

Product datasheet

Anti-AMPK alpha 1 antibody [2B7] ab110036

KO VALIDATED

[14 References](#) [7 Images](#)

Overview

Product name	Anti-AMPK alpha 1 antibody [2B7]
Description	Mouse monoclonal [2B7] to AMPK alpha 1
Host species	Mouse
Tested applications	Suitable for: WB, ICC/IF, ELISA, IHC-P, Flow Cyt
Species reactivity	Reacts with: Mouse, Rat, Human, African green monkey
Immunogen	Purified recombinant fragment of Human AMPK alpha 1 expressed in <i>E. Coli</i> .
Positive control	Jurkat, HeLa, HepG2, MCF-7, Cos7, NIH3T3, K562, HEK293 and PC-12 cell lysates. Ovarian cancer and brain tissues. NTERA-2 and PC-2 cells WB: RAW 264.7, Mouse Liver, Neuro2A cell lysate.
General notes	<p>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.</p> <p>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</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	Preservative: 0.05% Sodium azide Constituent: PBS
Purity	Protein G purified
Purification notes	Purified from tissue culture supernatant.
Clonality	Monoclonal
Clone number	2B7
Isotype	IgG1

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab110036 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		1/500 - 1/2000. Predicted molecular weight: 64 kDa.
ICC/IF		1/200 - 1/1000.
ELISA		1/10000.
IHC-P		1/200 - 1/1000.
Flow Cyt		1/200 - 1/1000. ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Target

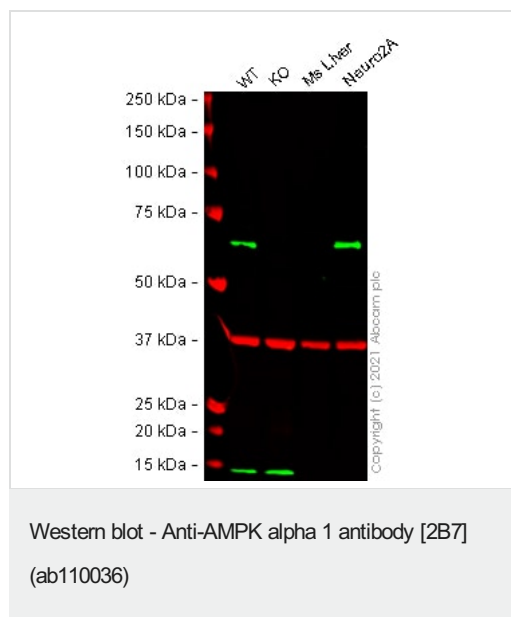
Function

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 [2B7] (ab110036) at 1/500 dilution

Lane 1 : Wild-type RAW 264.7 cell lysate

Lane 2 : PRKAA1 knockout RAW 264.7 cell lysate

Lane 3 : Mouse Liver cell lysate

Lane 4 : Neuro2A cell lysate

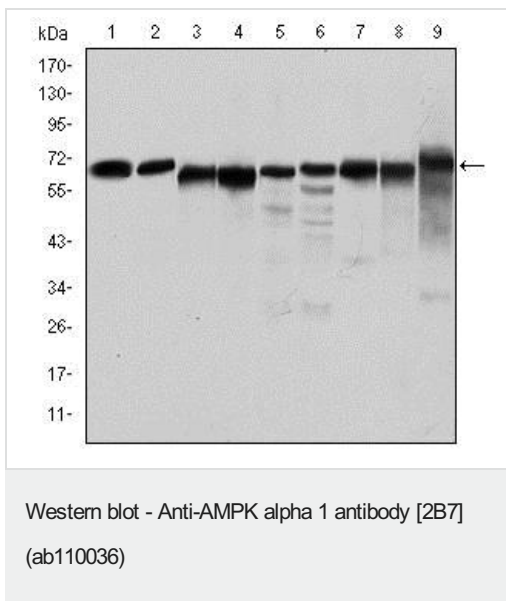
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Predicted band size: 64 kDa

Observed band size: 64 kDa

False colour image of Western blot: Anti-AMPK alpha 1 antibody [2B7] staining at 1/500 dilution, shown in green; Rabbit Anti-GAPDH antibody [EPR16891] ([ab181602](#)) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab110036 was shown to bind specifically to AMPK alpha 1. A band was observed at 64 kDa in wild-type RAW 264.7 cell lysates with no signal observed at this size in PRKAA1 knockout cell line [ab280055](#) (knockout cell lysate [ab280114](#)). To generate this image, wild-type and PRKAA1 knockout RAW 264.7 cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3 % milk in TBS-0.1 % Tween[®] 20 (TBS-T) before incubation with primary antibodies overnight at 4°C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Mouse IgG H&L (IRDye[®] 800CW) preabsorbed ([ab216772](#)) and Goat anti-Rabbit IgG H&L (IRDye[®] 680RD) preabsorbed ([ab216777](#)) at 1/20000 dilution.



