

Rabbit AMPK beta 1 Polyclonal Antibody | anti-AMPKbeta1 antibody

Phospho-AMPK beta 1 (Ser181) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA329633	Rabbit	Human, Mouse, Rat Predicted Reactivity: Bovine (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (100%), Chicken (100%)	ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

AMPK beta 1; Polyclonal Antibody; Phospho-AMPK beta 1 (Ser181) Antibody; 1300015D22Rik; 5"-AMP-activated protein kinase subunit beta-1; 5'-AMP-activated protein kinase beta-1 subunit; AAKB1_HUMAN; AMP-activated protein kinase beta subunit; AMP-ACTIVATED PROTEIN KINASE; NONCATALYTIC; BETA-1; AMP-activated; noncatalytic; beta-1; AMPK; AMPK beta 1 chain; AMPK subunit beta-1; AMPK-BETA-1; AMPKb; AU021155; E430008F22; HAMPKb; MGC17785; PRKAB1; Protein kinase AMP activated non catalytic subunit beta 1; protein kinase; beta 1 non-catalytic subunit; anti-AMPKbeta1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat Predicted Reactivity: Bovine (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (100%), Chicken (100%)
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-AMPK beta 1 (Ser181) Antibody detects endogenous levels of AMPK beta 1 only when phosphorylated at Ser181.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-AMPKbeta1 antibody	ELISA (Peptide ELISA), ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human AMPK beta1 around the phosphorylation site of Ser181.
Conjugation	Unconjugated
Fragment	Fab fragment
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.
Subunit Structure	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.
Similarity	The glycogen-binding domain may target AMPK to glycogen so that other factors like glycogen-bound debranching enzyme or protein phosphatases can directly affect AMPK activity. Belongs to the 5'-AMP-activated protein kinase beta subunit family.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



Application Data

At 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.



IHC (Immunohistochemistry)

At 1/200 staining Human pancreas tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary antibody.



IHC (Immunohistochemistry)

At 1/200 staining Mouse kidney tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary antibody.



IHC (Immunohistochemistry)

Staining Rat intestinal tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary antibody.



WB (Western Blot)

Western blot analysis of AMPK β 1 (Phospho-Ser181) using HepG2 whole cell lysates. -/+ means absence or presence of N peptide(1/4 non-phospho peptide) and P peptide(phospho peptide).

ADDITIONAL INFORMATION

Related Product Information for anti-AMPKbeta1 antibody

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).

NCBI AND UNIPROT INFORMATION

NCBI GI #	19923359
NCBI GeneID	5564
NCBI Accession #	NP_006244.2
NCBI GenBank Nucleotide #	NM_006253.4
UniProt Accession #	Q9Y478; Q9UBV0; Q9UE20; Q9UEX2; Q9Y6V8
Molecular Weight	30,382 Da
NCBI Official Full Name	5'-AMP-activated protein kinase subunit beta-1
NCBI Official Synonym Full Names	protein kinase, AMP-activated, beta 1 non-catalytic subunit
NCBI Official Symbol	PRKAB1
NCBI Official Synonym Symbols	AMPK; HAMPKb

NCBI Protein Information	5'-AMP-activated protein kinase subunit beta-1; AMPKb; AMPK beta 1; AMPK beta -1 chain; AMPK subunit beta-1; AMP-activated protein kinase beta subunit; 5'-AMP-activated protein kinase beta-1 subunit; protein kinase, AMP-activated, noncatalytic, beta-1
UniProt Protein Name	5'-AMP-activated protein kinase subunit beta-1
UniProt Gene Name	PRKAB1
UniProt Synonym Gene Names	AMPK; AMPK subunit beta-1; AMPKb
UniProt Entry Name	AAKB1_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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