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AMPKγ Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10086

Specification

AMPKγ Antibody - Product Information

Application	**WB, IHC, E**
Primary Accession	P54619
Reactivity	**Human, Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**37579**

AMPKγ Antibody - Additional Information

Gene ID 5571

Application & Usage	**The antibody can be used for ELISA (0.25 µg/ml), Western blotting (0.5 – 2.5 µg/ml) and Immunohistochemistry (2.5-5.0 µg/ml).**

Other Names
AMPK, 5'-AMP-activated protein kinase, gamma-1 subunit, AMP activated protein kinase, gamma-1 subunit, AMPK gamma-1 chain, AMPKg

Target/Specificity
AMPKγ

Antibody Form
Liquid

Appearance
Colorless liquid

Formulation
100 µg (0.25 mg/ml) purified rabbit Ig polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide.

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions
AMPKγ Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

AMPKγ Antibody - Protein Information

Name PRKAG1

Function
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 (PubMed:21680840, PubMed:24563466). 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 (PubMed:21680840, PubMed:24563466). AMPK acts via direct phosphorylation of metabolic enzymes, and by longer-term effects via phosphorylation of transcription regulators (PubMed:21680840, PubMed:24563466). Also acts as a regulator of cellular polarity by remodeling the actin cytoskeleton; probably by indirectly activating myosin (PubMed:21680840, PubMed:24563466). 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 (PubMed:21680840, PubMed:24563466). ADP also stimulates phosphorylation, without stimulating already phosphorylated catalytic subunit (PubMed:21680840, PubMed:24563466). ATP promotes dephosphorylation of catalytic subunit, rendering the AMPK enzyme inactive (PubMed:21680840, PubMed:24563466).

AMPKγ Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

AMPKγ Antibody - Images

AMPKγ Antibody - Background

AMPK gamma-1 chain is a regulatory subunit of the AMP-activated protein kinase (AMPK). AMPK is a heterotrimer consisting of an alpha catalytic subunit, and non-catalytic beta and gamma subunits. AMPK is an important energy-sensing enzyme that monitors cellular energy status. In response to cellular metabolic stresses, AMPK is activated, and thus phosphorylates and inactivates acetyl-CoA

carboxylase (ACC) and beta-hydroxy beta-methylglutaryl-CoA reductase (HMGCR), key enzymes involved in regulating de novo biosynthesis of fatty acid and cholesterol. This subunit is one of the gamma regulatory subunits of AMPK.