

Product datasheet

Anti-AMPK alpha 1 antibody ab3759

10 References 4 Images

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	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: 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 **ab3759** 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
IHC-P		Use a concentration of 5 µg/ml.

Application	Abreviews	Notes
ICC/IF		Use a concentration of 1 µg/ml.
IP		Use at 2-8 µg/mg of lysate.
WB		1/500 - 1/5000. Predicted molecular weight: 63 kDa.

Target

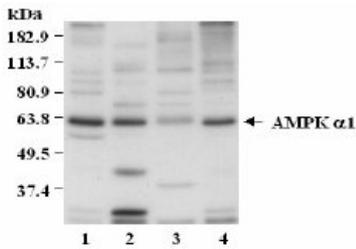
Function

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



Western blot - Anti-AMPK alpha 1 antibody (ab3759)

Samples: Extracts from

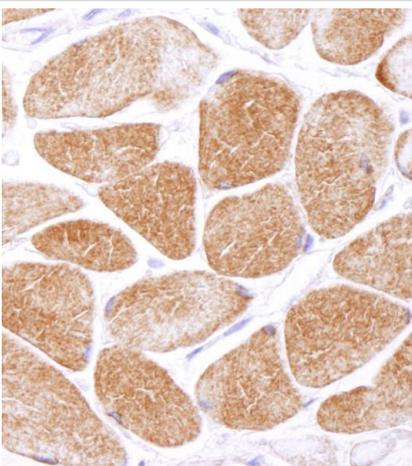
1. Bovine aortic endothelial cells
2. Rat aortic smooth muscle cells
3. HepG2 cells
4. Human aortic endothelial cells

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

Samples: Extracts from

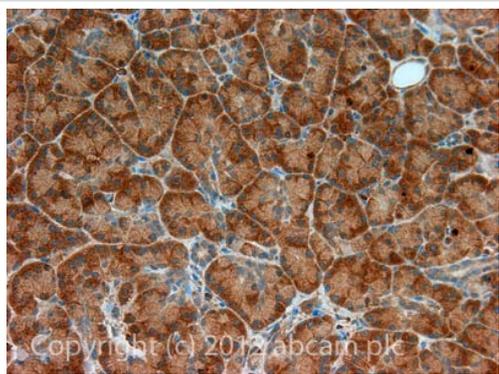
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Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-AMPK alpha 1 antibody (ab3759)

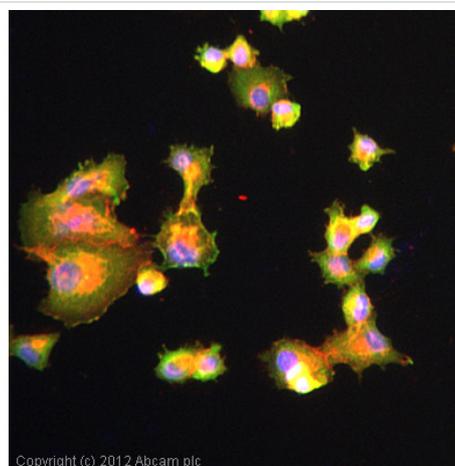
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human muscle tissue labelling AMPK alpha 1 with ab3759 at 1/5000 (0.2µg/ml). Detection: DAB.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-AMPK alpha 1 antibody (ab3759)

IHC image of AMPK alpha 1 staining in Human normal pancreas 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 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.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-AMPK alpha 1 antibody (ab3759)

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.

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