

## Product datasheet for MR206222

### Acaa2 (NM\_177470) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Acaa2 (NM_177470) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Acaa2
Synonyms:	0610011L04Rik; AI255831; AI265397; D18Erttd240e
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR206222 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCCCTGCTACGAGGTGTGTTTCATCGTCGCTGCGAAGCGAACACCCTTTGGAGCTTACGGGGCCTTC  
TCAAGGACTTCTCTGCCACCGATTTAACTGAATTTGCTGCCAGGGCTGCTCTGTCTGCTGGCAAAGTTCC  
ACCTGAAACCATCGATAGTGTTCATCGTGGGCAATGTATGCAGAGCTCTCAGATGCGGCATACCTGGCG  
AGGCATGTGGTTTTCGAGTGGGAGTCCCAACAGAGACTGGGGCACTTACCCTCAACAGGCTCTGTGGCT  
CTGGTTTCCAGTCCATCGTGAGCGGATGTCAGGAAATCTGTTCTAAAGATGCTGAGTCTGCTTGTGTGG  
AGGAACAGAGAGCATGAGCCAGTCCCCCTACTGTGTCAGAAATGTGCGCTTCGGAACCAAATTTGGATTA  
GATCTCAAGCTGGAAGATACTTTGTGGGCAAGGATTAACGGATCAACATGTTAAGCTGCCCATGGGAATGA  
CTGCAGAGAACCCTTGCTGCAAAAACAACATAAGCAGAGAAGACTGTGACAGATACGCCCTTGCACTCTCA  
GCAGAGGTGAAAAGCTGCTAACGAGGCTGGCTACTTCAATGAGGAGATGGCACCCATTGAGGTGAAGACG  
AAGAAAGGCAAACAGACCATGCAAGTGGACGAGCAGCTCGACCCAAACCACCTGGAGCAACTGCAGA  
AGCTCCCGTCCGTGTTCAAGAAAGACGGGACAGTACAGCAGGGAACGCCTCGGGGGTGTCTGACGGTGC  
TGGGGCCGTATCATAGCCAGCGAAGATGCTGTCAAAAAACATAACTTACGCCCTGGCCAGAGTCTGTG  
GGCTACTTCGTGTCGGATGCGATCCTACTATCATGGGATTGGTCCAGTCCCTGCTATCAATGGAGCAT  
TGAAGAAAGCTGGGCTGAGTCTTAAGGACATGGATTTGATAGACGTGAACGAAGCTTTTGCCCTCAGTT  
CTTGTCTGTTTCAAGGCCCTGGATCTTGACCCAGCAAAACCAATGTGAGTGGAGGCGCCATTGCCTG  
GGTCAACCCGCTGGGAGGATCTGGCTCCAGAATCACCGCACACCTGGTTCATGAGTTAAGGCGTCGAGGTG  
GAAAGTACGAGTGGGATCGGCTTGCAATGGAGGTGGCCAAGGCATCGCCCTGATCATCCAGAACACAGT  
C

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



**Protein Sequence:** >MR206222 protein sequence  
Red=Cloning site Green=Tags(s)

MALLRGVFIVAARKRTPFGAYGGLLKDFSATDLTEFAARAAL SAGKVP PETIDSVIVGNVMQSSSDAAYLA  
 RHVGLRVGVPTETGALTLNRLCGSGFQSI VSGCQE ICSKDAEVVL CCGTESMSQSPYCVRNVRFGTKFGL  
 DLKLEDTLWAGLTDQHVKLPMGTAENLA AKYNI SREDCDRYALQSQRWKAANEAGYFNEEMAPIEVKT  
 KKKGQTMQVDEHARPQT TLEQLQKLP SVFKKDGTVT AGNASGVSDGAGAVIIASEDAVKKHNF TPLARVV  
 GYFVSGCDPTIMGIGPVPAINGALKKAGLSLKMDLIDVNEAFAPQFLSVQKALDLDPSKTNVSGGAIAL  
 GHPLGGSGSRITAHLVHELRRRGKYAVGSACIGGGGGIALIIQNTV

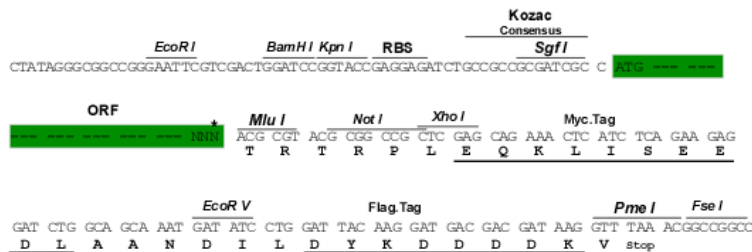
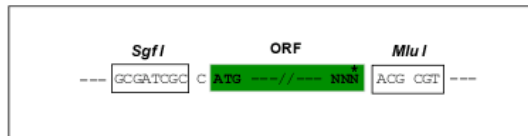
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_177470

**ORF Size:** 1194 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.

**RefSeq:** [NM\\_177470.1](#), [NM\\_177470.2](#), [NM\\_177470.3](#), [NP\\_803421.1](#)

**RefSeq Size:** 1500 bp

**RefSeq ORF:** 1194 bp

**Locus ID:** 52538

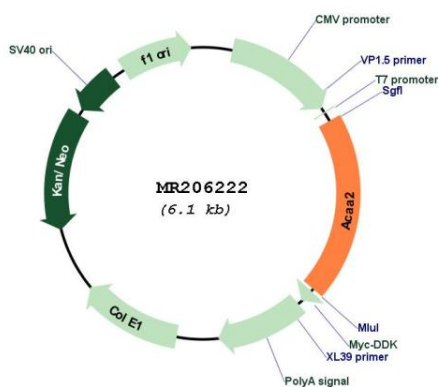
**UniProt ID:** [Q8BWT1](#)

**Cytogenetics:** 18 50.76 cM

**MW:** 41.9 kDa

**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 MR206222