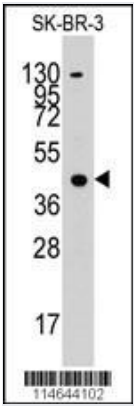
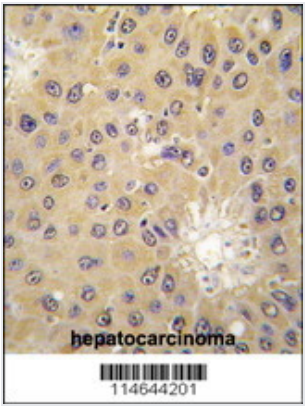
ACAT1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	ACAT1, Polyclonal Antibody
Full Product Name	ACAT1, CT (Acetyl-CoA Acetyltransferase, Mitochondrial, Acetoacetyl-CoA Thiolase, T2, ACAT, MAT) (APC)
Product Gene Name	anti-ACAT1 antibody
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with Allophycocyanin (APC).
Purity/Purification	Purified by Ammonium Sulfate Precipitation.
Specificity	Recognizes human ACAT1.
Preparation and Storage	May be stored at 4 degree C for short-term only. Aliquot to avoid repeated freezing and thawing. Store at -20 degree C. Aliquots are stable for at least 12 months. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap.
Molecular Weight	17,175 Da
OMIM	203750
3D Structure	ModBase 3D Structure for P24752
Immunogen	KLH-conjugated synthetic peptide corresponding to a portion of amino acids within residues 305-335 in the C-terminal region of human ACAT1.
Conjugate	APC
Note	Preservative Free
Product Categories/Family for anti-ACAT1 antibody	Antibodies; Enzymes; Acetyltransferase
Applications Tested/Suitable for anti-ACAT1 antibody	Immunohistochemistry (IHC), ELISA (EIA), Western Blot (WB)
Application Notes for anti-ACAT1 antibody	IHC: 1:10-1:50 ELISA: 1:1000 WB: 1:50-1:100 Applications are based on unconjugated antibody.
Related Product Information for anti-ACAT1 antibody	MBS6460960 is an antibody targeting ACAT1. Also known as ACAT1, CT (Acetyl-CoA Acetyltransferase, Mitochondrial, Acetoacetyl-CoA Thiolase, T2, ACAT, MAT) (APC). Reactive in Human. Host: Rabbit.
Product References and Citations for anti-ACAT1 antibody	1. Locke, J.A., Prostate 68(1), 20-33 (2008). 2. Guo, Z.Y., Biochemistry 46(35), 10063-10071 (2007). 3. Haapalainen, A.M., Biochemistry 46(14), 4305-4321 (2007).
Other Notes	Small volumes of anti-ACAT1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.



Western Blot (WB) of anti-ACAT1 antibody
Western blot analysis of anti-ACAT1 Pab in SK-BR-3 cell line lysates (35ug/lane).ACAT1 (arrow) was detected using the purified Pab.



Immunohistochemistry (IHC) of anti-ACAT1 antibody
Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted with ACAT1 antibody (C-term), 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.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for ACAT1. It may not necessarily be applicable to this product.

NCBI GI #	4557237
NCBI GeneID	38
NCBI Accession #	NP_000010
UniProt Primary Accession #	P24752
UniProt Secondary Accession #	Q96FG8; B2R6H1; G3XAB4
UniProt Related Accession #	P24752
GenBank Nucleotide #	NM_000019.3
NCBI Official Full Name	acetyl-CoA acetyltransferase, mitochondrial
NCBI Official Synonym Full Names	acetyl-CoA acetyltransferase 1
NCBI Official Symbol	ACAT1
NCBI Official Synonym Symbols	T2; MAT; ACAT; THIL
UniProt Protein Name	Acetyl-CoA acetyltransferase, mitochondrial
UniProt Synonym Protein Names	Acetoacetyl-CoA thiolase; T2
UniProt Gene Name	ACAT1
UniProt Synonym Gene Names	ACAT; MAT
UniProt Entry Name	THIL_HUMAN
NCBI Protein Information	acetyl-CoA acetyltransferase, mitochondrial
NCBI Summary for ACAT1	This gene encodes a mitochondrially localized enzyme that catalyzes the reversible formation of acetoacetyl-CoA from two molecules of acetyl-CoA. Defects in this gene are associated with 3-ketothiolase deficiency, an inborn error of isoleucine catabolism characterized by urinary excretion of 2-methyl-3-hydroxybutyric acid, 2-methylacetoacetic acid, tiglylglycine, and butanone. [provided by RefSeq, Feb 2009]

UniProt Comments for ACAT1	ACAT1: Plays a major role in ketone body metabolism. Defects in ACAT1 are a cause of 3-ketothiolase deficiency (3KTD); also known as alpha- methylacetoaceticaciduria. 3KTD is an inborn error of isoleucine catabolism characterized by intermittent ketoacidotic attacks associated with unconsciousness. Some patients die during an attack or are mentally retarded. Urinary excretion of 2-methyl-3- hydroxybutyric acid, 2-methylacetoacetic acid, triglylglycine, butanone is increased. It seems likely that the severity of this disease correlates better with the environmental or acquired factors than with the ACAT1 genotype. Belongs to the thiolase family. Protein type: Mitochondrial; Lipid Metabolism - synthesis and degradation of ketone bodies; Carbohydrate Metabolism - pyruvate; Amino Acid Metabolism - lysine degradation; Secondary Metabolites Metabolism - terpenoid backbone biosynthesis; Carbohydrate Metabolism - propanoate; Carbohydrate Metabolism - butanoate; EC 2.3.1.9; Lipid Metabolism - fatty acid; Amino Acid Metabolism - valine, leucine and isoleucine degradation; Acetyltransferase; Amino Acid Metabolism - tryptophan Chromosomal Location of Human Ortholog: 11q22.3 Cellular Component: mitochondrion; mitochondrial matrix; mitochondrial inner membrane Molecular Function: protein homodimerization activity; enzyme binding; acetyl-CoA C-acetyltransferase activity; metal ion binding; coenzyme binding Biological Process: response to starvation; ketone body catabolic process; response to hormone stimulus; ketone body biosynthetic process; branched chain family amino acid catabolic process; cellular lipid metabolic process; brain development; ketone body metabolic process; liver development; response to organic cyclic substance; protein homooligomerization Disease: Alpha-methylacetoacetic Aciduria
Research Articles on ACAT1	**1.** Our results demonstrated the contrasting effects of STC1 and STC2-derived peptides on human macrophage foam cell formation associated with ACAT1 expression and on HASMC migration.
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