

Product datasheet for **MR206750**

Acat1 (NM_144784) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Acat1 (NM_144784) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Acat1
Synonyms:	6330585C21Rik; Acat
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>MR206750 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGCTGCCCTGGTGGCTCTGCACGGCGTCGCCGAGGCCTCTGCTTCGCGGGCTGCTGCAGGAAGTAA
 GATGCCTGGAACGAAGTTATGCATCCAAACCCACTTTGAATGAAGTGGTTATAGTAAGTGCATAAGAAC
 TCCATTGGATCCTTCTGGGCAGCCTTGCCTCTCAGCCGGCCACTAAACTTGGTACTGCTGCAATTCAG
 GGAGCCATTGAGAAGGCAGGGATTCCAAAAGAAGAAGTGAAGGAAGTCTACATGGCAATGTCATCCAAG
 GGGGTGAAGGACAGGCCCTACCAGGCAAGCAACTGGGCGCAGGTTTACCTATTTCCACTCCATGCAC
 CACAGTAAACAAGTTTGTGCTTCAGGAATGAAAGCCATCATGATGGCCTCTCAAAGTCTTATGTGTGA
 CATCAGGATGTGATGGTGGCAGGCGGGATGGAGAGCATGTCCAATGTCCCATACGTAATGAGCAGAGGAG
 CAACACCATATGGTGGGTAAAACCTGAAGACCTGATTGTAAGACGGGCTAACTGATGCTACAATAA
 AATTCATATGGGTAACCTGTGCTGAGAATACTGCAAAGAAGATGAATATCTCACGGCAGGAACAGGATACG
 TAGCCTCTCAGCTTTACACCAGAAGTAAAGAAGCGTGGGACGCAGGGAAGTTTGCAGTGAGATTACTC
 CCATCACCATCTCAGTGAAGGTAAACAGATGTGGTGGTGAAGAAGATGAAGAATACAAGCGTGTGTA
 CTTTAGTAAAGTGCCAAAGCTCAAGACCGTGTCCAGAAAGAAAATGGCACAATAACAGCTGCCAATGCC
 AGCACACTGAACGATGGAGCAGCTGCTCTGTTTCTCATGACTGCAGAGGCAGCCAGAGGCTCAATGTTA
 AGCCATTGGCACGAATTGCAGCATTGTGCTGATGCTGCCGTAGACCCCATTTGATTTCCACTTGGCCTGC
 ATATGCCGTACCTAAGTTCTTAAATATGCAGGACTGAAAAAGAAGACATTGCCATGTGGGAAGTAAAT
 GAAGCATTGAGTGTGGTGTGCTAGCCAACATTAATGCTGGAGATTGACCCCAAAAAGTAAATATCC
 ACGGAGGAGCTGTTTCTCTGGCCATCCAATTGGGATGTCTGGAGCCCGGATTGTTGTTTCATATGGCTCA
 TGCCTGAAGCCAGGAGATTTCGGTCTGGCTAGTATTTGCAACGGAGGAGGAGGTGCTTCCGCCCTGCTG
 ATTGAGAAGCTG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR206750 protein sequence
 Red=Cloning site Green=Tags(s)

MAALVALHGVRRPLLRGLLQEVRCLEERSYASKPTLNEVVIVSAIRTPIGSFLGSLASQPATKLGTAIIQ
 GAIEKAGIPKEEVKEVVMGNVIQGGEGQAPTRQATLGAGLPITPCTTVNKVCASGMKAIMMASQSLMCG
 HQDVMVAGGMESMSNPVYVMSRGATPYGGVKLEDLIVKDGLTDVYNKIHMGNCAENTAKKMNISRQEODT
 YALSSYTRSKEAWDAGKFASEITPITISVKGKPDVVVKEDEEYKRVDFSKVPKLTQVFQKENGITANA
 STLNDGAAALVLMTAAEQRLNVKPLARIAAFADAADVPIDFPLAPAYAVPKVLKYAGLKKEDIAMWEVN
 EAFSVVVLANIKMLEIDPQKVNIIHGGAVSLGHPIGMSGARIVVHMAHALKPGEFGLASICNGGGGASALL
 IEKL

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_144784

ORF Size: 1275 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_144784.3](#), [NP_659033.1](#)
RefSeq Size: 3373 bp

RefSeq ORF: 1275 bp

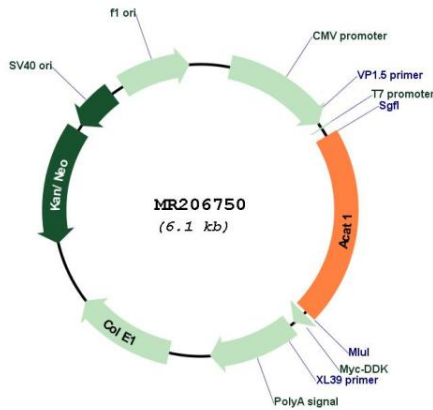
Locus ID: 110446

UniProt ID: [Q8QZT1](#)
Cytogenetics: 9 29.12 cM

MW: 44.8 kDa

Gene Summary: 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 thiolitic cleavage of medium- to long-chain 3-oxoacyl-CoAs into acetyl-CoA and a fatty acyl-CoA shortened by two carbon atoms. The activity of the enzyme is reversible and it can also catalyze the condensation of two acetyl-CoA molecules into acetoacetyl-CoA. Thereby, it plays a major role in ketone body metabolism.[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR206750