*h*AMPK α2 VersaClone cDNA

Catalog Number: RDC2312

Specifications:

Gene:	*h*PRKAA2
Accession:	NP_006243
Insert size:	1672bp
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

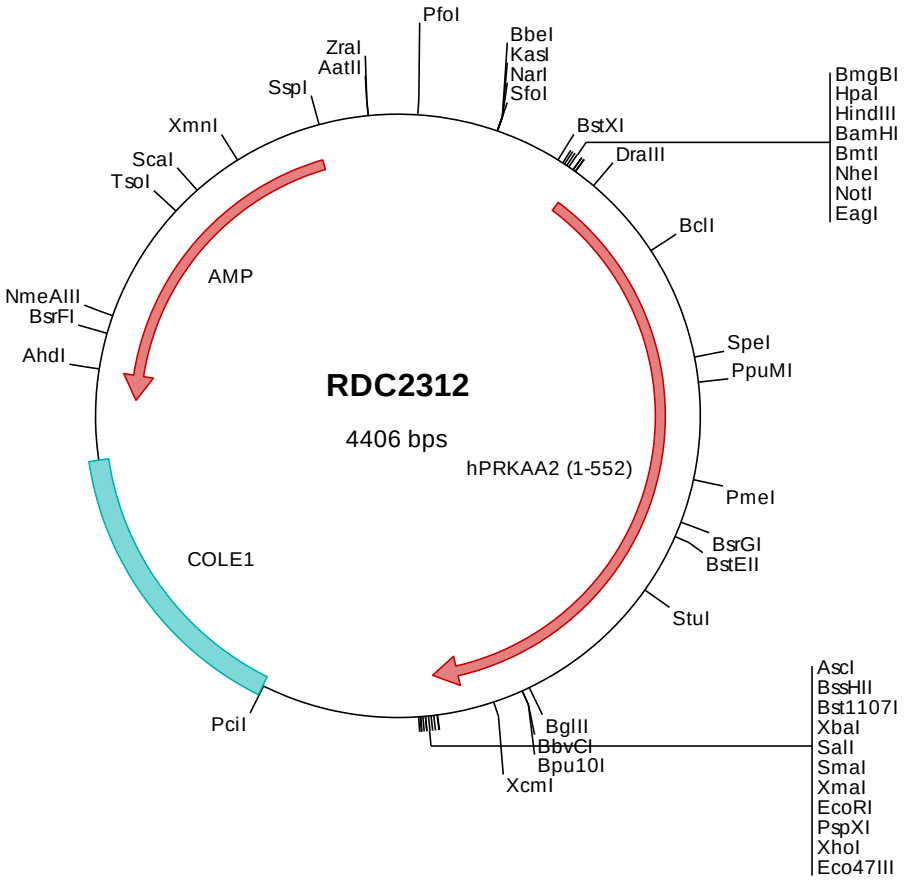
Formulation	cDNA is provided in 10 mM Tris-Cl, pH 8.5
Shipping	Ships at ambient temperature
Stability	1 year from date of receipt when stored at -20°C to -80°C
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

*h*AMPK α2 cDNA Plasmid

PRKAA2 protein kinase AMP-activated catalytic subunit alpha 2 [*Homo sapiens* (human)]

Also known as: AMPK; AMPK2; PRKAA; AMPKa2

Summary:
PRKAA2 is a catalytic 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.



FOR RESEARCH USE ONLY

NOT FOR USE IN HUMANS

R&D SYSTEMS
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> RDC2312 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 atggctgaga agcagaagca cgacgggcgg gtgaagatcg gacactacgt
 501  gctgggcgac acgctgggcg tcggcacctt cggcaaagtg aagattggag aacatcaatt aacaggccat aaagtggcag ttaaaatctt aaatagacag
 601  aagattcgca gtttagatgt tgttggaaaa ataaaacgag aaattcaaaa tctaaaactc tttcgtcatc ctcatattat caaactatac caggtgatca
 701  gcactccaac agattttttt atggtaatgg aatatgtgtc tggaggtgaa ttatttgact acatctgtaa gcatggacgg gttgaagaga tggaagccag
 801  gcggctcttt cagcagattc tgtctgctgt ggattactgt cataggcata tggttgttca tcgagacctg aaaccagaga atgtcctgtt ggatgcacac
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1701  tgaagtttac cgagctatga agcagctgga ttttgaatgg aaggtagtga atgcatacca tcttcgtgta agaagaaaaa atccagtgac tggcaattac
1801  gtgaaaatga gcttacaact ttacctggtt gataacagga gctatctttt ggactttaaa agcattgatg atgaagtagt ggagcagaga tctggttcct
1901  caacacctca gcgttcctgt tctgctgctg gcttacacag accaagatca agttttgatt ccacaactgc agagagccat tcactttctg gctctctcac
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2201  gtgtgaaatt gttatccgct cacaattcca cacaacatac gagccggaag cataaagtgt aaagcctggg gtgcctaatg agtgagctaa ctcacattaa
2301  ttgcgttgcg ctcactgccc gctttccagt cgggaaacct gtcgtgccag ctgcattaat gaatcggcca acgcgcgggg agaggcggtt tgcgtattgg
2401  gcgctcttcc gcttcctcgc tcactgactc gctgcgctcg gtcgttcggc tgcggcgagc ggtatcagct cactcaaagg cggtaatacg gttatccaca
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> RDC2312 Translated Insert Sequence

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 101  lfdyickhgr veemearrlf qqilsavdyc hrhmvvhrdl kpenvlldah mnakiadfgl snmmsdgefl rtscgspnya apevisgrly agpevdiwsc
 201  gvilyallcg tlpfddehvp tlfkkirggv fyipeylnrs vatllmhmlq vdplkratik direhewfkq dlpsylfped psydanvidd eavkevcekf
 301  ectesevmns lysgdpqdql avayhliidn rrimnqasef ylasppsgs fmddsamhip pglkphperm ppliadspka rcpldalntt kpkslavkka
 401  kwhlgirsqs kpydimaevy ramkqldfew kvvnayhlrv rrknpvtgny vkmslqlylv dnrsylldfk siddevveqr sgsstpqrsc saaglhrprs
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```