Product datasheet

Anti-Acetyl Coenzyme A carboxylase alpha antibody
ab72046

Overview

Product name          Anti-Acetyl Coenzyme A carboxylase alpha antibody
Description           Rabbit polyclonal to Acetyl Coenzyme A carboxylase alpha
Host species          Rabbit
Tested applications   Suitable for: IHC-P, WB
                       Unsuitable for: IP
Species reactivity    Reacts with: Mouse, Cow, Human
                       Predicted to work with: Rat, Sheep, Rabbit, Horse, Guinea pig, Dog, Pig, Chimpanzee,
                       Rhesus monkey, Gorilla, Orangutan
Immunogen             Synthetic peptide corresponding to a region between residue 2333 and the C-terminus (residue 2383) of human acetyl Coenzyme A carboxylase alpha (NP_942131.1).
Positive control      HeLa, 293T and NIH3T3 whole cell lysates.

Properties

Form                  Liquid
Storage instructions  Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer        Preservative: 0.09% Sodium Azide
                       Constituents: 8mM PBS, 60mM Citrate, 150mM Tris, pH 7-8
Purity                Immunogen affinity purified
Clonality             Polyclonal
Isotype               IgG

Applications

Our Abpromise guarantee covers the use of ab72046 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.
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
Defects in ACACA are a cause of acetyl-CoA carboxylase 1 deficiency (ACACAD) [MIM:200350]; also known as ACAC deficiency or ACC deficiency. An inborn error of de novo fatty acid synthesis associated with severe brain damage, persistent myopathy and poor growth.

Sequence similarities
Contains 1 ATP-grasp domain.
Contains 1 biotin carboxylation domain.
Contains 1 biotinyl-binding domain.
Contains 1 carboxyltransferase domain.

Post-translational modifications
Phosphorylation on Ser-1263 is required for interaction with BRCA1.

Cellular localization
Cytoplasm.

Application notes
Is unsuitable for IP.

IHC-P
Use a concentration of 1 µg/ml. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

WB
1/2000 - 1/10000. Detects a band of approximately 266 kDa (predicted molecular weight: 266 kDa).
Western blot - acetyl Coenzyme A carboxylase alpha antibody (ab72046)

All lanes: Anti-Acetyl Coenzyme A carboxylase alpha antibody (ab72046) at 0.1 µg/ml

Lane 1: HeLa whole cell lysate at 50 µg
Lane 2: HeLa whole cell lysate at 15 µg
Lane 3: HeLa whole cell lysate at 5 µg
Lane 4: 293T whole cell lysate at 50 µg
Lane 5: NIH3T3 whole cell lysate at 50 µg

Predicted band size: 266 kDa
Observed band size: 266 kDa
Additional bands at: 130 kDa, 90 kDa. We are unsure as to the identity of these extra bands.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Acetyl Coenzyme A carboxylase alpha antibody (ab72046)

IHC image of ab72046 staining in human normal skin formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with EDTA (pH9, epitope retrieval solution 2) for 20 mins. The section was then incubated with ab72046, 1µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

Please note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

Our Abpromise to you: Quality guaranteed and expert technical support

• Replacement or refund for products not performing as stated on the datasheet
• Valid for 12 months from date of delivery
• Response to your inquiry within 24 hours
• We provide support in Chinese, English, French, German, Japanese and Spanish
• Extensive multi-media technical resources to help you
• We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit http://www.abcam.com/abpromise or contact our technical team.

Terms and conditions

• Guarantee only valid for products bought direct from Abcam or one of our authorized distributors