

Anti-AMPK gamma 1 antibody [Y307] ab32382

敲除验证
重组
RabMAb

★★★★★
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概述

产品名称	Anti-AMPK gamma 1抗体[Y307]
描述	兔单克隆抗体[Y307] to AMPK gamma 1
宿主	Rabbit
经测试应用	适用于: WB, IHC-P
种属反应性	与反应: Human
免疫原	Synthetic peptide within Human AMPK gamma 1 aa 1-100. The exact sequence is proprietary.
表位	ab32382 reacts with an epitope located in the N terminal region of AMPK gamma 1.
阳性对照	Jurkat cell lysate and HeLa cell lysate, human skeletal muscles
常规说明	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p> <p>Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.</p>

性能

形式	Liquid
存放说明	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
存储溶液	<p>pH: 7.20</p> <p>Preservative: 0.01% Sodium azide</p> <p>Constituents: 49% PBS, 50% Glycerol (glycerin, glycerine), 0.05% BSA</p>
纯度	Protein A purified
克隆	单克隆
克隆编号	Y307

同种型

lgG

应用

The Abpromise guarantee

Abpromise™承诺保证使用ab32382于以下的经测试应用

“应用说明”部分 下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

应用	Ab评论	说明
WB	★★★★★ (1)	1/1000 - 1/2000. Predicted molecular weight: 38 kDa.
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

靶标

功能

AMP/ATP-binding subunit of AMP-activated protein kinase (AMPK), an energy sensor protein kinase that plays a key role in regulating cellular energy metabolism. In response to reduction of intracellular ATP levels, AMPK activates energy-producing pathways and inhibits energy-consuming processes: inhibits protein, carbohydrate and lipid biosynthesis, as well as cell growth and proliferation. AMPK acts via direct phosphorylation of metabolic enzymes, and by longer-term effects via phosphorylation of transcription regulators. Also acts as a regulator of cellular polarity by remodeling the actin cytoskeleton; probably by indirectly activating myosin. Gamma non-catalytic subunit mediates binding to AMP, ADP and ATP, leading to activate or inhibit AMPK: AMP-binding results in allosteric activation of alpha catalytic subunit (PRKAA1 or PRKAA2) both by inducing phosphorylation and preventing dephosphorylation of catalytic subunits. ADP also stimulates phosphorylation, without stimulating already phosphorylated catalytic subunit. ATP promotes dephosphorylation of catalytic subunit, rendering the AMPK enzyme inactive.

序列相似性

Belongs to the 5'-AMP-activated protein kinase gamma subunit family.
Contains 4 CBS domains.

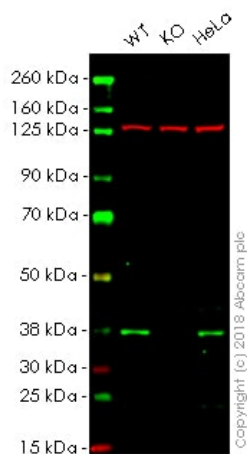
结构域

The AMPK pseudosubstrate motif resembles the sequence around sites phosphorylated on target proteins of AMPK, except the presence of a non-phosphorylatable residue in place of Ser. In the absence of AMP this pseudosubstrate sequence may bind to the active site groove on the alpha subunit (PRKAA1 or PRKAA2), preventing phosphorylation by the upstream activating kinase STK11/LKB1.
The CBS domains mediate binding to AMP, ADP and ATP. 2 sites bind either AMP or ATP, whereas a third site contains a tightly bound AMP that does not exchange. Under physiological conditions AMPK mainly exists in its inactive form in complex with ATP, which is much more abundant than AMP.

翻译后修饰

Phosphorylated by ULK1 and ULK2; leading to negatively regulate AMPK activity and suggesting the existence of a regulatory feedback loop between ULK1, ULK2 and AMPK.

图片



Western blot - Anti-AMPK gamma 1 antibody [Y307] (ab32382)

All lanes : Anti-AMPK gamma 1 antibody [Y307] (ab32382) at 1/1000 dilution

Lane 1 : Wild-type HAP1 whole cell lysate

Lane 2 : PRKAG1 (AMPK gamma 1) knockout HAP1 whole cell lysate

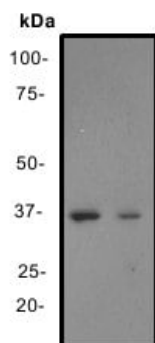
Lane 3 : HeLa whole cell lysate

Lysates/proteins at 20 µg per lane.

Predicted band size: 38 kDa

Lanes 1 - 3: Merged signal (red and green). Green - ab32382 observed at 38 kDa. Red - loading control, Mouse anti Vinculin, observed at 125 kDa.

ab32382 was shown to recognize AMPK gamma 1 in wild-type HAP1 cells as signal was lost at the expected MW in PRKAG1 (AMPK gamma 1) knockout cells. Additional cross-reactive bands were observed in the wild-type and knockout cells. Wild-type and PRKAG1 (AMPK gamma 1) knockout samples were subjected to SDS-PAGE. Ab32382 and Mouse anti-Vinculin ([ab9484](#) loading control) were incubated overnight at 4°C at 1/1000 dilution and 1/20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed [ab216773](#) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed [ab216776](#) secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.



Western blot - Anti-AMPK gamma 1 antibody [Y307] (ab32382)

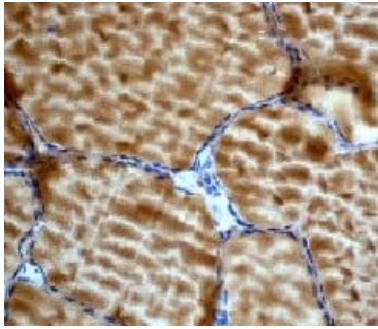
All lanes : Anti-AMPK gamma 1 antibody [Y307] (ab32382) at 1/2000 dilution

Lane 1 : Jurkat cell lysate

Lane 2 : HeLa cell lysate

Predicted band size: 38 kDa

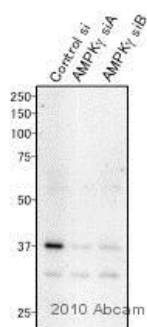
Observed band size: 37 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-AMPK gamma 1 antibody [Y307] (ab32382)

This image shows paraffin embedded human skeletal muscle stained with 1/250 **ab23282**.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Western blot - Anti-AMPK gamma 1 antibody [Y307] (ab32382)

This image is courtesy of an anonymous Abreview

All lanes : Anti-AMPK gamma 1 antibody [Y307] (ab32382) at 1/2000 dilution

Lane 1 : HeLa whole cell lysate - Control Si

Lane 2 : HeLa whole cell lysate - treated with AMPK gamma 1 siRNA A for 36 hours

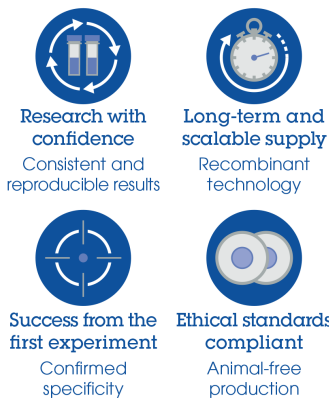
Lane 3 : HeLa whole cell lysate - treated with AMPK gamma 1 siRNA B for 36 hours

Secondary

All lanes : HRP-conjugated Donkey polyclonal to rabbit IgG at 1/3000 dilution

Predicted band size: 38 kDa

Why choose a recombinant antibody?



Anti-AMPK gamma 1 antibody [Y307] (ab32382)

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