

# AMPK gamma 1 Rabbit mAb

Catalog # AP76387

## Product Information

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<b>Application</b>	WB, IHC-P
<b>Primary Accession</b>	<a href="#">P54619</a>
<b>Reactivity</b>	Human
<b>Host</b>	Rabbit
<b>Clonality</b>	Monoclonal Antibody
<b>Isotype</b>	IgG
<b>Conjugate</b>	Unconjugated
<b>Purification</b>	Affinity Purified
<b>Calculated MW</b>	37579

## Additional Information

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<b>Gene ID</b>	5571
<b>Other Names</b>	PRKAG1
<b>Dilution</b>	WB~~1:500-1:1000 IHC-P~~N/A
<b>Format</b>	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
<b>Storage</b>	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

## Protein Information

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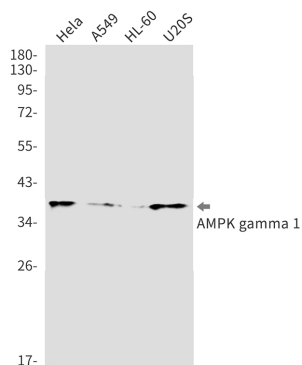
<b>Name</b>	PRKAG1
<b>Function</b>	AMP/ATP-binding subunit of AMP-activated protein kinase (AMPK), an energy sensor protein kinase that plays a key role in regulating cellular energy metabolism (PubMed: <a href="#">21680840</a> , PubMed: <a href="#">24563466</a> ). In response to reduction of intracellular 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: <a href="#">21680840</a> , PubMed: <a href="#">24563466</a> ). AMPK acts via direct phosphorylation of metabolic enzymes, and by longer-term effects via phosphorylation of transcription regulators (PubMed: <a href="#">21680840</a> , PubMed: <a href="#">24563466</a> ). Also acts as a regulator of cellular polarity by remodeling the actin cytoskeleton; probably by indirectly activating myosin (PubMed: <a href="#">21680840</a> , PubMed: <a href="#">24563466</a> ). 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](#)).

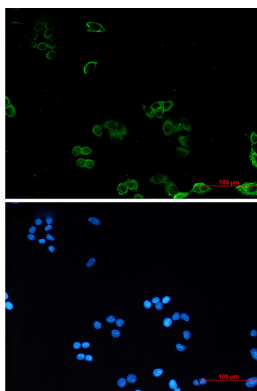
## Background

AMPK is highly conserved from yeast to plants and animals and plays a key role in the regulation of energy homeostasis. Accumulating evidence indicates that AMPK not only regulates the metabolism of fatty acids and glycogen, but also modulates protein synthesis and cell growth through EF2 and TSC2/mTOR pathways, as well as blood flow via eNOS/nNOS.

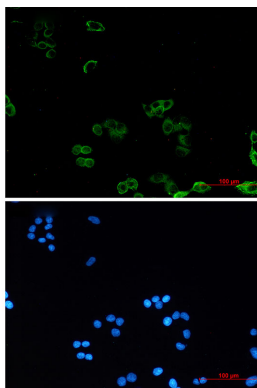
## Images



Western blot analysis of AMPK gamma 1 in HeLa, A549, HL-60, U2OS lysates using AMPK gamma 1 antibody.



Immunocytochemistry analysis of AMPK gamma 1 (green) in HeLa using AMPK gamma 1 antibody, and DAPI (blue)



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