Anti-AMPK alpha 1 antibody ab3759

Overview

Product name: Anti-AMPK alpha 1 antibody

Description: Rabbit polyclonal to AMPK alpha 1

Host species: Rabbit

Tested applications: Suitable for: IHC-P, ICC/IF, IP, WB

Species reactivity: Reacts with: Mouse, Rat, Cow, Human

Predicted to work with: Rabbit, Horse, Chicken, Guinea pig, Dog, Turkey, Pig, Chimpanzee, Rhesus monkey, Gorilla, Tilapia, Orangutan, Medaka fish, Platypus

Immunogen: Synthetic peptide (Human) - which represented a portion of AMP activated protein Kinase (AMPK), alpha 1 catalytic subunit encoded within exon 8.

Positive control: HepG2 whole cell lysate (ab7900) can be used as a positive control in WB. This antibody gave a positive result in IHC in the following FFPE tissue: Human normal pancreas. It also gave a positive result in PANC1 cell line in IF/ICC

Properties

Form: Liquid

Storage instructions: Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.

Storage buffer: Preservative: 0.1% Sodium azide

Constituents: 0.021% PBS, 1.764% Sodium citrate, 1.815% Tris

Purity: Immunogen affinity purified

Clonality: Polyclonal

Isotype: IgG

Applications

Our Abpromise guarantee covers the use of ab3759 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

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<td>IHC-P</td>
<td>Use a concentration of 5 µg/ml.</td>
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Function
Responsible for the regulation of fatty acid synthesis by phosphorylation of acetyl-CoA carboxylase. It also regulates cholesterol synthesis via phosphorylation and inactivation of hormone-sensitive lipase and hydroxymethylglutaryl-CoA reductase. Appears to act as a metabolic stress-sensing protein kinase switching off biosynthetic pathways when cellular ATP levels are depleted and when 5’-AMP rises in response to fuel limitation and/or hypoxia. This is a catalytic subunit.

Sequence similarities
Belongs to the protein kinase superfamily. CAMK Ser/Thr protein kinase family. SNF1 subfamily. Contains 1 protein kinase domain.

Images

Samples: Extracts from
1. Bovine aortic endothelial cells
2. Rat aortic smooth muscle cells
3. HepG2 cells
4. Human aortic endothelial cells

Antibody: Affinity purified Rabbit anti-AMPK alpha 1 (ab3759) used at 2µg/ml (1/500).

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Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human muscle tissue labelling AMPK alpha 1 with ab3759 at 1/5000 (0.2µg/ml). Detection: DAB.

IHC image of AMPK alpha 1 staining in Human normal pancreas formalin fixed paraffin embedded tissue section, performed on a Leica BondTM system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab3759, 5µg/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.
ICC/IF image of ab3759 stained PANC1 cells. The cells were 100% methanol fixed (5 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab3759, 1µg/ml) overnight at +4°C. The secondary antibody (green) was ab96899, DyLight® 488 goat anti-rabbit IgG (H+L) used at a 1/250 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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