

KD-Validated Anti-PRKAG1 Rabbit Monoclonal Antibody
Rabbit monoclonal antibody
Catalog # AGI1320**Specification****KD-Validated Anti-PRKAG1 Rabbit Monoclonal Antibody - Product Information**

Application	WB, ICC
Primary Accession	P54619
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Rabbit IgG
Calculated MW	Predicted, 38 kDa; observed, 36 kDa kDa
Gene Name	PRKAG1
Aliases	PRKAG1; Protein Kinase AMP-Activated Non-Catalytic Subunit Gamma 1; Protein Kinase, AMP-Activated, Gamma 1 Non-Catalytic Subunit; 5'-AMP-Activated Protein Kinase Subunit Gamma-1; AMPK Gamma1; 5'-AMP-Activated Protein Kinase, Gamma-1 Subunit; AMPK Subunit Gamma-1; AMPK Gamma-1 Chain; AMPKG; AMPKg
Immunogen	A synthesized peptide derived from human AMPK gamma 1

KD-Validated Anti-PRKAG1 Rabbit Monoclonal Antibody - Additional Information

Gene ID	5571
Other Names	
5'-AMP-activated protein kinase subunit gamma-1, AMPK gamma1, AMPK subunit gamma-1, AMPKg, PRKAG1	

KD-Validated Anti-PRKAG1 Rabbit Monoclonal 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](http://www.uniprot.org/citations/21680840), PubMed: [24563466](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/21680840), PubMed: [24563466](http://www.uniprot.org/citations/24563466)). AMPK acts via direct phosphorylation of metabolic enzymes, and by longer-term effects via phosphorylation of transcription regulators (PubMed: [21680840](http://www.uniprot.org/citations/21680840), PubMed: [24563466](http://www.uniprot.org/citations/24563466)).

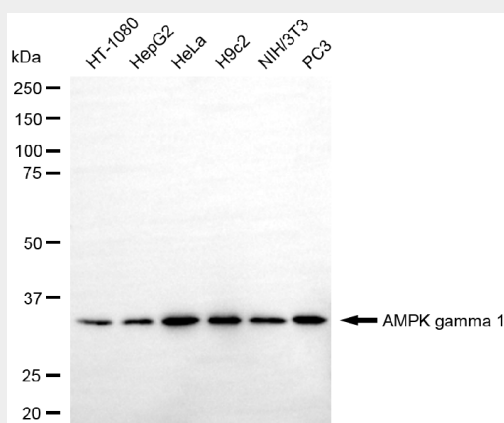
href="http://www.uniprot.org/citations/24563466" target="_blank">24563466). Also acts as a regulator of cellular polarity by remodeling the actin cytoskeleton; probably by indirectly activating myosin (PubMed:21680840, PubMed:24563466). Gamma non-catalytic subunit mediates binding to AMP, ADP and ATP, 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).

KD-Validated Anti-PRKAG1 Rabbit Monoclonal Antibody - Protocols

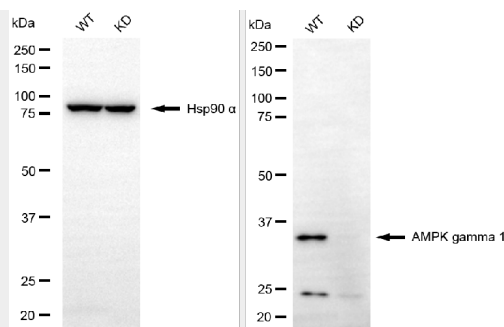
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

KD-Validated Anti-PRKAG1 Rabbit Monoclonal Antibody - Images

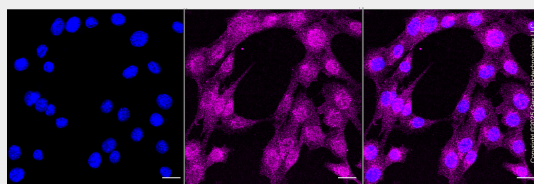


Western blotting analysis using anti-AMPK gamma 1 antibody (Cat#AGI1320). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-AMPK gamma 1 antibody (Cat#AGI1320, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



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Western blotting analysis using anti-AMPK gamma 1 antibody (Cat#AGI1320). AMPK gamma 1 expression in wild-type (WT) and PRKAG1 knockdown (KD) HSHC cells with 30 μ g of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-AMPK gamma 1 antibody (Cat#AGI1320, 1:2,500) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Immunocytochemical staining of C2C12 cells with anti-AMPK gamma 1 antibody (Cat#AGI1320, 1:1,000). Nuclei were stained blue with DAPI; AMPK gamma 1 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar, 20 μ m.