

AMPKy Antibody

Rabbit Polyclonal Antibody Catalog # ABV10086

Specification

AMPKy Antibody - Product Information

Application WB, IHC, E
Primary Accession P54619

Reactivity Human, Mouse

Host Rabbit
Clonality Polyclonal
Isotype Rabbit IgG
Calculated MW 37579

AMPKy 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

ΑΜΡΚγ

Antibody Form

Liquid

Appearance

Colorless liquid

Formulation

 $100~\mu g$ (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

AMPKy 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).

AMPKy Antibody - Protocols

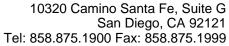
Provided below are standard protocols that you may find useful for product applications.

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

AMPKy 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.