

## Product datasheet for **RC204465**

### ACADSB (NM\_001609) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	ACADSB (NM_001609) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ACADSB
Synonyms:	2-MEBCAD; ACAD7; SBCAD
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide  
Sequence:

>RC204465 ORF sequence  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCCGCGATCGCC

ATGGAGGGCCTGGCAGTGCGGTTGCTGCGCGGCAGCAAGCTGCTAAGAAGAAATTCCTGACTTGTTTGT  
CTTCTTGAAGATTCTCTCATGTCTCAAATCTTCCCAGTCAGAAGCTCTACTCAATATAACAAATAA  
TGAATACACTTTGCTCCCTGCAAACATTTACAGATGAGGAAATGATGATAAAGAGTTCAGTTAAAAA  
TTTGCTCAGGAACAAATGCACCTTTGGTTTCAACCATGGATGAAAATTCGAAAATGGAGAAATCAGTAA  
TACAAGGATTATTTCAACAAGGGTTGATGGGTATTGAAGTTGACCCAGAATATGGAGGCACAGGAGCTTC  
ATTTTTATCCACTGTGCTCGTATAGAGGAATTAGCCAAAGTTGATGCATCTGTGGCTGTCTTTGTGAG  
ATCCAGAACACATTAATTAACACACTGATTAGAAAACATGGAACAGAAGAACAAAAGGCCACCTATTTGC  
CTCAGCTCACTACAGAAAAGTAGGAAGTTTCTGCCTTTCAGAGGCTGGAGCAGGTAGTGACTCATTTC  
TTTGAAGACCAGAGCTGATAAAGAGGGAGATTATTATGCCTCAATGGATCAAAGATGTGGATCAGCAGT  
GCTGAGCACGCAGGGCTCTTCTGGTGTAGGCAATGTAGACCCTACCATTGGATATAAGGGAATACCT  
CCTTCTTAGTAGATCGTGATACTCCGGGCCTTCATATAGGGAAACCTGAAAACAAATTTGGGGCTCAGAGC  
TTCTTCCACCTGCCCGTTAACATTGAAAATGTCAAGTTCAGAAAGCCAATATCTTTGGGACAAATTTGA  
CATGGCTATAAGTATGCCATAGGGAGTCTCAATGAAGGTAGAATAGGAATTTGCTGCACAGATGCTGGGAC  
TGGCGCAAGGATGTTTGGACTACACTATTCATATATTAAGAAAGGATACAATTTGGCAAAAGACTATT  
TGATTTTCAGGGCCTCCAACACCAAGTGGCTCAGTGGCCACCCAGCTGGAAGCTGCAAGATTACTAACA  
TACAATGCTGCTAGGCTTTTGAAGCTGGAAGCCATTCAAAAAGAAGCGTCAATGGCCAAATACTATG  
CATCAGAGATTGCAGGACAAACAACGATAAATGTATCGAGTGGATGGGGGAGTAGGCTACACCAAGA  
TTACCCTGTGGAGAAATACTTCCGAGATGCAAAGATTGGTACGATATATGAAGGAGCTTCCAACATCCAG  
TTGAACACCATTGCAAAGCATATCGATGCAGAATAC

ACGCGTACGCGCGCCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

## Protein Sequence:

>RC204465 protein sequence  
Red=Cloning site Green=Tags(s)

MEGLAVRLLRGSKLLRRNFLTCLSSWKIPPHVSKSSQSEALLNITNNGIHFAPLQFTDEEMMIKSSVKK  
FAQEQIAPLVSTMDENSKMEKSVIQGLFQQGLMGIEVDPEYGGTGASFLSTVLVIEELAKVDA SVAVFCE  
IQNTLINTLIRKHGTEEQKATYLPQLTTEKVSFCLSEAGAGSDFSALKTRADKEGDYVYVNLGSKMWISS  
AEHAGLFLVMANVDPTIGYKGITSFVDRDTPGLHIGKPENKLGSRASSTCPLTFENVKVPEANILGQIG  
HGYKYAIGSLNEGRIGIAAQMGLAQGCFDYTIPIYIKERIQFGKRLDFDQGLQHVAHVATQLEAARLLT  
YNAARLLEAGKPFIKEASMAKYAYASEIAGQTTSKCIEMMGVGYTKDYPVEKYFRDAKIGTIYEGASNIQ  
LNTIAKHIDAEY

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

## Chromatograms:

[https://cdn.origene.com/chromatograms/mk6522\\_h10.zip](https://cdn.origene.com/chromatograms/mk6522_h10.zip)

## Restriction Sites:

SgfI-MluI

**Cloning Scheme:**


**ACCN:** NM\_001609

**ORF Size:** 1296 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\\_001609.4](#)

**RefSeq Size:** 5941 bp

**RefSeq ORF:** 1299 bp

**Locus ID:** 36

**UniProt ID:** [P45954](#)

**Cytogenetics:** 10q26.13

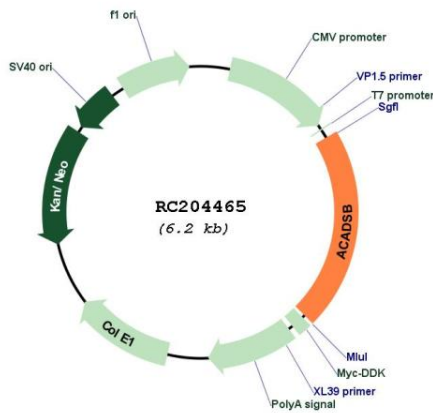
**Domains:** Acyl-CoA\_dh, Acyl-CoA\_dh\_M, Acyl-CoA\_dh\_N

**Protein Pathways:** Fatty acid metabolism, Metabolic pathways, Valine, leucine and isoleucine degradation

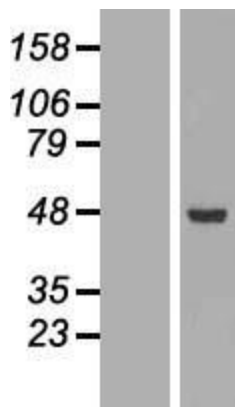
**MW:** 47.5 kDa

**Gene Summary:** Short/branched chain acyl-CoA dehydrogenase(ACADSB) is a member of the acyl-CoA dehydrogenase family of enzymes that catalyze the dehydrogenation of acyl-CoA derivatives in the metabolism of fatty acids or branch chained amino acids. Substrate specificity is the primary characteristic used to define members of this gene family. The ACADSB gene product has the greatest activity towards the short branched chain acyl-CoA derivative, (S)-2-methylbutyryl-CoA, but also reacts significantly with other 2-methyl branched chain substrates and with short straight chain acyl-CoAs. The cDNA encodes for a mitochondrial precursor protein which is cleaved upon mitochondrial import and predicted to yield a mature peptide of approximately 43.7-KDa. [provided by RefSeq, Jul 2008]

**Product images:**



Circular map for RC204465



Western blot validation of overexpression lysate (Cat# [LY419848]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC204465 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).