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phospho-AMPK beta 1 (Ser108) Rabbit pAb

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Catalog # AP94422

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	P80386
Reactivity	Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	30394
Physical State	Liquid
Immunogen	KLH conjugated Synthesised phosphopeptide derived from rat AMPK beta 1 around the phosphorylation site of Ser108
Epitope Specificity	TR(p-S)QN
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the 5'-AMP-activated protein kinase beta subunit family.
SUBUNIT	AMPK is a heterotrimer of an alpha catalytic subunit (PRKAA1 or PRKAA2), a beta (PRKAB1 or PRKAB2) and a gamma non-catalytic subunits (PRKAG1, PRKAG2 or PRKAG3). Interacts with FNIP1 and FNIP2.
Post-translational modifications	Phosphorylated when associated with the catalytic subunit (PRKAA1 or PRKAA2). Phosphorylated by ULK1; leading to negatively regulate AMPK activity and suggesting the existence of a regulatory feedback loop between ULK1 and AMPK.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	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. [provided by RefSeq, Jul 2008].

Additional Information

Gene ID	83803

Other Names	5'-AMP-activated protein kinase subunit beta-1, AMPK subunit beta-1, AMPKb, 5'-AMP-activated protein kinase 40 kDa subunit, Prkab1
Target/Specificity	Highly expressed in kidney, heart, white adipose tissue, lung and spleen.
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,Flow-Cyt=2ug/Test
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	Prkab1
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).
Tissue Location	Highly expressed in kidney, heart, white adipose tissue, lung and spleen

Background

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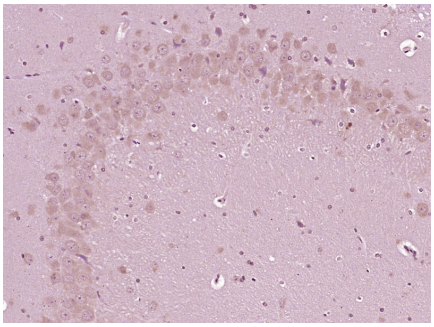
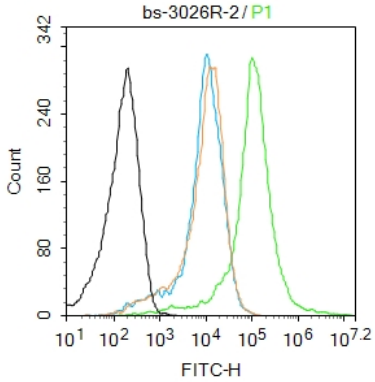
Images

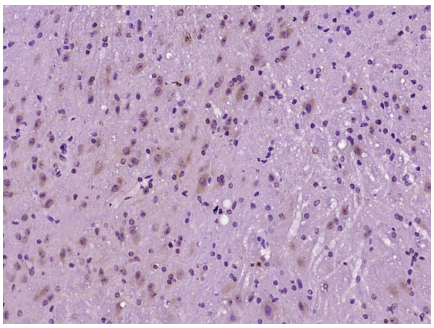


Paraformaldehyde-fixed, paraffin embedded (Rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (phospho-AMPK beta 1 (Ser108)) Polyclonal Antibody, Unconjugated (AP94422) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

Blank control:Mouse spleen. Primary Antibody (green line): Rabbit Anti-ALOX5 antibody (AP94422) Dilution: 2 µg /10^6 cells; Isotype Control Antibody (orange line): Rabbit IgG . Secondary Antibody : Goat anti-rabbit IgG-AF488 Dilution: 1 µg /test. Protocol The cells were fixed with 70% ethanol (10min at room temperature) and then were



incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at room temperature .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.



Paraformaldehyde-fixed, paraffin embedded (Mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (phospho-AMPK beta 1 (Ser108)) Polyclonal Antibody, Unconjugated (AP94422) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.