

Product datasheet

Anti-ACAT1 antibody [9H10AB4] ab110290

1 References 4 Images

Overview

Product name	Anti-ACAT1 antibody [9H10AB4]
Description	Mouse monoclonal [9H10AB4] to ACAT1
Host species	Mouse
Tested applications	Suitable for: ICC, Flow Cyt, IP, IHC-P
Species reactivity	Reacts with: Human
Immunogen	Tissue, cells or virus. This information is considered to be commercially sensitive.
Positive control	ICC: Human HDFn cells IHC-P: Human cerebellumIP: HepG2 cells and Human liver mitochondria Flow Cyt: HeLa cells
General notes	<p>This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com.</p> <p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p> <p>Product was previously marketed under the MitoSciences sub-brand.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.5 Preservative: 0.02% Sodium azide Constituent: HEPES buffered saline
Purity	Ammonium Sulphate Precipitation
Purification notes	Purity near homogeneity as judge by SDS-PAGE. The antibody was produced in-vitro using hybridomas grown in serum-free medium and then purified by biochemical fractionation.
Clonality	Monoclonal

Clone number	9H10AB4
Isotype	IgG2a
Light chain type	kappa

Applications

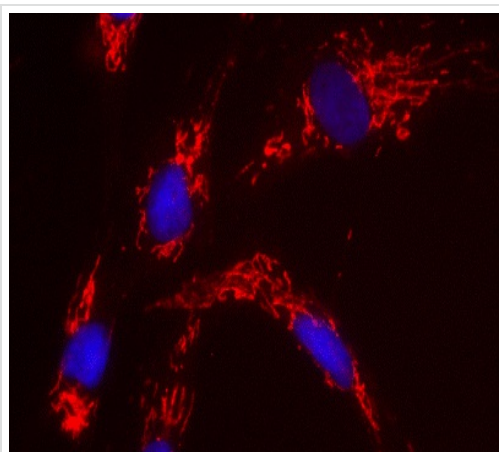
The Abpromise guarantee Our [Abpromise guarantee](#) covers the use of ab110290 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC		Use a concentration of 5 µg/ml.
Flow Cyt		Use a concentration of 1 µg/ml. ab170191 - Mouse monoclonal IgG2a, is suitable for use as an isotype control with this antibody.
IP		Use at an assay dependent concentration.
IHC-P		1/100. Perform heat mediated antigen retrieval via the pressure cooker method (1 minute, with 1 mmol EDTA at pH8) before commencing with IHC staining protocol.

Target

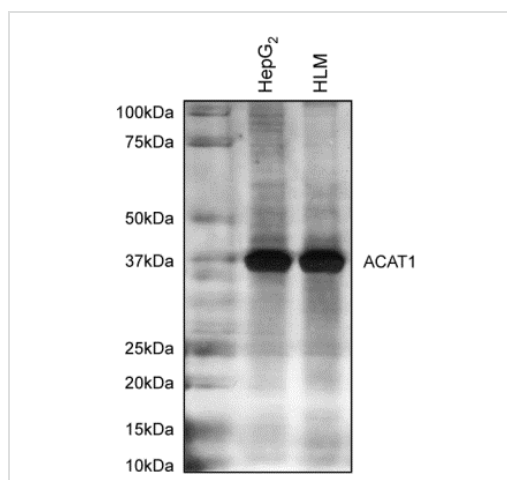
Function	Plays a major role in ketone body metabolism.
Involvement in disease	Defects in ACAT1 are a cause of 3-ketothiolase deficiency (3KTD) [MIM:203750]; also known as alpha-methylacetoaceticaciduria. 3KTD is an inborn error of isoleucine catabolism characterized by intermittent ketoacidotic attacks 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.
Sequence similarities	Belongs to the thiolase family.
Cellular localization	Mitochondrion.

Images



Immunocytochemistry - Anti-ACAT1 antibody
[9H10AB4] (ab110290)

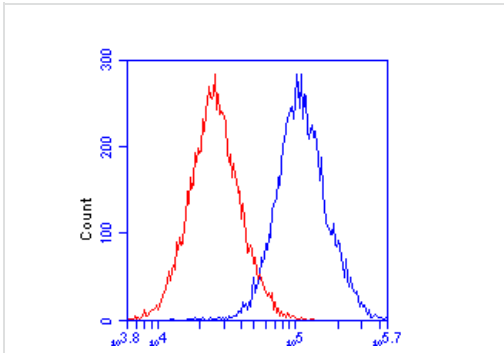
Immunocytochemistry image of ab110290 stained human HDFn cells. The cells were paraformaldehyde fixed (4%, 20 min) and Triton X-100 permeabilized (0.1%, 15 min). The cells were incubated with the antibody (9H10AB4, 5 μ g/ml) for 2 hours at room temperature or over night at 4°C. The secondary antibody was (red) Alexa Fluor® 594 goat anti-mouse IgG (H+L) used at a 1/1000 dilution for 1 hour. 10% Goat serum was used as the blocking agent for all blocking steps. DAPI was used to stain the cell nuclei (blue). Target protein locates mainly in mitochondria.



Immunoprecipitation - Anti-ACAT1 antibody
[9H10AB4] (ab110290)

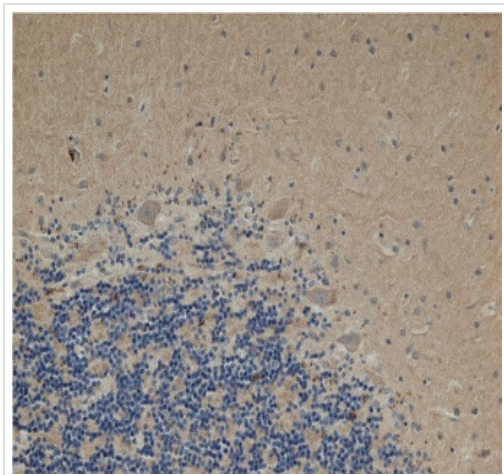
ab110290 immunocaptured from HepG2 cells (lane 1) and Human liver mitochondria (lane 2)

Predicted molecular weight is 44 kDa.



Flow Cytometry - Anti-ACAT1 antibody [9H10AB4]
(ab110290)

ab110290, at 1 µg/mL, staining ACAT1 in HeLa (blue) or in an isotype control antibody (red) and analyzed by flow cytometry.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ACAT1 antibody [9H10AB4] (ab110290)

ACAT1 immunohistochemistry in human cerebellum visualized with ab110290. ACAT1 immunoactivity is most intense in neuronal cell bodies, most notably in the large Purkinje cells. Note the distinctive subcellular localization of ACAT1 immunoreactivity in the Purkinje cell bodies. The functional significance of this pattern is unknown at present but this antibody offers the opportunity to investigate it in more detail.

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