

## Product datasheet for **SC108887**

### ACOX1 (NM\_007292) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	ACOX1 (NM_007292) Human Untagged Clone
Tag:	Tag Free
Symbol:	ACOX1
Synonyms:	ACOX; MITCH; PALMCOX; SCOX
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL4</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:** >NCBI ORF sequence for NM\_007292, the custom clone sequence may differ by one or more nucleotides

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ATGAACCCGGACCTGCGCAGGGAGCGGGATTCCGCCAGCTTCAACCCGGAGCTGCTTACACACATCCTGG
ACGGCAGCCCCGAGAAAACCCGGCGCCGCCGAGAGATCGAGAACATGATCCTGAACGCCAGACTTCCA
GCATGAGGACTTGAACCTCCTCACTCGCAGCCAGCGTTATGAGGTGGCTGTCAGGAAAAGTGCCATCATG
GTGAAGAAGATGAGGGAGTTTGGCATCGCTGACCTGATGAAATTATGTGGTTTAAAAAACTACATTTGG
TCAATTTTGTGGAACCTGTGGGCCCTCAATTACTCCATGTTTATTCTACCTTGCTGAATCAGGGCACCAC
TGCTCAGAAAAGAGAAATGGCTGCTTTCATCAAAGGACTCCAGATAAATTGGCACCTACGCCCAGACGGAA
ATGGGCCACGGAACTCACCTTCGAGGCTTGAAACACAGCCACGTATGACCCTGAAACCCAGGAGTTCA
TTCTCAACAGTCTACTGTGACCTCCATTAATGGTGGCCTGGTGGGCTTGAAAGACTTCAAATCATGC
AATAGTCTTGGCCAGCTCATCTAAGGGGAAATGCTATGGATTACATGCCTTTATCGTACCTATTCTGT
GAAATCGGGACCATAAGCCTTTGCCAGGAATTACCGTTGGTACATCGCCCAAAATTTGGTTATGATG
AGATAGACAATGGCTACCTCAAATGGACAACCATCGTATCCCAGAGAAAACATGCTGATGAAGTATGC
CCAGGTGAAGCCTGATGGCACATACGTGAAACCGCTGAGTAACAAGCTGACTTACGGGACCATGGTGTTC
GTCAGGTCTTCTTGTGGGAGAAGCTGCTCGGGCTGTGCTAAGGCGTGACACCATTGCCATCCGATACA
GCGCTGTGAGGCACCACTGAAATCAAGCCAGGTGAACCAGAACCACAGATTTTGGATTTTCAAACCCA
GCAGTATAAACTCTTCCACTCCTGGCCACTGCCTATGCCTTCCAGTTTGTGGGCGCATACATGAAGGAG
ACCTATCACCCGGATTAACGAAGGCATTGGTCAAGGGGACCTGAGTGAAGTGCCTGAGCTTCATGCCTCA
CCGCTGGACTGAAGGCTTTCACCTCCTGGACTGCAAACACTGGCATTGAAGCATGTCGGATGGCTTGTGG
TGGGCATGGCTATTCTCATTGCAGTGGTCTTCAAATATTTATGTCAATTCACCCCAAGCTGTACCTTT
GAGGGAGAAAACACTGTATGATGCTCCAGACGGCTAGGTTCTGATGAAAAGTTATGATCAGGTGCACCT
CAGGAAAAGTTGGTGTGTGGCATGGTGTCTATTTGAACGACCTGCCAGTCAGCGCATCCAGCCACAGCA
GGTAGCAGTCTGGCCAACCATGGTGGATATCAACAGCCCCGAAAGCCTAACCGAAGCATATAAACTCCGT
GCAGCCAGATTAGTAGAAATGTGCAAAAAACCTTCAAAAAGAAGTGATTACAGAAAAAGCAAGGAGG
TAGCTTGGAACTAACTTCTGTTGACCTTGTTCGAGCAAGTGAGGCACATTGCCACTATGTGGTAGTTAA
GCTCTTTTCAGAAAACTCCTCAAATTAAGATAAAGCCATTCAAGCTGTCTTAAGGAGTTTATGTCTG
CTGATTCTCTGTATGGAATCAGTCAGAACCGGGGGATTTCTTTCAGGGGAGCATCATGACAGAGCCTC
AGATTACACAAGTAAACCAGCGTAAAGGAGTTACTCACTCTGATTCGCTCAGATGCTGTTGCTTTGGT
TGATGCATTTGATTTTCAGGATGTGACACTTGGCTCTGTGCTTGGCCGCTATGATGGGAATGTGTATGAA
AACTTGTTTGAGTGGGCTAAGAACTCCCACTGAACAAAGCAGAGGTCCACGAATCTTACAAGCACCTGA
AGTCACTGCAGTCCAAGCTCTGA
    
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**5' Read Nucleotide Sequence:**

