abcam

Product datasheet

# Anti-AMPK gamma 1 antibody [Y308] ab32508

重组 RabMAb

★★★★★ 7 Abreviews 24 References 5 图像

## 概述

| | |
|---|---|
| **产品名称** | Anti-AMPK gamma 1抗体[Y308] |
| **描述** | 兔单克隆抗体[Y308] to AMPK gamma 1 |
| **宿主** | Rabbit |
| **特异性** | This antibody recognises 5'-AMP-activated protein kinase (AMPK). |
| **经测试应用** | **适用于:** Flow Cyt (Intra), IP, WB<br>**不适用于:** ICC/IF or IHC |
| **种属反应性** | **与反应:** Human<br>**预测可用于:** Mouse, Rat, African green monkey |
| **免疫原** | Synthetic peptide within Human AMPK gamma 1 aa 300-400 (C terminal). The exact sequence is proprietary.<br>(Peptide available as **ab218345**) |
| **阳性对照** | Jurkat whole cell lysate (**ab7899**). Flow Cyt (intra): HeLa cells |
| **常规说明** | This product is a recombinant monoclonal antibody, which offers several advantages including:<br>- High batch-to-batch consistency and reproducibility<br>- Improved sensitivity and specificity<br>- Long-term security of supply<br>- Animal-free production<br>For more information **see here**.<br>Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**. |

## 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** | pH: 7.20<br>Preservative: 0.01% Sodium azide<br>Constituents: 49% PBS, 50% Glycerol (glycerin, glycerine), 0.05% BSA |
| **纯度** | Protein A purified |

| | |
|---|---|
| **克隆** | 单克隆 |
| **克隆编号** | Y308 |
| **同种型** | IgG |

## 应用

**The Abpromise guarantee** **Abpromise™承诺保证使用ab32508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 |
|---|---|---|
| **Flow Cyt (Intra)** | | 1/100.<br>**ab172730** - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody. |
| **IP** | | Use at an assay dependent concentration. |
| **WB** | ★★★★★ (7) | 1/1000 - 1/10000. Detects a band of approximately 38 kDa (predicted molecular weight: 38 kDa). |

**应用说明** Is unsuitable for ICC/IF or IHC.

## 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.

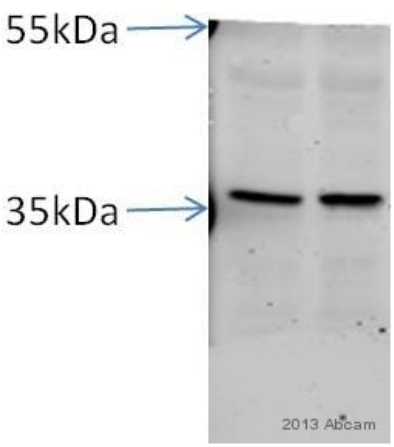
**序列相似性** Belongs to the 5'-AMP-activated protein kinase gamma subunit family.
Contains 4 CBS domains.

**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 [Y308] (ab32508)

This image is courtesy of an anonymous Abreview

**All lanes :** Anti-AMPK gamma 1 antibody [Y308] (ab32508) at 1/1000 dilution

**All lanes :** HEK293 whole cell lysate

Lysates/proteins at 30 µg per lane.

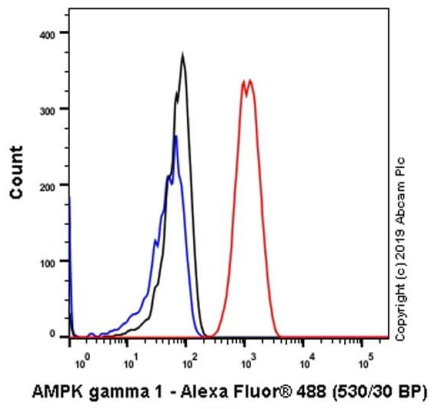
**Secondary**

**All lanes :** Alexa Fluor® 690-conjugated Goat anti-rabbit IgG polyclonal at 1/10000 dilution

Performed under reducing conditions.

