


Product datasheet

Anti-AMPK alpha 1 antibody ab3759

29 References 5 Images

Overview

Product name	Anti-AMPK alpha 1 antibody
Description	Rabbit polyclonal to AMPK alpha 1
Host species	Rabbit
Tested applications	Suitable for: IP, WB, IHC-P
Species reactivity	Reacts with: Mouse, Rat, Cow, Human Predicted to work with: Orangutan 
Immunogen	Synthetic peptide within Human AMPK alpha 1 aa 350-450. The exact immunogen sequence used to generate this antibody is proprietary information. If additional detail on the immunogen is needed to determine the suitability of the antibody for your needs, please contact our Scientific Support team to discuss your requirements. BAA36547.1 (GeneID 5562). Database link: Q13131
Positive control	WB: Bovine aortic endothelial cell extracts. Rat aortic smooth muscle cell extracts. HepG2 extracts. Human aortic endothelial cell extract. HeLa, HEK-293T, Jurkat, TCMK-1 and NIH/3T3 whole cell lysate. IHC-P: Human muscle and pancreas tissue. IP: AMPK alpha 1 IP in HeLa cell lysate.
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	pH: 7 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

The Abpromise guarantee 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.

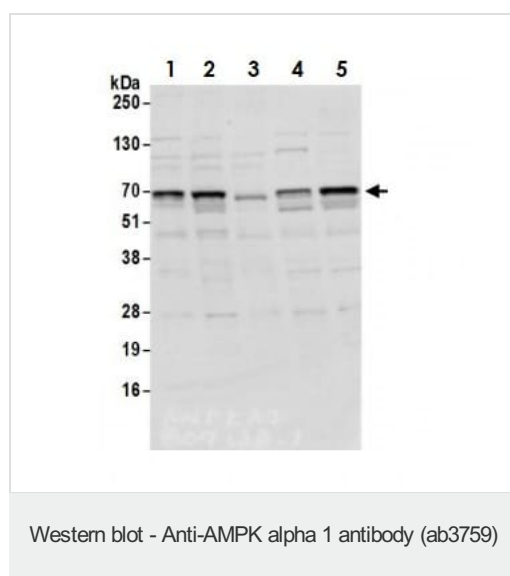
Application	Abreviews	Notes
IP		Use at 2-5 µg/mg of lysate.
WB		1/500 - 1/10000. Predicted molecular weight: 63 kDa.
IHC-P		Use at an assay dependent concentration.

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



All lanes : Anti-AMPK alpha 1 antibody (ab3759) at 0.1 µg/ml

Lane 1 : HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate

Lane 2 : HEK-293T (Human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell lysate

Lane 3 : Jurkat (Human T cell leukemia cell line from peripheral blood) whole cell lysate

Lane 4 : TCMK-1 (Mouse kidney epithelial cell line) whole cell lysate

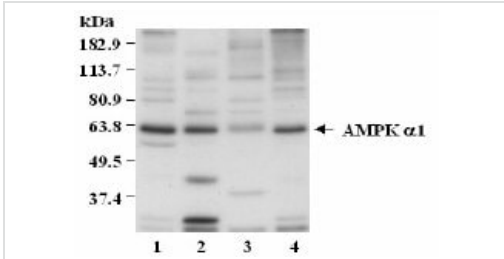
Lane 5 : NIH/3T3 (Mouse embryonic fibroblast cell line) whole cell lysate

Lysates/proteins at 15 µg per lane.

Predicted band size: 63 kDa

Exposure time: 3 seconds

Lysates prepared using NETN lysis buffer.

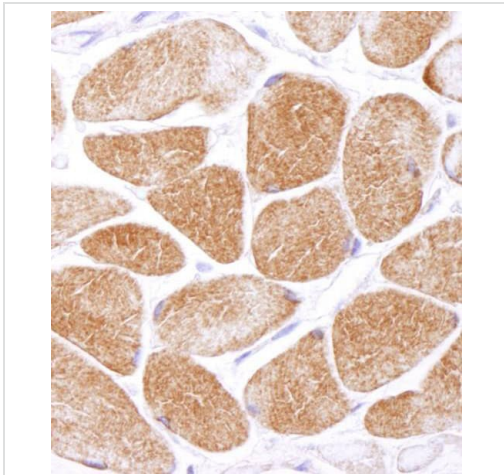


Western blot - Anti-AMPK alpha 1 antibody (ab3759)

Samples: Extracts from

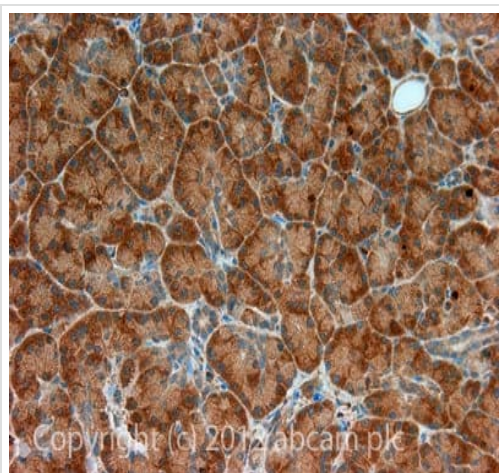
1. Bovine aortic endothelial cells
2. Rat aortic smooth muscle cells
3. HepG2 cells
4. Human aortic endothelial cells

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



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

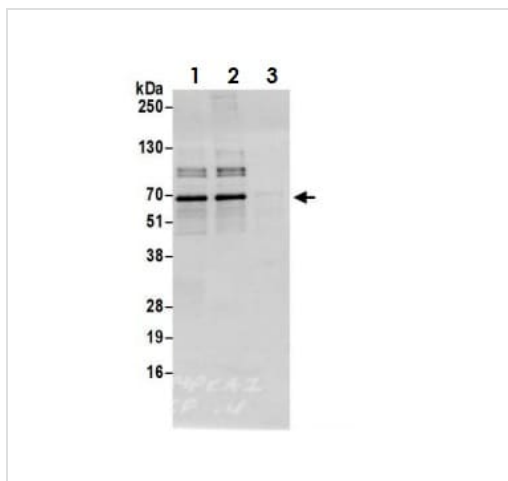
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human muscle tissue labelling AMPK alpha 1 with ab3759 at 1/5000 (0.2µg/ml). Detection: DAB.



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.



Immunoprecipitation - Anti-AMPK alpha 1 antibody (ab3759)

Samples: Whole cell lysate (1.0 mg per IP reaction; 20% of IP loaded) from HeLa cells prepared using NETN lysis buffer.

Lane 1 and 2: ab3759 used for IP at 3 µg per reaction, two lots.

Lane 3: Control IgG.

For blotting immunoprecipitated AMPK alpha 1, ab3759 was used at 0.4 µg/ml.

Detection: Chemiluminescence with an exposure time of 3 seconds.

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