

Product datasheet for **MG206222**

Acaa2 (NM_177470) Mouse Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Acaa2 (NM_177470) Mouse Tagged ORF Clone
Tag: TurboGFP
Symbol: Acaa2
Synonyms: 0610011L04Rik; AI255831; AI265397; D18ErtD240e
Mammalian Cell Selection: Neomycin
Vector: pCMV6-AC-GFP (PS100010)
E. coli Selection: Ampicillin (100 ug/mL)
ORF Nucleotide Sequence: >MG206222 representing NM_177470
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGGCCCTGCTACGAGGTGTGTTTCATCGTCGCTGCGAAGCGAACACCCTTTGGAGCTTACGGGGCCTTC
 TCAAGGACTTCTCTGCCACCGATTTAACTGAATTTGCTGCCAGGGCTGCTCTGTCTGCTGGCAAAGTTCC
 ACCTGAAACCATCGATAGTGTTCATCGTGGCAATGTATGCAGAGCTCTCAGATGCGGCATACCTGGCC
 AGGCATGTGGTTTTCGAGTGGGAGTCCCAACAGAGACTGGGGCACTTACCCTCAACAGGCTCTGTGGCT
 CTGGTTCCAGTCCATCGTGAGCGGATGTCAGGAAATCTGTTCTAAAGATGCTGAGGTCGCTTGTGTGG
 AGGAACAGAGAGCATGAGCCAGTCCCCCTACTGTGTCAGAAATGTGCGCTTCGGAACCAAATTTGGATTA
 GATCTCAAGCTGGAAGATACTTTGTGGGCAAGGATTAACGGATCAACATGTTAAGCTGCCCATGGGAATGA
 CTGCAGAGAACCCTTGCTGCAAAAACAACATAAGCAGAGAAGACTGTGACAGATACGCCCTTGCACTCTCA
 GCAGAGGTGGAAGCTGCTAACGAGGCTGGCTACTTCAATGAGGAGATGGCACCCATTGAGGTGAAGACG
 AAGAAAGGCAACAGACCATGCAAGTGGACGAGCAGCTCGACCCAAACCACCTGGAGCAACTGCAGA
 AGCTCCCGTCCGTGTTCAAGAAAGACGGGACAGTACAGCAGGGAACGCCTCGGGGTGTCTGACGGTGC
 TGGGGCCGTATCATAGCCAGCGAAGATGCTGTCAAAAAACATAACTTCACGCCCTGGCCAGAGTCTGTG
 GGCTACTTCGTGCCGATGCGATCCTACTATCATGGGATTGGTCCAGTCCCTGCTATCAATGGAGCAT
 TGAAGAAAGCTGGCTGAGTCTTAAGGACATGGATTTGATAGACGTGAACGAAGCTTTTGCCCTCAGTT
 CTTGTCTGTTCAAGGCCCTGGATCTTGACCCAGCAAAACCAATGTGAGTGGAGGCGCCATTGCCTG
 GGTCAACCCGCTGGGAGGATCTGGCTCCAGAATCACCGCACACCTGGTTCATGAGTTAAGGCGTCGAGGTG
 GAAAGTACGAGTGGGATCGGCTTGCAATGGAGGTGGCCAAGGCATCGCCCTGATCATCCAGAACACAGT
 C

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >MG206222 representing NM_177470
 Red=Cloning site Green=Tags(s)

MALLRGVFIVAARKRTPFGAYGGLLKDFSATDLTEFAARAAL SAGKVPPETIDSVIVGNVMQSSSDAAYLA
 RHVGLRVGVPTETGALTLNRLCGSGFQSI VSGCQEICSKDAEVVLCGGTESMSQSPYCVRNVRFGTKFGL
 DLKLEDLWAGLTDQHVKLPMGTAENLA AKYNI SREDCDRYALQSQRWKAANEAGYFNEEMAPIEVKT
 KKGKQTMQVDEHARPQTLEQLQKLP SVFKDGTVTAGNASGVSDGAGAVIIASEDAVKKHNF TPLARVV
 GYFVSGCDPTIMGIGPVPAIN GALKKAGLSLKMDLIDVNEAFAPQFLSVQKALDLDP SKTNVSGGAIAL
 GHPLGGSGSRITAHLVHELRRRGKYAVGSACIGGGQGI ALIIQNTV

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_177470

ORF Size: 1191 bp

OTI Disclaimer: 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_177470.2](#), [NP_803421.1](#)

RefSeq Size: 1502 bp

RefSeq ORF: 1194 bp

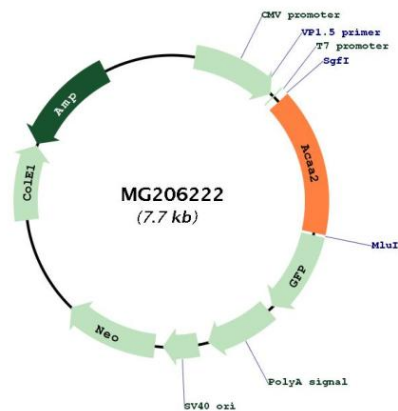
Locus ID: 52538

UniProt ID: [Q8BWT1](#)

Cytogenetics: 18 50.76 cM

Gene Summary: In the production of energy from fats, this is one of the enzymes that catalyzes the last step of the mitochondrial beta-oxidation pathway, an aerobic process breaking down fatty acids into acetyl-CoA. Using free coenzyme A/CoA, catalyzes the thiolytic cleavage of medium- to long-chain unbranched 3-oxoacyl-CoAs into acetyl-CoA and a fatty acyl-CoA shortened by two carbon atoms. Also catalyzes the condensation of two acetyl-CoA molecules into acetoacetyl-CoA and could be involved in the production of ketone bodies. Also displays hydrolase activity on various fatty acyl-CoAs (By similarity). Thereby, could be responsible for the production of acetate in a side reaction to beta-oxidation (By similarity). Abolishes BNIP3-mediated apoptosis and mitochondrial damage (By similarity).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MG206222