

**PRKAG3 Antibody (internal region)**  
**Peptide-affinity purified goat antibody**  
**Catalog # AF2734a****Specification**

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**PRKAG3 Antibody (internal region) - Product Information**

Application	E
Primary Accession	<a href="#">O9UGI9</a>
Other Accession	<a href="#">NP_059127.2</a> , <a href="#">53632</a>
Predicted	Human
Host	Goat
Clonality	Polyclonal
Concentration	0.5 mg/ml
Isotype	IgG
Calculated MW	54258

**PRKAG3 Antibody (internal region) - Additional Information****Gene ID** 53632**Other Names**

5'-AMP-activated protein kinase subunit gamma-3, AMPK gamma3, AMPK subunit gamma-3, PRKAG3, AMPKG3

**Format**

0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

PRKAG3 Antibody (internal region) is for research use only and not for use in diagnostic or therapeutic procedures.

**PRKAG3 Antibody (internal region) - Protein Information****Name** PRKAG3**Synonyms** AMPKG3**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:&lt;a href="http://www.uniprot.org/citations/14722619" target="\_blank"&gt;14722619&lt;/a&gt;, PubMed:&lt;a href="http://www.uniprot.org/citations/17878938" target="\_blank"&gt;17878938&lt;/a&gt;, PubMed:&lt;a href="http://www.uniprot.org/citations/24563466" target="\_blank"&gt;24563466&lt;/a&gt;). 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. AMPK also acts as a regulator of cellular polarity by remodeling the actin cytoskeleton; probably by indirectly activating myosin. The AMPK gamma3 subunit is a non-catalytic subunit with a regulatory role in muscle energy metabolism (PubMed:<<http://www.uniprot.org/citations/17878938>>). It mediates binding to AMP, ADP and ATP, leading to AMPK activation or inhibition: 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.

**Tissue Location**

Skeletal muscle, with weak expression in heart and pancreas

**PRKAG3 Antibody (internal region) - 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](#)

**PRKAG3 Antibody (internal region) - Images****PRKAG3 Antibody (internal region) - References**

Gain-of-function R225W mutation in human AMPKgamma3 causing increased glycogen and decreased triglyceride in skeletal muscle. Costford SR, Kavaslar N, Ahituv N, Chaudhry SN, Schackwitz WS, Dent R, Pennacchio LA, McPherson R, Harper ME. PLoS ONE. 2007 Sep 19;2(9):e903. PMID: 17878938