abcam

Product datasheet

Anti-Acetyl Coenzyme A Carboxylase antibody [EP687Y] - BSA and Azide free ab173584

KO VALIDATED Recombinant RabMAb

7 Images

Overview

Product name	Anti-Acetyl Coenzyme A Carboxylase antibody [EP687Y] - BSA and Azide free
Description	Rabbit monoclonal [EP687Y] to Acetyl Coenzyme A Carboxylase - BSA and Azide free
Host species	Rabbit
Specificity	Acetyl Coenzyme A Carboxylase is highly expressed in lipogenic tissues such as liver, adipose, and lactating mammary gland, and its activities are regulated at various levels [Proc Natl Acad Sci U S A. 2003 Jun 24;100(13):7515-20.].
Tested applications	**Suitable for:** WB, IHC-P
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	IHC-P: Human breast carcinoma, Mouse stomach and Rat kidney tissue.
General notes	ab173584 is the carrier-free version of **ab45174**. Our **carrier-free** antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications. Use our **conjugation kits** for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold. This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc. 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 production For more information **see here**.

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

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EP687Y
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab173584 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
WB		Use at an assay dependent concentration. Detects a band of approximately 265 kDa (predicted molecular weight: 265 kDa). Can be blocked with Acetyl Coenzyme A Carboxylase peptide (**ab195232**).
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. See **IHC antigen retrieval protocols**.

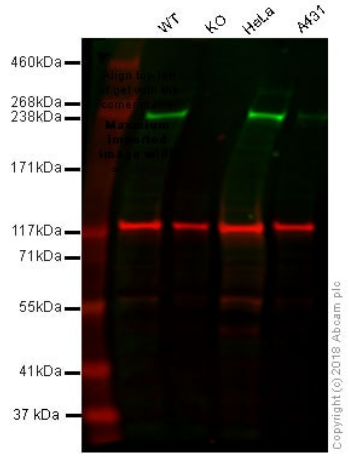
Target

Function	Catalyzes the rate-limiting reaction in the biogenesis of long-chain fatty acids. Carries out three functions: biotin carboxyl carrier protein, biotin carboxylase and carboxyltransferase.
Tissue specificity	Expressed in brain, placental, skeletal muscle, renal, pancreatic and adipose tissues; expressed at low level in pulmonary tissue; not detected in the liver.
Pathway	Lipid metabolism; malonyl-CoA biosynthesis; malonyl-CoA from acetyl-CoA: step 1/1.
Involvement in disease	Acetyl-CoA carboxylase 1 deficiency
Sequence similarities	Contains 1 ATP-grasp domain. Contains 1 biotin carboxylation domain. Contains 1 biotinyl-binding domain. Contains 1 carboxyltransferase domain.
Post-translational	Phosphorylation on Ser-1263 is required for interaction with BRCA1.

modifications

Cellular localization Cytoplasm.

Images



Western blot - Anti-Acetyl Coenzyme A Carboxylase antibody [EP687Y] - BSA and Azide free (ab173584)

All lanes : Anti-Acetyl Coenzyme A Carboxylase antibody [EP687Y] (**ab45174**) at 1/2000 dilution (unpurified)

Lane 1 : Wild-type HAP1 whole cell lysate
Lane 2 : ACACA (Acetyl Coenzyme A Carboxylase) knockout HAP1 whole cell lysate
Lane 3 : HeLa whole cell lysate
Lane 4 : A431 whole cell lysate

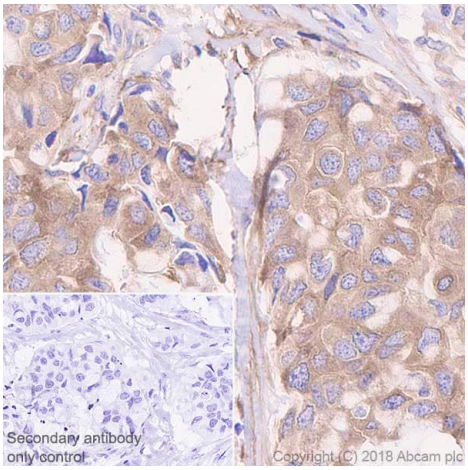
Lysates/proteins at 20 µg per lane.

Predicted band size: 265 kDa

Lanes 1 - 4: Merged signal (red and green). Green - **ab45174** observed at 265 kDa. Red - loading control, **ab130007**, observed at 130 kDa.

