10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

AMPK beta2 (PRKAB2) Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7046a

Product Information

Application	WB, E
Primary Accession	O43741
Other Accession	NP_005390
Reactivity	Human, Mouse
Predicted	Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB3183
Calculated MW	30302
Antigen Region	3-33

Additional Information

Gene ID	5565
Other Names	5'-AMP-activated protein kinase subunit beta-2, AMPK subunit beta-2, PRKAB2
Target/Specificity	This AMPK beta2 (PRKAB2) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 3-33 amino acids from the N-terminal region of human AMPK beta2 (PRKAB2).
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
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 beta2 (PRKAB2) Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PRKAB2
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).

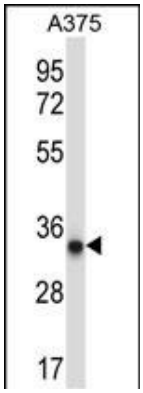
Background

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.

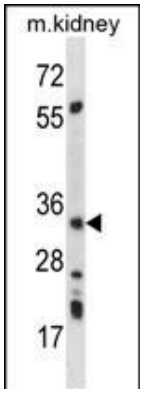
References

Minokoshi, Y., et al., Nature 428(6982):569-574 (2004).
Prochazka, M., et al., Mol. Cell. Probes 16(6):421-427 (2002).
Park, S.H., et al., J. Appl. Physiol. 93(6):2081-2088 (2002).
Xu, X.R., et al., Proc. Natl. Acad. Sci. U.S.A. 98(26):15089-15094 (2001).
Thornton, C., et al., J. Biol. Chem. 273(20):12443-12450 (1998).

Images



PRKAB2 Antibody (A18) (Cat. #AP7046a) western blot analysis in A375 cell line lysates (35ug/lane).This demonstrates the PRKAB2 antibody detected the PRKAB2 protein (arrow).



PRKAB2 Antibody (A18) (Cat. #AP7046a) western blot analysis in mouse kidney tissue lysates (35ug/lane).This demonstrates the PRKAB2 antibody detected the PRKAB2 protein (arrow).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.