

## Product datasheet for **RG211503**

### **ACOX1 (NM\_007292) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	ACOX1 (NM_007292) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ACOX1
Synonyms:	ACOX; MITCH; PALMCOX; SCOX
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide  
Sequence:**

>RG211503 representing NM\_007292  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGAACCCGGACCTGCGCAGGGAGCGGGATTCCGCCAGCTTCAACCCGGAGCTGCTTACACACATCCTGG  
 ACGGCAGCCCGAGAAAACCCGGCGCCGCGAGAGATCGAGAACATGATCCTGAACGACCCAGACTTCCA  
 GCATGAGGACTTGAACCTCCTCACTCGCAGCCAGCGTTATGAGGTGGCTGTCAGGAAAAGTGCCATCATG  
 GTGAAGAAGATGAGGGAGTTTGGCATCGCTGACCCTGATGAAATTATGTGGTTTAAAAAACTACATTTGG  
 TCAATTTTGTGGAACCTGTGGCCCTCAATTACTCCATGTTTATTCTACCTTGCTGAATCAGGGCACCAC  
 TGCTCAGAAAGAGAAAATGGCTGCTTTCATCAAAGGACTCCAGATAAATGGCACCTACGCCCAGACGGAA  
 ATGGGCCACGGAACTCACCTTCGAGGCTTGAAACCACAGCCACGTATGACCCTGAAACCCAGGAGTTCA  
 TTCTCAACAGTCCTACTGTGACCTCCATTAATGGTGGCCTGGTGGGCTTGAAAAGACTTCAAATCATGC  
 AATAGTTCTTGCCAGCTCATCACTAAGGGGAAATGCTATGGATTACATGCCTTTATCGTACCTATTCTGT  
 GAAATCGGGACCCATAAGCCTTTGCCAGGAATTACCGTTGGTGACATCGGCCCAAAATTTGGTTATGATG  
 AGATAGACAATGGCTACCTCAAAATGGACAACCATCGTATTTCCAGAGAAAACATGCTGATGAAGTATGC  
 CCAGGTGAAGCCTGATGGCACATACGTGAAACCGCTGAGTAACAAGCTGACTTACGGGACCATGGTGT  
 GTCAGGTCCTTCTTGTGGGAGAAGCTGCTCGGGCTCTGTCTAAGGCGTGACCATTGCCATCCGATACA  
 GCGCTGTGAGGCACCACTGAAATCAAGCCAGGTGAACCAGAACCACAGATTTTGGATTTTCAAACCCA  
 GCAGTATAAACTTTTCCACTCCTGGCCACTGCCTATGCCTTCCAGTTTGTGGGCGCATACATGAAGGAG  
 ACCTATCACCGGATTAACGAAGGCATTGGTCAAGGGGACCTGAGTGAACCTGCCTGAGCTTCATGCCCTCA  
 CCGCTGGACTGAAGGCTTTCACCTCCTGGACTGCAAACACTGGCATTGAAGCATGTCGGATGGCTTGTGG  
 TGGGCATGGCTATTCTCATTGCAGTGGTCTTCAAATATTTATGTCAATTTACCCCAAGCTGTACCTTT  
 GAGGGAGAAAACACTGTCATGATGCTCCAGACGGCTAGGTTCTGATGAAAAGTTATGATCAGGTGCACT  
 CAGGAAAAGTTGGTGTGTGGCATGGTGTCTATTTGAACGACCTGCCAGTCAGCGCATCCAGCCACAGCA  
 GGTAGCAGTCTGGCCAACCATGGTGGATATCAACAGCCCCGAAAGCCTAACCGAAGCATATAAACTCCGT  
 GCAGCCAGATTAGTAGAAATTGCTGAAAAACCTTCAAAGAAGTATTACAGAAAAAGCAAGGAGG  
 TAGCTTGGAACTAACTTCTGTTGACCTTGTTCGAGCAAGTGAGGCACATTGCCACTATGTGGTAGTTAA  
 GCTCTTTTCAAAAACTCCTCAAAATTAAGATAAAGCCATTCAAGCTGTCTTAAGGAGTTTATGTCTG  
 CTGATTTCTGTATGGAATCAGTCAGAACCGGGGGATTTCCTCAGGGGAGCATCATGACAGAGCCTC  
 AGATTACACAAGTAAACCAGCGTAAAGGAGTTACTCACTCTGATTTCGCTCAGATGCTGTTGCTTTGGT  
 TGATGCATTTGATTTTTCAGGATGTGACACTTGGCTCTGTGCTTGGCCGCTATGATGGGAATGTGTATGAA  
 AACTTGTTTGAGTGGGCTAAGAACTCCCACTGAACAAAGCAGAGGTCCACGAATCTTACAAGCACCTGA  
 AGTCACTGCAGTCCAAGCTC

**ACGCGT**ACGCGGCCGCTCGAG – GFP Tag – GTTTAA

**Protein Sequence:** >RG211503 representing NM\_007292  
 Red=Cloning site Green=Tags(s)

MNPDLRRERDSASFNPPELLTHILDGSPEKTRRRREIENMILNDPDFQHEDLNFLTRSQRVEVAVRKSAIM  
 VKKMFREFGIADPDEIMWFKHLVNFVEPVGLNYSMFIPTLLNQGTTAQKEKWLSSKGLQIIGTYAQTE  
 MGHGTHLRGLETTATYDPETQEFILNSPTVTSIKWWPGGLGKTSNHAIVLAQLITKGKCYGLHAFIVPIR  
 EIGTHKPLPGITVGDIGPKFGYDEIDNGYLKMDNHRIPRENMLMKYAQVKPDGTYYKPLSNKLTYGTMVF  
 VRSFLVGEAARALSKACTIAIRYS AVRHQSEIKPGEPEPQILDFTQQYKLFPLLATAYAFQFVGAYMKE  
 TYHRINEGIGQGDLSELPELHALTAGLKAFTSWTANTGIEACRMACGGHGYSHCGLPNIIYVNFPTPCTF  
 EGENTVMMLQATARFLMKSVDQVHSGKLVCGMVSYLNDLPSQRIQPQVAVWPTMVDINSPELSTEAYKLR  
 AARLVEIAAKNLQKEVIHRKSKEVAVNLTSDVLRASEAHCHYVVVKLFSEKLLKIQDKAIQAVLRSLCL  
 LYSLYGISQAGDFLQGSIMTEPQITQVNQRVKELLTLIRSDAVALVDAFDFQDVTLGSVLGRYDGNVYE  
 NLFWEAKNSPLNKAEVHESYKHLKSLQSKL

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_007292

**ORF Size:** 1980 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\\_007292.6](#)

**RefSeq Size:** 3445 bp

**RefSeq ORF:** 1983 bp

**Locus ID:** 51

**UniProt ID:** [Q15067](#)

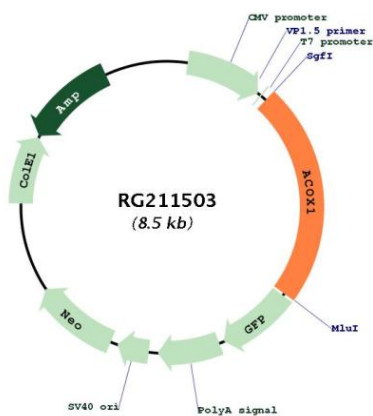
**Cytogenetics:** 17q25.1

**Protein Families:** 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]

## Product images:



Circular map for RG211503