

Product datasheet for RC224181

ACAT1 (ACACA) (NM_198836) Human Tagged ORF Clone

Product data:

| | |
|---------------------------|---|
| Product Type: | Expression Plasmids |
| Product Name: | ACAT1 (ACACA) (NM_198836) Human Tagged ORF Clone |
| Tag: | Myc-DDK |
| Symbol: | ACAT1 |
| Synonyms: | ACAC; ACACAD; ACC; ACC1; ACCA |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-Entry (PS100001) |
| E. coli Selection: | Kanamycin (25 ug/mL) |
| ORF Nucleotide Sequence: | >RC224181 representing NM_198836 Red=Cloning site Blue=ORF Green=Tags(s) |

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGATGAACCATCTCCCTTGGCCCAACCTCTGGAGCTGAACCAGCACTCTCGATTCATAATAGGTTCTG
TGTCTGAAGATAACTCAGAGGATGAGATCAGCAACCTGGTGAAGTTGGACCTACTGGAGGAGAAGGAGGG
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GATTTTGAAGATTCTGCACACGTTCTTGTCCAAGGGGCCATGTTATTGCTGCTCGGATCACTAGTGAAA
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ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
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Protein Sequence: >RC224181 representing NM_198836
 Red=Cloning site Green=Tags(s)

MDEPSPLAQPLELNQHSRFIIGSVSEDNSEDEISNLVKLDLLEEKEGSLSPASVGSDDLSDLGISLQDG
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 NPRHMEMYADRESRGSVLEPEGTVEIKFRRKDLVKTMRRVDPVYIHLAERLGTPELSTAERKELENLKE
 REEFLIPIYHQVAVQFADLHDTGRMQEKGVISDILDWKTSTRFFYWRLRRLLEDLVKKKIHANPELT
 DGQIQAMLRRWFVEVEGTVKAYVWDDNNDLAEWLEKQLTEEDGVHVSIEENIKCISRDYVLKQIRSLVQA
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TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:

ACCN: NM_198836

ORF Size: 7038 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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.

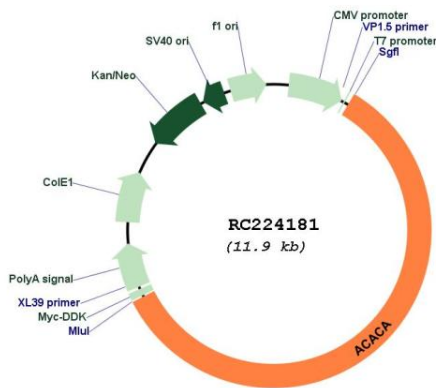
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

- 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_198836.2](#)
RefSeq Size: 9585 bp
RefSeq ORF: 7041 bp
Locus ID: 31
UniProt ID: [Q13085](#)
Cytogenetics: 17q12
Protein Families: Druggable Genome
Protein Pathways: Fatty acid biosynthesis, Insulin signaling pathway, Metabolic pathways, Propanoate metabolism, Pyruvate metabolism
MW: 265.4 kDa

Gene Summary: 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]

Product images:



Circular map for RC224181