Acetyl-Coa Carboxylase 1 (ACACA) Human Recombinant Protein

PRODUCT OVERVIEW

Product Name	Acetyl-CoA carboxylase 1 (ACACA), Recombinant Protein
Full Product Name	Recombinant Human Acetyl-CoA carboxylase 1 (ACACA) , partial
Product Gene Name	ACACA recombinant protein
Product Synonym Gene Name	ACACA
Sequence	PIDRIIEFVP TKTPYDPRWM LAGRPHPTQK GQWLSGFFDY GSFSEIMQPW AQTVVVGRAR LGGIPVGVVA VETRTVELSI PADPANLDSE AKIIQQAGQV WFPDSAFKTY QAIKDFNREG LPLMVFANWR GFSGGMKDMY DQVLKFGAYI VDGLRECCQP VLVYIPPQAE LRGGSWVVID SSINPRHMEM YADRESRGSV LEPEGTVEIK FRRKDLVKTM RRVDPVYIHL AERLGTPELS TAERKELENK LKEREEFLIP IYHQVAVQFA DLHDTPGRMQ EKGVISDILD WKTSRTFFYW RLRRLLLEDL VKKKIHN
Host	E Coli or Yeast or Baculovirus or Mammalian Cell
Form/Format	Lyophilized or liquid (Format to be determined during the manufacturing process)
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE. (lot specific)
Preparation and Storage	Store at -20 degrees C. For long-term storage, store at -20 degrees C or -80 degrees C. Store working aliquots at 4 degrees C for up to one week. Repeated freezing and thawing is not recommended.
Molecular Weight	269,999 Da
Sequence Positions	1918-2234aa; Partial
Tag Information	This protein contains an N-terminal tag and may also contain a C-terminal tag. Tag types are determined by various factors including tag-protein stability, please inquire for tag information.
Sterility	Sterile filter available upon request.
Endotoxin	Low endotoxin available upon request.
OMIM	200350
3D Structure	ModBase 3D Structure for Q13085
Species	Human
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for ACACA recombinant protein	Acetyl-CoA carboxylase (ACC) is a complex multifunctional enzyme system. ACC is a biotin-containing enzyme which catalyzes the carboxylation of acetyl-CoA to malonyl-CoA, the rate-limiting step in fatty acid synthesis. There are two ACC forms, alpha and beta, encoded by two different genes. ACC-alpha is highly enriched in lipogenic tissues. The enzyme is under long term control at the transcriptional and translational levels and under short term regulation by the phosphorylation dephosphorylation of targeted serine residues and by allosteric transformation by citrate or palmitoyl-CoA. Multiple alternatively spliced transcript variants divergent in the 5 sequence and encoding distinct isoforms have been found for this gene.
Other Notes	Small volumes of ACACA recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for ACACA purchase	MBS1306882 is a recombinant protein targeting ACACA. Also known as Recombinant Human Acetyl-CoA carboxylase 1 (ACACA) , partial. Host: E Coli or Yeast or Baculovirus or Mammalian Cell.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for ACACA. It may not necessarily be applicable to this product.

NCBI GI #	38679960
NCBI GeneID	31
NCBI Accession #	NP_942131.1
UniProt Primary Accession #	Q13085
UniProt Secondary Accession #	Q6KEV6; Q6XDA8; Q7Z2G8; Q7Z561; Q7Z563; Q7Z564; Q86WB2; Q86WB3; B2RP68
UniProt Related Accession #	Q13085
GenBank Nucleotide #	NM_198834.2
NCBI Official Full Name	acetyl-CoA carboxylase 1 isoform 1
NCBI Official Synonym Full Names	acetyl-CoA carboxylase alpha
NCBI Official Symbol	ACACA
NCBI Official Synonym Symbols	ACC; ACAC; ACC1; ACCA; ACACAD
UniProt Protein Name	Acetyl-CoA carboxylase 1
UniProt Synonym Protein Names	ACC-alphaIncluding the following 1 domains:Biotin carboxylase (EC:6.3.4.14
UniProt Gene Name	ACACA
UniProt Synonym Gene Names	ACAC; ACC1; ACCA; ACC1
NCBI Protein Information	acetyl-CoA carboxylase 1
NCBI Summary for ACACA	Acetyl-CoA carboxylase (ACC) is a complex multifunctional enzyme system. ACC is a biotin-containing enzyme which catalyzes the carboxylation of acetyl-CoA to malonyl-CoA, the rate-limiting step in fatty acid synthesis. There are two ACC forms, alpha and beta, encoded by two different genes. ACC-alpha is highly enriched in lipogenic tissues. The enzyme is under long term control at the transcriptional and translational levels and under short term regulation by the phosphorylation/dephosphorylation of targeted serine residues and by allosteric transformation by citrate or palmitoyl-CoA. Multiple alternatively spliced transcript variants divergent in the 5' sequence and encoding distinct isoforms have been found for this gene. [provided by RefSeq, Jul 2008]
UniProt Comments for ACACA	Catalyzes the rate-limiting reaction in the biogenesis of long-chain fatty acids. Carries out three functions: biotin carboxyl carrier protein, biotin carboxylase and carboxyltransferase.
Research Articles on ACACA	**1.** Inhibition of Acetyl-CoA Carboxylase 1 (ACC1) and 2 (ACC2) Reduces Proliferation and De Novo Lipogenesis of EGFRvIII Human Glioblastoma Cells
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