

Rabbit Anti-phospho-AMPK beta 1 (Ser108)/AP Conjugated antibody

SL3026R-AP

Product Name	Anti-phospho-AMPK beta 1 (Ser108)/AP
Chinese Name	碱性磷酸酶 (AP) 标记的磷酸化腺苷单磷酸活化蛋白激酶 β 1 抗体
Alias	PRKAB1(phospho S108); PRKAB1(phospho-S108); AMPK beta 1(Ser108); p-AMPK beta 1(Ser108); p-AMPK beta 1(S108); 5 AMP activated protein kinase subunit beta 1; AMPK; AMPK beta 1 chain; AMPKb; HAMPKb; PRKAB1; 5'-AMP-activated protein kinase subunit beta-1; AMP-activated protein kinase beta subunit; protein kinase, AMP-activated, noncatalytic, beta-1; AMPK beta -1 chain; 5'-AMP-activated protein kinase beta-1 subunit; AMPKb; AMPK subunit beta-1; AAKB1_RAT; AAKB1_HUMAN; AMPK b1; AMPK-b1.
Product Type	Phosphorylated anti
Research Area	Tumour Cell biology immunology Chromatin and nuclear signals Signal transduction Apoptosis transcriptional regulatory factor Kinases and Phosphatases
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Mouse,Rat
Applications	IHC-P=1:100-500,IHC-F=1:100-500 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight	30kDa
Form	Lyophilized or Liquid
Concentration	1mg/ml
immunogen	KLH conjugated Synthesised phosphopeptide derived from rat AMPK beta 1 around the phosphorylation site of Ser108
Lsotype	IgG
Purification	affinity purified by Protein A
Storage Buffer	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The

lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 1M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

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. [provided by RefSeq, Jul 2008].

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).

Product Detail

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.

Tissue Specificity:

Highly expressed in kidney, heart, white adipose tissue, lung and spleen.

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.

Similarity:

Belongs to the 5'-AMP-activated protein kinase beta subunit family.

Database links:

[Entrez Gene: 5564](#) Human

[Entrez Gene: 19079](#) Mouse

[Entrez Gene: 83803](#) Rat

[Omim: 602740](#) Human

[SwissProt: Q9Y478](#) Human

[SwissProt: Q9R078](#) Mouse

[SwissProt: P80386](#) Rat

[Unigene: 6061](#) Human

[Unigene: 726001](#) Human

[Unigene: 458152](#) Mouse

[Unigene: 3619](#) Rat

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

AMPK β 1(AMP-activated Protein Kinase beta-1)(腺苷单磷酸活化蛋白激酶 β -1)是一种参与细胞适应能量危机的应激反应酶,AMPK 不仅可以在细胞水平作为能量的感受器,还可以通过激素和 cell factor, 如瘦素、脂联素和 ghrelin 来参与调节机体的能量消耗和能量摄入.