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PRKAG3 Antibody (internal region)

Peptide-affinity purified goat antibody
Catalog # AF2734a

Specification

PRKAG3 Antibody (internal region) - Product Information

Application	**E**
Primary Accession	Q9UGI9
Other Accession	NP_059127.2, 53632
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:14722619, PubMed:17878938, 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. 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: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 Cytomety
- 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