>OriGene 5' read for NM\_007292 unedited

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GAATTCGGCACGAGGACGCCAGCAGGGCAATTTCTTGACCTTCGGAGCCCTTTCCCGA
GGATCCGCTCGGGAGCCTCCCCTGGCCAGGAGCAGGGGATTAGTCTGCCCGCGACCGGC
CCCAGCCACGACGCGGACATCGCCCCCTGTCTGGGCCGCTGCTACTCACGCGTCAAAG
GGCCACGGAGAAAAGAGGGGCGGGCCGGGGCGGGCGAGCGGAGCGGGGACTTGC
GCCGCTCTGAGGCTGCCTCCTAGGTCGGCCGGCGCTGGAGCTGCGGATTTAGATTGTC
ACTGCCACCTCGGTGGTGTACTTTCGCTGCCAGCTGGTCTGCGCCATGAACCCGGACC
TGCGCAGGGAGCGGGATTCCGCCAGCTTCAACCCGGAGCTGCTTACACACATCCTGGACG
GCAGCCCCGAGAAAACCCGGCGCCGCCGAGAGATCGAGAACATGATCCTGAACGCCAG
ACTTCCAGCATGAGGACTTGAACCTCCTCACTCGCAGCCAGCGTTATGAGGTGGCTGTCA
GGAAAAGTGCCATCATGGTGAAGAAGATGAGGGAGTTTGGCATCGCTGACCCTGATGAAA
TTATGTGGTTTAAAAATTTTGTGCACCGAGGGCGNCTGAGCCTCTGGATCTTCACTTGG
GCATNGTCTGCCACCTTGCTTACCANGCAACTGCNGAGCAGCAGGAGCGCTTCTTCA
TGCCCGCTGGAACCTGGNAGATCATTGGCACTTATGCC
    
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<b>3' Read Nucleotide Sequence:</b>	>OriGene 3' read for NM_007292 unedited TGCTTTGGACCGCGCCGCAATCTAGGGTCGAGTTTTTTTTTTTTTTTTTTTTTTTTTTTT TTTTTTTTTTGACTTTAAAAAATAATTAAGATGTATTTAACCTTTAAGTATAGAAT GATTGGATAAATTAGATTTCAACTGAAAGGACAATTAGCGATTTCAGAGAAAAGCTCCTAAA AATAGACTGAAAACAAAGCCCTACATAGAGTAAGAAATAGAACCTATGGAACCTCCATTT TTCTCAACTATAGTTTTTTGGTTTTGGTTTTCCAGTTGTTAAAAAACAACCTCACA GTTTTCAATTTTTCTGAACCAAAAAATCAGAACACATGGTTTGGGTCAAAGGGTTTTCTG GGCTACGTCGGGAGGGCTGACCTAAGGGACATTTTTTTTTAATGCCAAATACAGTAATC TCCAAGCTTTAATGGCTTATGCCAAGATGACAGAATATGTGAAATCTGATTGTCCCAAA GTTACTACTGCACTCCAAGCTACAACAGTGCCACAGCTGAGAGGGTTCCCTATACTTC CTACTACTGGGACAATTTAGCGATCCTTCAATGGAAAATTCCTAATTACACGAGACAAT GGTCTACAGTAGGCCCGTGCGGAATAAGTTCCCTCGTTGAAAAATGCTAGCATGAATA GTTTGATAAATGCCATCCATCAGCAAAGGAGAGCAAGCAGGCAGAGACTGTCCAAGCAG AAACTCATTGCATCAGGTTTCCAATAAGTTTCCTTTCCCAGCCCTTTTTTAATCCT GCTTTAAGCCCAGCCCCAGGGTAAGTCTGTGAAACACTGAGCAGAAAGCTTGGAAAGTTC TAACACATTTAAAATACCTTGCTAAAACACTTAAATAGCCCGGGATAGCAATTAATGGG AAATATCACCCCTCCGGGTTAAATTCTGCTATATCAAAGGCATACCTACTGGAACAN
<b>Restriction Sites:</b>	NotI-NotI
<b>ACCN:</b>	NM_007292
<b>Insert Size:</b>	3420 bp
<b>OTI Disclaimer:</b>	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
<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>	<u><a href="#">NM_007292.3</a></u> , <u><a href="#">NP_009223.2</a></u>
<b>RefSeq Size:</b>	3445 bp
<b>RefSeq ORF:</b>	1983 bp
<b>Locus ID:</b>	51
<b>UniProt ID:</b>	<u><a href="#">Q15067</a></u>
<b>Cytogenetics:</b>	17q25.1
<b>Protein Families:</b>	Druggable Genome

**Protein Pathways:** alpha-Linolenic acid metabolism, Biosynthesis of unsaturated fatty acids, Fatty acid metabolism, Metabolic pathways, PPAR signaling pathway

**Gene Summary:** The protein encoded by this gene is the first enzyme of the fatty acid beta-oxidation pathway, which catalyzes the desaturation of acyl-CoAs to 2-trans-enoyl-CoAs. It donates electrons directly to molecular oxygen, thereby producing hydrogen peroxide. Defects in this gene result in pseudoneonatal adrenoleukodystrophy, a disease that is characterized by accumulation of very long chain fatty acids. Alternatively spliced transcript variants encoding different isoforms have been identified. [provided by RefSeq, Jul 2008]  
Transcript Variant: This variant (2) has multiple differences in the coding region but maintains the reading frame, compared to variant 1. The encoded isoform (b, alternately known as ACOX1a per PMID: 17603022), is the same length as isoform a. Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.