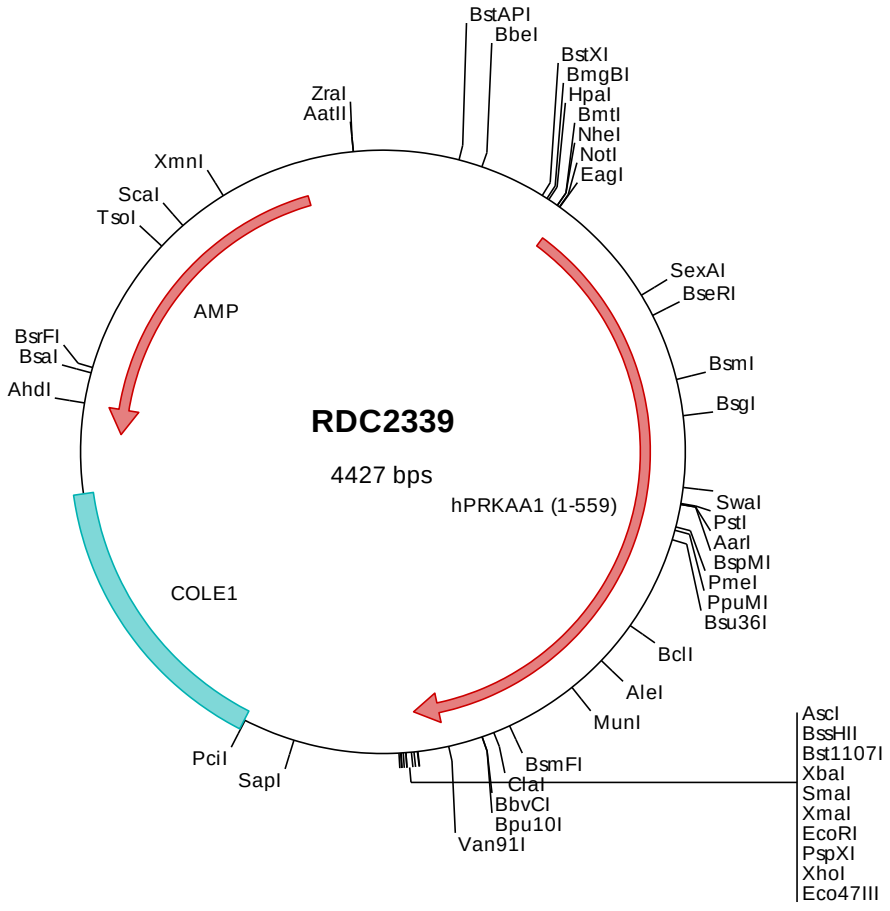
Formulation	cDNA is provided in 10 mM Tris-Cl, pH 8.5
Shipping	Ships at ambient temperature
Stability	1 year from date of receipt when stored at -20°C to -80°C
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

*h*AMPK α1 cDNA Plasmid

PRKAA1 protein kinase AMP-activated catalytic subunit alpha 1 [*Homo sapiens* (human)]

Also known as: AMPK; AMPKa1

Summary:
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 many key metabolic enzymes through phosphorylation. It protects cells from stresses that cause ATP depletion by switching off ATP-consuming biosynthetic pathways. Alternatively spliced transcripts encoding different proteins have been described.



FOR RESEARCH USE ONLY

NOT FOR USE IN HUMANS

R&D SYSTEMS
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> RDC2339 Plasmid DNA Sequence

