

PRKAG1 Antibody (N-term) Blocking peptide
Synthetic peptide
Catalog # BP11853a**Specification**

PRKAG1 Antibody (N-term) Blocking peptide - Product InformationPrimary Accession [P54619](#)**PRKAG1 Antibody (N-term) Blocking peptide - Additional Information**

Gene ID 5571

Other Names

5'-AMP-activated protein kinase subunit gamma-1, AMPK gamma1, AMPK subunit gamma-1, AMPKg, PRKAG1

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

PRKAG1 Antibody (N-term) Blocking peptide - 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).

PRKAG1 Antibody (N-term) Blocking peptide - Protocols

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

- [Blocking Peptides](#)

PRKAG1 Antibody (N-term) Blocking peptide - Images

PRKAG1 Antibody (N-term) Blocking peptide - Background

The protein encoded by this gene belongs to the phosphoinositide 3-kinase (PI3K) family. PI3-kinases play roles in signaling pathways involved in cell proliferation, oncogenic transformation, cell survival, cell migration, and intracellular protein trafficking. This protein contains a lipid kinase catalytic domain as well as a C-terminal C2 domain, a characteristic of class II PI3-kinases. C2 domains act as calcium-dependent phospholipid binding motifs that mediate translocation of proteins to membranes, and may also mediate protein-protein interactions. The PI3-kinase activity of this protein is not sensitive to nanomolar levels of the inhibitor wortmanin. This protein was shown to be able to be activated by insulin and may be involved in integrin-dependent signaling.

PRKAG1 Antibody (N-term) Blocking peptide - References

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Kostakis, G.C., et al. Oral Surg Oral Med Oral Pathol Oral Radiol Endod 109 (5), E53-E58 (2010)
Koutros, S., et al. Cancer Res. 70(6):2389-2396(2010)
Ng, S.K., et al. Biochem. Biophys. Res. Commun. 387(2):310-315(2009)