All lanes : Anti-AMPK alpha 1 antibody [2B7] (ab110036) at 1/500 dilution

Lane 1 : Jurkat cell lysate.

Lane 2 : HeLa cell lysate.

Lane 3 : HepG2 cell lysate.

Lane 4 : MCF-7 cell lysate.

Lane 5 : Cos7 cell lysate.

Lane 6 : NIH3T3 cell lysate.

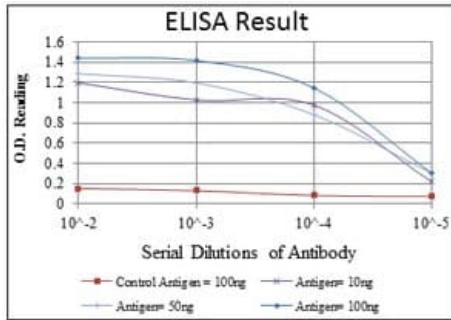
Lane 7 : K562 cell lysate.

Lane 8 : HEK293 cell lysate.

Lane 9 : PC-12 cell lysate.

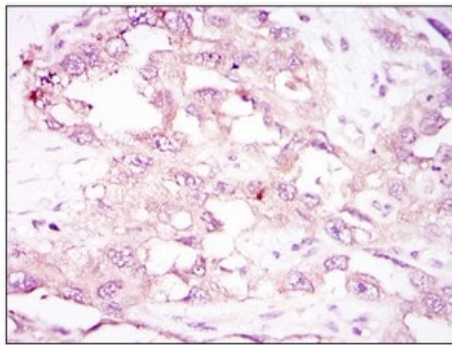
Predicted band size: 64 kDa

Observed band size: 64 kDa



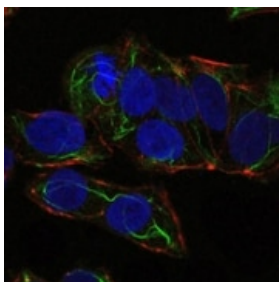
ELISA - Anti-AMPK alpha 1 antibody [2B7]
(ab110036)

The proposed dilution of ab110036 is 1/10000.



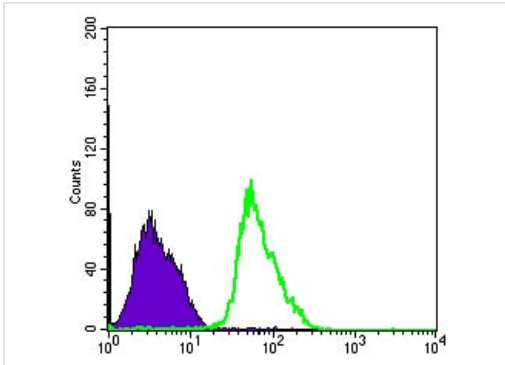
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-AMPK alpha 1 antibody [2B7] (ab110036)

ab110036 at 1/200 dilution staining AMPK alpha 1 in paraffin-embedded ovarian cancer by Immunohistochemistry.



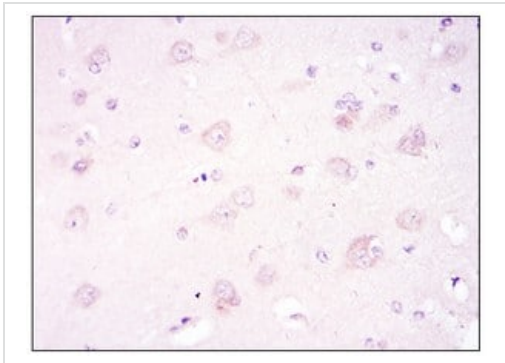
Immunocytochemistry/ Immunofluorescence - Anti-AMPK alpha 1 antibody [2B7] (ab110036)

ab110036 at 1/200 dilution staining AMPK alpha 1 in NTERA-2 cells (green) by Immunofluorescence. The nuclei are stained with DRAQ5 fluorescent DNA dye (blue) and the Actin filaments have been labeled with Alexa Fluor-555 phalloidin (red).



Flow Cytometry - Anti-AMPK alpha 1 antibody [2B7]
(ab110036)

ab110036 used in Flow cytometric analysis of PC-2 cells (green).
The negative control is indicated in purple.



Immunohistochemistry (Formalin/PFA-fixed paraffin-
embedded sections) - Anti-AMPK alpha 1 antibody
[2B7] (ab110036)

ab110036 at 1/200 dilution staining AMPK alpha 1 in paraffin-
embedded brain tissues by Immunohistochemistry.

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

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