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 101  tcagggcgcg tcagcgggtg ttggcgggtg tcggggctgg cttaactatg cggcatcaga gcagattgta ctgagagtgc accatatgcg gtgtgaaata
 201  ccgcacagat gcgtaaggag aaaataccgc atcaggcgcc attcgccatt caggctgcgc aactgttggg aagggcgatc ggtgcgggcc tcttcgctat
 301  tacgccagct ggcgaaaggg ggatgtgctg caaggcgatt aagttgggta acgccagggt tttcccagtc acgacgttgt aaaacgacgg ccagtgaatt
 401  ggagacgtgt taacaagctt ggatccgata tcgctagcgc ggccgccacc atgcgcagac tcagttcctg gagaaagatg gcgacagccg agaagcagaa
 501  acacgacggg cgggtgaaga tcggccacta cattctgggt gacacgctgg gggtcggcac cttcggcaaa gtgaaggttg gcaaacatga attgactggg
 601  cataaagtag ctgtgaagat actcaatcga cagaagattc ggagccttga tgtggtagga aaaatccgca gagaaattca gaacctcaag cttttcaggc
 701  atcctcatat aattaaactg taccaggtca tcagtacacc atctgatatt ttcatggtga tggaatatgt ctcaggagga gagctatttg attatatctg
 801  taagaatgga aggctggatg aaaaagaaag tcggcgtctg ttccaacaga tcctttctgg tgtggattat tgtcacaggc atatggtggt ccatagagat
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1701  aaatgatatt atggcagaag tatgtagagc aatcaaacaa ttggattatg aatggaaggt tgtaaaccca tattatttgc gtgtacgaag gaagaatcct
1801  gtgacaagca cttactccaa aatgagtcta cagttatacc aagtggatag tagaacttat ctactggatt tccgtagtat tgatgatgaa attacagaag
1901  ccaaatcagg gactgctact ccacagagat cgggatcagt tagcaactat cgatcttgcc aaaggagtga ttcagatgct gaggctcaag gaaaatcctc
2001  agaagtttct cttacctcat ctgtgacctc acttgactct tctcctgttg acctaactcc aagacctgga agtcacacaa tagaattttt tgagatgtgt
2101  gcaaatctaa ttaaaattct tgcacaataa aggcgcgcca gtatactcta gagtcgacac ccggggaatt cctcgagcgc tcgtctctag cttggcgtaa
2201  tcatggtcat agctgtttcc tgtgtgaaat tgttatccgc tcacaattcc acacaacata cgagccggaa gcataaagtg taaagcctgg ggtgcctaat
2301  gagtgagcta actcacatta attgcgttgc gctcactgcc cgctttccag tcgggaaacc tgtcgtgcca gctgcattaa tgaatcggcc aacgcgcggg
2401  gagaggcggt ttgcgtattg ggcgctcttc cgcttcctcg ctcactgact cgctgcgctc ggtcgttcgg ctgcggcgag cggtatcagc tcactcaaag
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2601  tggcgttttt ccataggctc cgccccctg acgagcatca caaaaatcga cgctcaagtc agaggtggcg aaacccgaca ggactataaa gataccaggc
2701  gtttcccccc ggaagctccc tcgtgcgctc tcctgttccg accctgccgc ttaccggata cctgtccgcc tttctccctt cgggaagcgt ggcgctttct
2801  caatgctcac gctgtaggta tctcagttcg gtgtaggtcg ttcgctccaa gctgggctgt gtgcacgaac ccccgttca gcccgaccgc tgcgccttat
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3101  gttggtagct cttgatccgg caaacaaacc accgctggta gcggtggttt ttttgtttgc aagcagcaga ttacgcgcag aaaaaaagga tctcaagaag
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3601  catccagtct attaattgtt gccgggaagc tagagtaagt agttcgccag ttaatagttt gcgcaacgtt gttgccattg ctacaggcat cgtggtgtca
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4201  ggcgacacgg aaatgttgaa tactcatact cttcctttttt caatattatt gaagcattta tcagggttat tgtctcatga gcggatacat atttgaatgt
4301  atttagaaaa ataaacaaat aggggttccg cgcacatttc cccgaaaagt gccacctgac gtctaagaaa ccattattat catgacatta acctataaaa
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> RDC2339 Translated Insert Sequence

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 101  fmvmeyvsgg elfdyicknq rldekesrrl fqqilsgvdy chrhmvvhrd lkpenvllda hmnakiadfg lsnmmsdgef lrtscgspny aapevisgrl
 201  yagpevdiws sgvilyallc gtlpfdddhv ptlfkkicdg ifytpqylnp svisllkhml qvdpmkrati kdirehewfk qdlpkylfpe dpsysstmid
 301  dealkevcek fecseeevls clynrnhqdp lavayhliid nrrimneakd fylatsppds flddhhltrp hpervpflva etprarhtld elnpqkskhq
 401  gvrkakwhlg irsqsrpndi maevcraikq ldyewkvvnp yylrvrrknp vtstyskmsl qlyqvdsrty lldfrsidde iteaksgtat pqrsgsvsny
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