

# ACOX1 Antibody

Purified Mouse Monoclonal Antibody (Mab) Catalog # AM1847B

## **Product Information**

Primary AccessionQ15067Other AccessionNP_009223.2ReactivityHumanHostMouseClonalityMonoclonalIsotypeIgG1Clone Names153CT43.1.1Calculated MW74424	Application	WB, IHC-P, IF, E
Other AccessionNP_009223.2ReactivityHumanHostMouseClonalityMonoclonalIsotypeIgG1Clone Names153CT43.1.1Calculated MW74424	Primary Accession	<u>Q15067</u>
ReactivityHumanHostMouseClonalityMonoclonalIsotypeIgG1Clone Names153CT43.1.1Calculated MW74424	Other Accession	<u>NP_009223.2</u>
HostMouseClonalityMonoclonalIsotypeIgG1Clone Names153CT43.1.1Calculated MW74424	Reactivity	Human
ClonalityMonoclonalIsotypeIgG1Clone Names153CT43.1.1Calculated MW74424	Host	Mouse
IsotypeIgG1Clone Names153CT43.1.1Calculated MW74424	Clonality	Monoclonal
Clone Names 153CT43.1.1   Calculated MW 74424	Isotype	IgG1
Calculated MW 74424	Clone Names	153CT43.1.1
	Calculated MW	74424

### **Additional Information**

Gene ID	51
Other Names	Peroxisomal acyl-coenzyme A oxidase 1, AOX, Palmitoyl-CoA oxidase, Straight-chain acyl-CoA oxidase, SCOX, ACOX1, ACOX
Target/Specificity	This ACOX1 monoclonal antibody is generated from mouse immunized with ACOX1 recombinant protein.
Dilution	WB~~1:100~500 IHC-P~~1:100~500 IF~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	ACOX1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

### **Protein Information**

Name	ACOX1 ( <u>HGNC:119</u> )
Synonyms	ACOX
Function	Involved in the initial and rate-limiting step of peroxisomal beta-oxidation of straight-chain saturated and unsaturated very-long- chain fatty acids

	(PubMed: <u>15060085</u> , PubMed: <u>17458872</u> , PubMed: <u>17603022</u> , PubMed: <u>32169171</u> , PubMed: <u>33234382</u> , PubMed: <u>7876265</u> ). Catalyzes the desaturation of fatty acyl-CoAs such as palmitoyl-CoA (hexadecanoyl- CoA) to 2-trans-enoyl-CoAs ((2E)-enoyl-CoAs) such as (2E)-hexadecenoyl- CoA, and donates electrons directly to molecular oxygen (O(2)), thereby producing hydrogen peroxide (H(2)O(2)) (PubMed: <u>17458872</u> , PubMed: <u>17603022</u> , PubMed: <u>7876265</u> ).
Cellular Location	Peroxisome.
Tissue Location	Widely expressed with highest levels of isoform 1 and isoform 2 detected in testis. Isoform 1 is expressed at higher levels than isoform 2 in liver and kidney while isoform 2 levels are higher in brain, lung, muscle, white adipose tissue and testis. Levels are almost equal in heart.

## Background

ACOX1 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.

## References

Lu, Y., et al. J. Lipid Res. 49(12):2582-2589(2008) Carrozzo, R., et al. Am. J. Med. Genet. A 146A (13), 1676-1681 (2008) Omi, S., et al. J. Biochem. 143(5):649-660(2008)

#### Images



All lanes: Anti-ACOX1 Antibody at 1:1000 dilution Lane 1: PC-12 whole cell lysate Lane 2: Mouse testis lysate Lane 3: Mouse heart lysate Lane 4: Mouse kidney lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Mouse IgG, (H+L), Peroxidase conjugated (ASP1613) at 1/8000 dilution. Observed band size: 74 KDa Blocking/Dilution buffer: 5% NFDM/TBST.



ACOX1 Monoclonal Antibody (Cat. #AM1847b) immunohistochemistry analysis in formalin fixed and paraffin embedded human colon carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the ACOX1 Monoclonal Antibody for immunohistochemistry. Clinical relevance has not been evaluated.

Confocal immunofluorescent analysis of ACOX1 Antibody (Cat#AM1847b) with Hela cell followed by Alexa Fluor®



488-conjugated goat anti-mouse lgG (green). DAPI was used to stain the cell nuclear (blue).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.