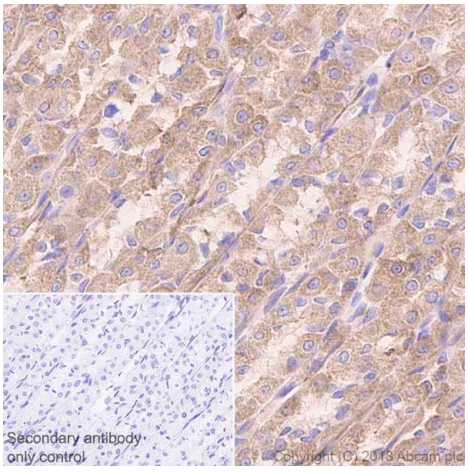
ab45174 was shown to specifically react with Acetyl Coenzyme A Carboxylase in wild-type HAP1 cells as signal was lost in ACACA (Acetyl Coenzyme A Carboxylase) knockout cells. Wild-type and ACACA (Acetyl Coenzyme A Carboxylase) knockout samples were subjected to SDS-PAGE. Ab45174 and **ab130007** (Mouse anti-Vinculin loading control) were incubated overnight at 4°C at 1/2000 dilution and 1/20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed **ab216773** and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed **ab216776** secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab45174**).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Acetyl Coenzyme A Carboxylase antibody [EP687Y] - BSA and Azide free (ab173584)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human breast carcinoma tissue sections labeling Acetyl Coenzyme A Carboxylase with purified **ab45174** at 1/400 dilution (2.06 µg/mL). Heat mediated antigen retrieval was performed using **ab93684** (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab45174**)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Acetyl Coenzyme A Carboxylase antibody [EP687Y] - BSA and Azide free (ab173584)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of rat stomcah tissue sections labeling Acetyl Coenzyme A Carboxylase with purified **ab45174** at 1/400 dilution (2.06 µg/mL). Heat mediated antigen retrieval was performed using **ab93684** (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.
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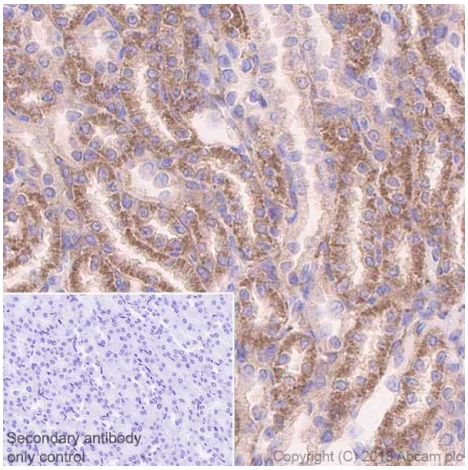
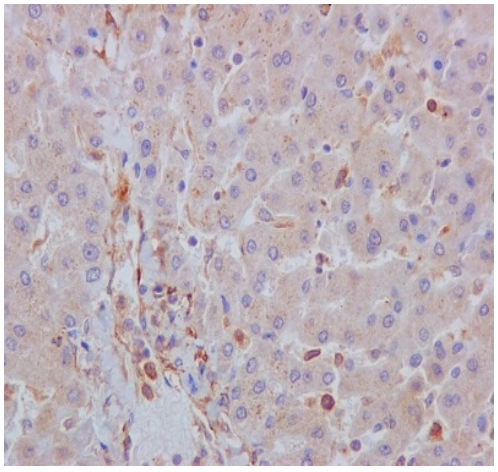


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Acetyl Coenzyme A Carboxylase antibody [EP687Y] - BSA and Azide free (ab173584)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse kidney tissue sections labeling Acetyl Coenzyme A Carboxylase with purified **ab45174** at 1/400 dilution (2.06 µg/mL). Heat mediated antigen retrieval was performed using **ab93684** (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.

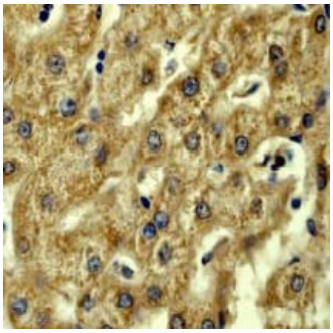
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab45174**)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Acetyl Coenzyme A Carboxylase antibody [EP687Y] - BSA and Azide free (ab173584)

Immunohistochemical analysis of paraffin-embedded human liver tissue labeling Acetyl Coenzyme A Carboxylase with **ab45174** (unpurified) at 1/250 dilution followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**, 1/500). Counter stained with hematoxylin. Heat mediated antigen retrieval was performed with citrate buffer pH 6 before commencing with IHC staining protocol.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab45174**).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Acetyl Coenzyme A Carboxylase antibody [EP687Y] - BSA and Azide free (ab173584)

ab45174 (unpurified), at a dilution of 1/50, staining human Acetyl Coenzyme A Carboxylase in human liver by immunohistochemistry using paraffin embedded tissue. Heat mediated antigen retrieval was perfromed with citrate buffer pH 6 before commencing with IHC staining protocol.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab45174**).

Anti-Acetyl Coenzyme A Carboxylase antibody [EP687Y] - BSA and Azide free (ab173584)

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