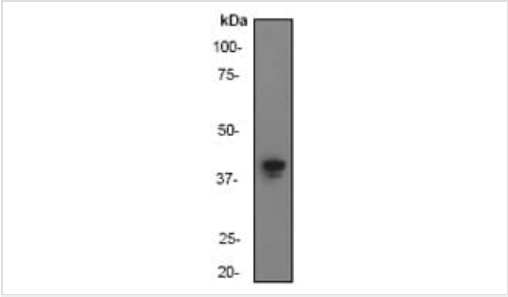
**Predicted band size:** 38 kDa
**Observed band size:** 38 kDa

**Exposure time:** 5 minutes




Flow Cytometry (Intracellular) - Anti-AMPK gamma 1 antibody [Y308] (ab32508)

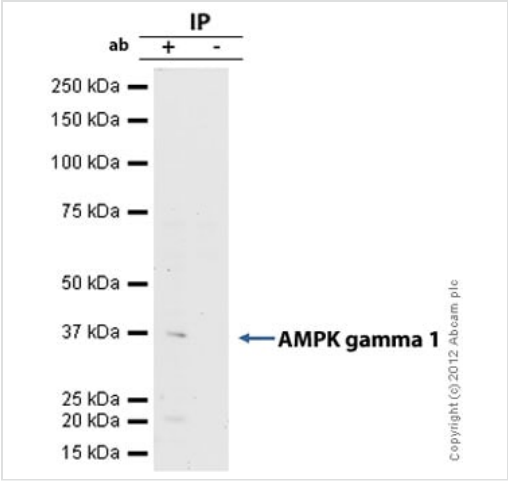
Intracellular Flow Cytometry analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling AMPK gamma 1 with ab32508 at 1/100 dilution (1µg) (Red). Goat anti rabbit IgG (Alexa Fluor®488, **ab150077**) at 1/2000 dilution was used as the secondary antibody. Cells were fixed with4% paraformaldehyde. Rabbit monoclonal IgG (**ab172730**) was used as isotype control (Black). Unlabelled control: Cells without incubation with primary antibody and secondary antibody (Blue).




Western blot - Anti-AMPK gamma 1 antibody [Y308] (ab32508)

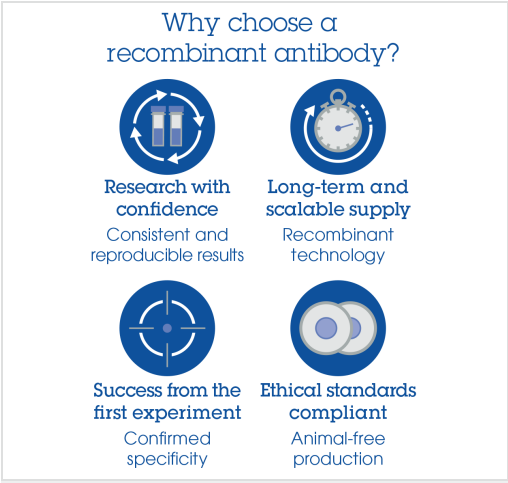
Anti-AMPK gamma 1 antibody [Y308] (ab32508) at 1/1000 dilution + Jurkat cell lysate

**Predicted band size:** 38 kDa
**Observed band size:** 38 kDa




Immunoprecipitation - Anti-AMPK gamma 1 antibody [Y308] (ab32508)

AMPK gamma 1 was immunoprecipitated using 1 mg Jurkat whole cell extract, 0.2 ug of Rabbit monoclonal [Y308] to AMPK gamma 1and 50µl of protein G magnetic beads (lane 1). The antibody was incubated with the Protein G beads for 10min under agitation. No antibody was added to the control (lane 2). Jurkat whole cell extractdiluted in RIPA buffer was added to each sample and incubated for 10min under agitation. Proteins were eluted by addition of 40µl SDS loading buffer and incubated for 10min at 70$^{o}$C; 10µl of each sample was separated on a SDS PAGE gel, transferred to a nitrocellulose membrane, blocked with 5% BSA and probed with ab32508. Secondary: Mouse monoclonal [SB62a] Secondary Antibody to Rabbit IgG light chain (HRP) (**ab99697**). Bands: 37kDa: AMPK gamma 1.




Anti-AMPK gamma 1 antibody [Y308] (ab32508)

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