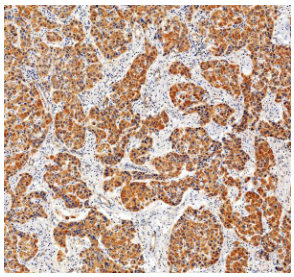
PRKAB1 Antibody / Protein Kinase AMP-Activated Non-Catalytic Subunit Beta 1 Antibody (R32363)

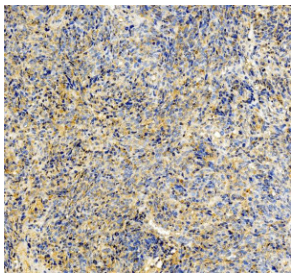
Catalog No.	Formulation	Size
R32363	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

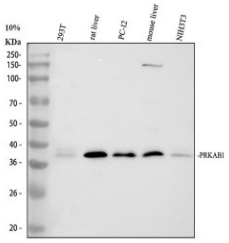
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q9Y478
Applications	Western Blot : 0.5-1ug/ml Immunohistochemistry (FFPE) : 2-5ug/ml
Limitations	This PRKAB1 Antibody / Protein Kinase AMP-Activated Non-Catalytic Subunit Beta 1 Antibody is available for research use only.



PRKAB1 Antibody Human Liver Cancer IHC. Immunohistochemical staining of FFPE human liver cancer tissue demonstrates PRKAB1 expression following heat-induced epitope retrieval in pH8 EDTA buffer. Strong brown DAB staining is observed predominantly within the cytoplasm of malignant hepatocytes, consistent with the intracellular localization of protein kinase AMP-activated non-catalytic subunit beta 1 as a regulatory component of the AMPK complex, while nuclei are counterstained blue with hematoxylin. This PRKAB1 Antibody is suitable for studies of protein kinase AMP-activated non-catalytic subunit beta 1, AMPK signaling, and metabolic regulation in liver cancer.



PRKAB1 Antibody Human Ovarian Cancer IHC. Immunohistochemical staining of FFPE human ovarian cancer tissue demonstrates PRKAB1 expression following heat-induced epitope retrieval in pH8 EDTA buffer. Brown DAB staining is observed predominantly within the cytoplasm of tumor cells, with heterogeneous staining intensity throughout the neoplastic tissue, while nuclei are counterstained blue with hematoxylin. The localization is consistent with the intracellular distribution of protein kinase AMP-activated non-catalytic subunit beta 1 as a regulatory component of the AMPK complex. This PRKAB1 Antibody is suitable for studies of protein kinase AMP-activated non-catalytic subunit beta 1, AMPK signaling, and metabolic regulation in ovarian cancer.



PRKAB1 Antibody Human, Rat and Mouse WB. Western blot demonstrates detection of PRKAB1 in human 293T cells, rat liver and PC-12 cell lysates, and mouse liver and NIH3T3 cell lysates. A prominent immunoreactive band is observed at approximately 38 kDa in all samples, slightly above the predicted molecular weight of approximately 30 kDa, which is consistent with the reduced electrophoretic mobility frequently reported for AMPK beta 1. An additional high molecular weight band is visible in the mouse liver sample, which may represent a modified protein species or a protein complex. This PRKAB1 Antibody is suitable for studies of protein kinase AMP-activated non-catalytic subunit beta 1, AMPK signaling, and cellular energy metabolism across human, rat, and mouse samples.

Description

PRKAB1 Antibody recognizes protein kinase AMP-activated non-catalytic subunit beta 1 (PRKAB1), one of the regulatory beta subunits of AMP-activated protein kinase (AMPK), the central cellular energy sensor that coordinates metabolic homeostasis. AMPK functions as a heterotrimeric complex composed of a catalytic alpha subunit together with regulatory beta and gamma subunits. PRKAB1 serves as a scaffold within this complex, promoting assembly of the functional kinase while helping regulate enzyme localization, substrate interactions, and activation in response to cellular energy status. Through these roles, PRKAB1 contributes to the ability of cells to detect changes in ATP availability and restore energy balance during metabolic stress.

PRKAB1 is widely expressed in mammalian tissues, with particularly important roles in metabolically active organs including liver, skeletal muscle, heart, adipose tissue, and brain. Activation of AMPK signaling occurs when intracellular ATP levels decline and AMP or ADP levels increase, leading to phosphorylation of downstream targets that stimulate ATP-generating pathways while suppressing energy-consuming anabolic processes. PRKAB1-containing AMPK complexes regulate glucose uptake, fatty acid oxidation, glycogen metabolism, mitochondrial biogenesis, autophagy, and protein synthesis. The beta subunit also contains a carbohydrate-binding module that mediates interactions with glycogen, providing an additional mechanism through which AMPK activity can be influenced by cellular nutrient stores.

Dysregulation of PRKAB1 and AMPK signaling has been implicated in numerous diseases, including obesity, type 2 diabetes, cardiovascular disease, non-alcoholic fatty liver disease, neurodegenerative disorders, and cancer. Because AMPK integrates signals from nutrient availability, hypoxia, oxidative stress, and exercise, it has become a major focus of metabolic research and therapeutic development. Investigators frequently examine PRKAB1 together with the catalytic alpha and regulatory gamma subunits to better understand AMPK complex composition, activation, and downstream signaling pathways under physiological and pathological conditions.

A PRKAB1 Antibody is a valuable research tool for investigating AMPK signaling, cellular energy sensing, glucose and lipid metabolism, mitochondrial function, autophagy, and metabolic diseases.

Learn more about related metabolic regulators by exploring our Metabolism Marker Antibodies page, featuring antibodies for AMPK signaling, glucose metabolism, lipid metabolism, and cellular energy homeostasis.

Application Notes

Optimal dilution of the PRKAB1 Antibody / Protein Kinase AMP-Activated Non-Catalytic Subunit Beta 1 Antibody should be determined by the researcher.

Immunogen

Amino acids DRPKILMDSPEDADLFHSEEIKAPEKEEFLAWQHDLE of human AMPK beta 1 were used as the immunogen for the PRKAB1 antibody.

Storage

After reconstitution, the PRKAB1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

PRKAB1 antibody, Protein Kinase AMP-Activated Non-Catalytic Subunit Beta 1 antibody, AMP-Activated Protein Kinase Subunit Beta 1 antibody, AMPK Beta 1 antibody

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