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AMPK beta (PRKAB1) Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP7045a

Specification

AMPK beta (PRKAB1) Antibody (N-term) - Product Information

Application	**WB, IHC-P,E**
Primary Accession	Q9Y478
Other Accession	P80386, NP_006244
Reactivity	**Human, Mouse**
Predicted	**Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**30382**
Antigen Region	**4-34**

AMPK beta (PRKAB1) Antibody (N-term) - Additional Information

Gene ID 5564

Other Names
5'-AMP-activated protein kinase subunit beta-1, AMPK subunit beta-1, AMPKb, PRKAB1, AMPK

Target/Specificity
This AMPK beta (PRKAB1) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 4-34 amino acids from the N-terminal region of human AMPK beta (PRKAB1).

Dilution
WB~~1:1000
IHC-P~~1:50~100

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

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

Precautions
AMPK beta (PRKAB1) Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

AMPK beta (PRKAB1) Antibody (N-term) - Protein Information

Name PRKAB1

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Synonyms AMPK

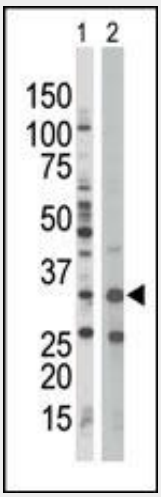
Function Non-catalytic subunit of AMP-activated protein kinase (AMPK), an energy sensor protein kinase that plays a key role in regulating cellular energy metabolism. In response to reduction of intracellular ATP levels, AMPK activates energy-producing pathways and inhibits energy-consuming processes: 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. Also acts as a regulator of cellular polarity by remodeling the actin cytoskeleton; probably by indirectly activating myosin. Beta non-catalytic subunit acts as a scaffold on which the AMPK complex assembles, via its C-terminus that bridges alpha (PRKAA1 or PRKAA2) and gamma subunits (PRKAG1, PRKAG2 or PRKAG3).

AMPK beta (PRKAB1) Antibody (N-term) - 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

AMPK beta (PRKAB1) Antibody (N-term) - Images



The anti-PRKAB1 Pab (Cat. #AP7045a) is used in Western blot to detect PRKAB1 in Jurkat cell lysate (Lane 1) and mouse spleen tissue lysate (Lane 2).

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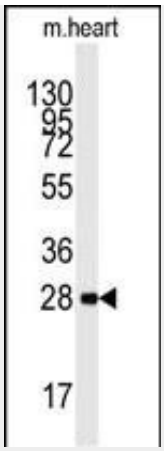
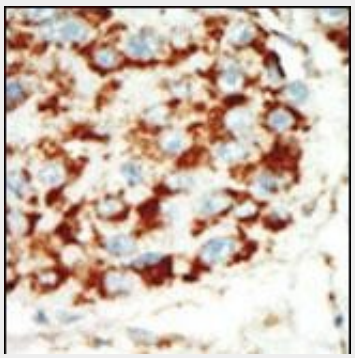


Western blot analysis of anti-PRKAB1 Antibody (N-term) (Cat.#AP7045a) in mouse heart lysates (35ug/lane). PRKAB1 (arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

AMPK beta (PRKAB1) Antibody (N-term) - Background

The protein encoded by this gene is a regulatory subunit of the AMP-activated protein kinase (AMPK). AMPK is a heterotrimer consisting of an alpha catalytic subunit, and non-catalytic beta and gamma subunits. AMPK is an important energy-sensing enzyme that monitors cellular energy status. In response to cellular metabolic stresses, AMPK is activated, and thus phosphorylates and inactivates acetyl-CoA carboxylase (ACC) and beta-hydroxy beta-methylglutaryl-CoA reductase (HMGCR), key enzymes involved in regulating de novo biosynthesis of fatty acid and cholesterol. This subunit may be a positive regulator of AMPK activity. The myristoylation and phosphorylation of this subunit have been shown to affect the enzyme activity and cellular localization of AMPK. This subunit may also serve as an adaptor molecule mediating the association of the AMPK complex.

AMPK beta (PRKAB1) Antibody (N-term) - References

Minokoshi, Y., et al., Nature 428(6982):569-574 (2004).
Andersson, U., et al., J. Biol. Chem. 279(13):12005-12008 (2004).
Landree, L.E., et al., J. Biol. Chem. 279(5):3817-3827 (2004).
Carling, D., Trends Biochem. Sci. 29(1):18-24 (2004).
Shaw, R.J., et al., Proc. Natl. Acad. Sci. U.S.A. 101(10):3329-3335 (2004).