10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

ACAT1 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AW5517

Product Information

Application	IHC-P, WB
Primary Accession	P24752
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	45200
Isotype	Rabbit IgG
Antigen Source	HUMAN

Additional Information

Gene ID	38
Antigen Region	311-349
Other Names	Acetyl-CoA acetyltransferase, mitochondrial, Acetoacetyl-CoA thiolase, T2, ACAT1, ACAT, MAT
Dilution	IHC-P~~1:100~500 WB~~1:1000
Target/Specificity	This ACAT1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 296-349 amino acids from the C-terminal region of human ACAT1.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation 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	ACAT1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ACAT1
Synonyms	ACAT, MAT
Function	This is one of the enzymes that catalyzes the last step of the mitochondrial

beta-oxidation pathway, an aerobic process breaking down fatty acids into acetyl-CoA (PubMed:1715688, PubMed:7728148, PubMed:9744475). Using free coenzyme A/CoA, catalyzes the thiolytic cleavage of medium- to long-chain 3-oxoacyl-CoAs into acetyl-CoA and a fatty acyl-CoA shortened by two carbon atoms (PubMed:1715688, PubMed:7728148, PubMed:9744475). The activity of the enzyme is reversible and it can also catalyze the condensation of two acetyl-CoA molecules into acetoacetyl-CoA (PubMed:17371050). Thereby, it plays a major role in ketone body metabolism (PubMed:1715688, PubMed:17371050, PubMed:7728148, PubMed:9744475).

Cellular Location Mitochondrion.

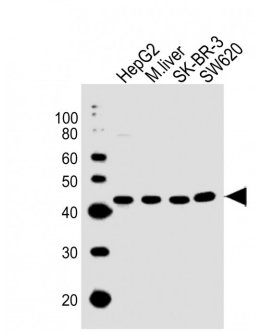
Background

ACAT1 is a mitochondrially localized enzyme that catalyzes the reversible formation of acetoacetyl-CoA from two molecules of acetyl-CoA. Defects in the gene encoding ACAT1 are associated with the alpha-methylacetoaceticaciduria disorder,an inborn error of isoleucine catabolism characterized by urinary excretion of 2-methyl-3-hydroxybutyric acid, 2-methylacetoacetic acid, tiglylglycine, and butanone.

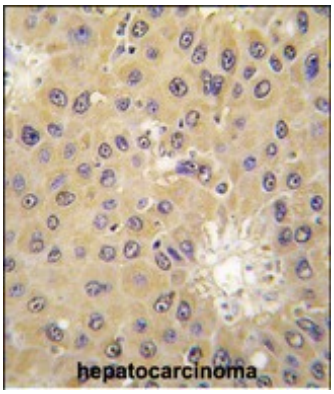
References

Locke,J.A.,Prostate 68 (1), 20-33 (2008)
Guo,Z.Y.,Biochemistry 46 (35), 10063-10071 (2007)
Haapalainen,A.M.,Biochemistry 46 (14), 4305-4321 (2007)

Images



All lanes : Anti-ACAT1 Antibody (C-term) at 1:1000 dilution Lane 1: HepG2 whole cell lysates Lane 2: mouse liver lysates Lane 3: SK-BR-3 whole cell lysates Lane 4: SW620 whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 45 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted with ACAT1 antibody (C-term) (Cat.#AW5517), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

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