abcam

ab177157

Anti-AHAS antibody [EPR12843]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR12843
Purification technique	Affinity purification Protein A
Concentration	0.165 - 0.17 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Not recommended

Species	Human
Dilution info	-
Notes	-

IP

Not recommended

Species	Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

IHC-P

Not recommended

Species	Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/10 - 1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Target data

See full target information HACL2

Function	Endoplasmic reticulum 2-OH acyl-CoA lyase involved in the cleavage (C1 removal) reaction in the fatty acid alpha-oxydation in a thiamine pyrophosphate (TPP)-dependent manner. Involved in the phytosphingosine degradation pathway.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Species reactivity
Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	The acetohydroxyacid synthase (AHAS) also known as acetolactate synthase (ALS) is an enzyme that plays an important role in the biosynthesis of branched-chain amino acids. With a molecular mass of approximately 170 kDa AHAS catalyzes the first common step in the biosynthetic pathways of valine leucine and isoleucine. This enzyme is widely expressed in plants bacteria and fungi. AHAS is a holoenzyme that consists of a large catalytic subunit and a smaller regulatory subunit showing its complex structure and diverse regulatory control.

Biological function summary	AHAS facilitates the condensation of two pyruvate molecules to form acetolactate or a pyruvate and ketoisovalerate to form acetohydroxybutyrate. This condensation reaction is a critical step in the synthesis of all three branched-chain amino acids which are essential components for protein construction in various organisms. As a part of a multi-enzyme complex the activity of AHAS is also modulated by feedback mechanisms from the end products of its pathway ensuring the balance in amino acid production and cellular homeostasis.
Pathways	AHAS integrates into the branched-chain amino acid biosynthesis pathway directly taking its place at the start. This pathway connects to amino acid metabolism which is essential for protein synthesis. AHAS is intertwined with proteins like dihydroxyacid dehydratase and branched-chain aminotransferase which continue the pathway downstream. These interactions highlight AHAS's significance in creating amino acids necessary for organismal growth and development.
Associated diseases and disorders	AHAS relates prominently to conditions involving imbalances in amino acid metabolism. Alterations in AHAS function can lead to metabolic disorders such as maple syrup urine disease although it primarily involves branched-chain alpha-keto acid dehydrogenase complex. In some cases herbicides target AHAS poisoning the mechanism in plants and disrupting their growth. Understanding the function of AHAS helps us to comprehend the architecture of metabolic diseases and assists in designing therapeutic approaches even though the direct connection with human metabolic disorders remains mainly indirect.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

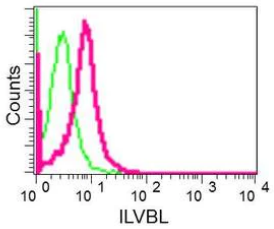
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

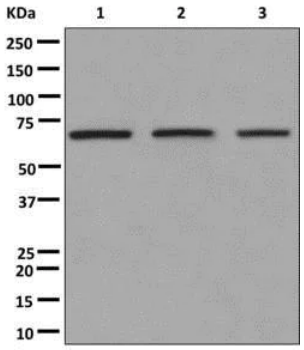
2 product images



Flow Cytometry (Intracellular) - Anti-AHAS antibody [EPR12843] (ab177157)

AHAS Flow Cytometry (Intracellular) staining using rabbit Anti-AHAS antibody

Intracellular flow cytometric analysis of permeabilized Hela cells labeling AHAS with ab177157 at 1/10 dilution (red), or a rabbit IgG (negative) (green).



Western blot - Anti-AHAS antibody [EPR12843] (ab177157)

AHAS Western blot staining using rabbit Anti-AHAS antibody

All lanes:
Western blot - Anti-AHAS antibody [EPR12843] (ab177157) at 1/1000 dilution

Lane 1:
HeLa cell lysate at 10 µg

Lane 2:
HepG2 cell lysate at 10 µg

Lane 3:
A549 cell lysate at 10 µg

Secondary

All lanes:
Goat anti-rabbit HRP at 1/2000 dilution

Predicted band size: 67 kDa

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