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ACOX1 Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM1847B

Product Information

Application	WB, IHC-P, IF, E
Primary Accession	Q15067
Other Accession	NP_009223.2
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
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 (HGNC:119)
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:15060085, PubMed:17458872, PubMed:17603022, PubMed:32169171, PubMed:33234382, PubMed:7876265). 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:17458872, PubMed:17603022, PubMed:7876265).

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.

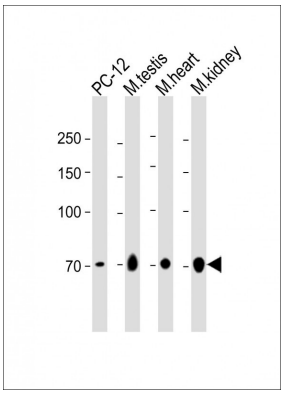
Background

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.