

## Product datasheet for **MG206750**

### Acat1 (NM\_144784) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Acat1 (NM_144784) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Acat1
Synonyms:	6330585C21Rik; Acat
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG206750 representing NM_144784 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCTGCCCTGGTGGCTCTGCACGGCGTCGTCGCCAGGCCTCTGCTTCGCGGGCTGCTGCAGGAAGTAA  
GATGCCTGGAACGAAGTTATGCATCCAAACCCACTTTGAATGAAGTGGTTATAGTAAAGTCTATAAGAAC  
TCCATTGGATCCTTCTGGGCAGCCTTGCTCTCAGCCGGCCACTAACTTGGTACTGCTGCAATTCAG  
GGAGCCATTGAGAAGGCAGGGATTCCAAAAGAAGAAGTGAAGGAAGTCTACATGGCAATGTCATCCAAG  
GGGGTGAAGGACAGGCCCTACCAGGCAAGCAACTGGGCGCAGGTTTACCTATTTCCACTCCATGCAC  
CACAGTAAACAAGTTTTGTGCTTCAGGAATGAAAGCCATCATGATGGCCTCTCAAAGTCTTATGTGTGGA  
CATCAGGATGTGATGGTGGCAGGCGGGATGGAGAGCATGTCCAATGTCCCATACGTAATGAGCAGAGGAG  
CAACACCATATGGTGGGGTAAAACCTGAAGACCTGATTGTAAAAGACGGGCTAACTGATGTCTACAATAA  
AATTCATATGGGTAAGTGTGCTGAGAATACTGCAAAGAAGATGAATATCTCACGGCAGGAACAGGATACG  
TACGCTCTCAGCTTTACACCAGAAGTAAAGAAGCGTGGGACGCAGGGAAGTTGCCAGTGAGATTACTC  
CCATCACCATCTCAGTGAAGGTAAACCAGATGTGGTGGTGAAGAAGATGAAGAATAACAAGCGTGTGA  
CTTTAGTAAAGTGCCAAAGCTCAAGACCGTGTTCAGAAAAGAAAATGGCACAATAACAGCTGCCAATGCC  
AGCACACTGAACGATGGAGCAGCTGCTGGTTCTCATGACTGCAGAGGCAGCCAGGGCTCAATGTTA  
AGCCATTGGCACGAATTGCAGCATTTGCTGATGCTGCCGTAGACCCATTGATTTCCACTTGCGCCTGC  
ATATGCCGTACCTAAGGTTCTTAAATATGCAGGACTGAAAAAAGAAGACATTGCCATGTGGGAAGTAAAT  
GAAGCATTGAGTGGTTGTGCTAGCCAACATTAATGCTGGAGATTGACCCCAAAAAGTAAATATCC  
ACGGAGGAGCTGTTTCTGCGCCATCCAATTGGGATGTCTGGAGCCCGATTGTTGTTTCATATGGCTCA  
TGCCCTGAAGCCAGGAGATTCCGTCTGGCTAGTATTTGCAACGGAGGAGGAGGTCTCCGCCCTGCTG  
ATTGAGAAGCTG

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >MG206750 representing NM\_144784  
 Red=Cloning site Green=Tags(s)

MAALVALHGVVRRPLLRGLLQEVRCLEERSYASKPTLNEVVIVSAIRTPIGSFLGSLASQPATKLGTAAIQ  
 GAIEKAGIPKEEVKEVYMGNVIQGGEGQAPTRQATLGAGLPITPCTTVNKVCASGMKAIMMASQSLMCG  
 HQDVMVAGGMESMSNVPYVMSRGATPYGGVKLEDLIVKDGLTDVYNKIHMGNCAENTAKKMNISRQEQDT  
 YALSSYTRSKEAWDAGKFASEITPITISVKGKPDVVVKEDEEYKRVDFSKVPKLVFKENGITTAANA  
 STLNDGAAALVLMTAEAAQRLNVKPLARIAAFADAADVPIDFPLAPAYAVPKVLKYAGLKKEDIAMWEVN  
 EAFSVVLANIKMLEIDPQVNIHGGAVSLGHPIGMSGARIVVHMAHALKPGFGLASICNGGGGASALL  
 IEKL

TRTRPLE - GFP Tag - V

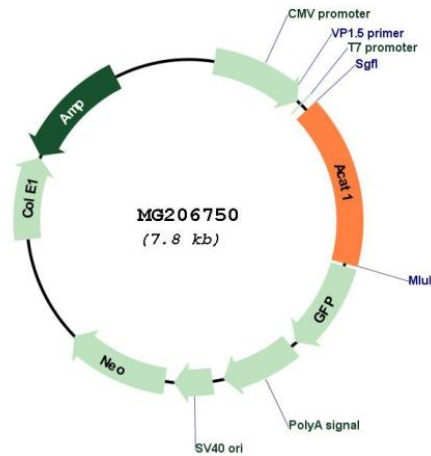
**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**



**Plasmid Map:**



**ACCN:**

NM\_144784

<b>ORF Size:</b>	1272 bp
<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_144784.3</a> , <a href="#">NP_659033.1</a>
<b>RefSeq Size:</b>	3373 bp
<b>RefSeq ORF:</b>	1275 bp
<b>Locus ID:</b>	110446
<b>UniProt ID:</b>	<a href="#">Q8QZT1</a>
<b>Cytogenetics:</b>	9 29.12 cM
<b>Gene Summary:</b>	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 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]