
Product Name: AMPK α 1/2 Rabbit Polyclonal Antibody**Catalog #: APRab06848**

For research use only.

Summary

Description	Rabbit polyclonal Antibody
Host	Rabbit
Application	WB,IHC,ICC/IF,ELISA
Reactivity	Human,Mouse,Rat,Monkey,Bovine,Fish
Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Concentration	1mg/ml
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Liquid in PBS containing 50% glycerol, 0.5% protective protein and 0.02% New type preservative N.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:500-1:2000,IHC 1:100-1:500,ICC/IF 1:100-1:500,ELISA 1:5000-1:20000
Molecular Weight	63kDa

Antigen Information

Gene Name	AAPK1/AAPK2 PRKAA1; AMPK1; 5'-AMP-activated protein kinase catalytic subunit alpha-1; AMPK subunit alpha-1; Acetyl-CoA carboxylase kinase; ACACA kinase; Hydroxymethylglutaryl-CoA reductase kinase; HMGCR kinase; Tau-protein kinase PRKAA1; PRKAA2; AMPK;
Alternative Names	
Gene ID	5562/5563
SwissProt ID	Q13131/P54646
Immunogen	The antiserum was produced against synthesized peptide derived from human AMPK alpha. AA range:140-189

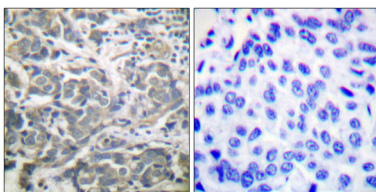
Background

The protein encoded by this gene belongs to the ser/thr protein kinase family. It is the catalytic subunit of the 5'-prime-AMP-activated protein kinase (AMPK). AMPK is a cellular energy sensor conserved in all eukaryotic cells. The kinase activity of AMPK is activated by the stimuli that increase the cellular AMP/ATP ratio. AMPK regulates the activities of a number of key metabolic enzymes through phosphorylation. It protects cells from stresses that cause ATP depletion by switching off ATP-consuming biosynthetic pathways. Alternatively spliced transcript variants encoding distinct isoforms have been observed. [provided by RefSeq, Jul 2008],catalytic activity:ATP + a protein = ADP + a phosphoprotein.,cofactor:Magnesium.,enzyme regulation:Binding of AMP results in allosteric activation, inducing phosphorylation on Thr-174 by STK11 in complex with STE20-related adapter-alpha (STRAD alpha) pseudo kinase and CAB39. Also activated by phosphorylation by CAMKK2 triggered by a rise in intracellular calcium ions, without detectable changes in the AMP/ATP ratio.,function:Responsible for the regulation of fatty acid synthesis by phosphorylation of acetyl-CoA carboxylase. It also regulates cholesterol synthesis via phosphorylation and inactivation of hormone-sensitive lipase and hydroxymethylglutaryl-CoA reductase. Appears to act as a metabolic stress-sensing protein kinase switching off biosynthetic pathways when cellular ATP levels are depleted and when 5'-AMP rises in response to fuel limitation and/or hypoxia. This is a catalytic subunit.,sequence caution:Translation N-terminally shortened.,similarity:Belongs to the protein kinase superfamily.,similarity:Belongs to the protein kinase superfamily. CAMK Ser/Thr protein kinase family. SNF1 subfamily.,similarity:Contains 1 protein kinase domain.,subunit:Heterotrimer of an alpha catalytic subunit, a beta and a gamma non-catalytic subunits. Interacts with FNIP1 and FNIP2.,

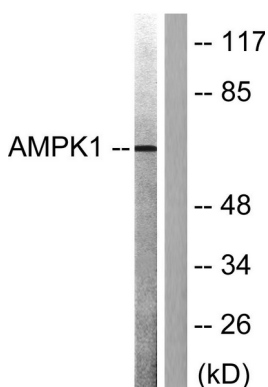
Research Area

Insulin Receptor; mTOR; AMPK

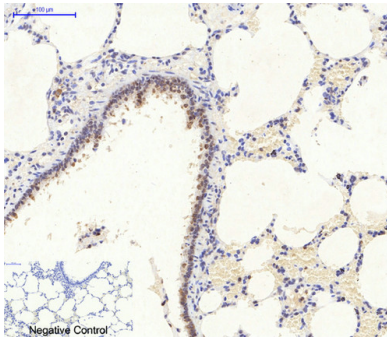
Image Data



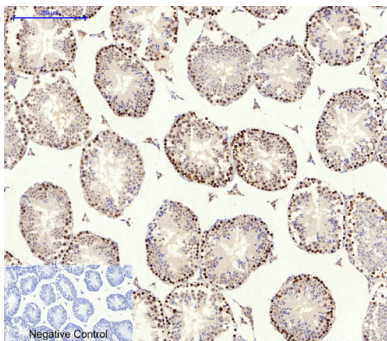
Immunohistochemistry analysis of paraffin-embedded human breast carcinoma tissue, using AMPK alpha Antibody. The picture on the right is blocked with the synthesized peptide.



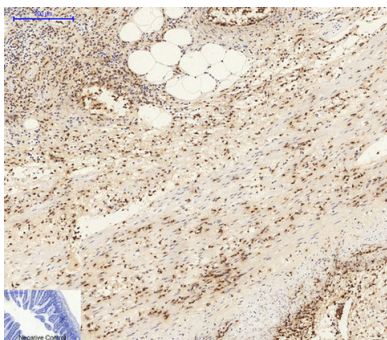
Western blot analysis of lysates from COS7 cells, treated with Adriamycin 0.5ng/ml 24h, using AMPK alpha Antibody. The lane on the right is blocked with the synthesized peptide.



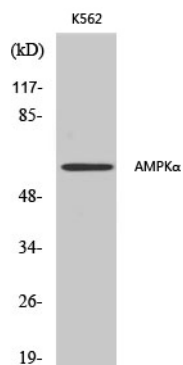
Immunohistochemical analysis of paraffin-embedded Rat-lung tissue. 1,AMPK α 1/2 Polyclonal Antibody was diluted at 1:200 (4°C,overnight) . 2, Sodium citrate pH 6.0 was used for antibody retrieval (>98°C,20min) . 3,Secondary antibody was diluted at 1:200 (room tempeRature, 30min) . Negative control was used by secondary antibody only.



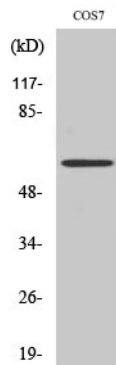
Immunohistochemical analysis of paraffin-embedded Mouse-testis tissue. 1,AMPK α 1/2 Polyclonal Antibody was diluted at 1:200 (4°C,overnight) . 2, Sodium citrate pH 6.0 was used for antibody retrieval (>98°C,20min) . 3,Secondary antibody was diluted at 1:200 (room tempeRature, 30min) . Negative control was used by secondary antibody only.



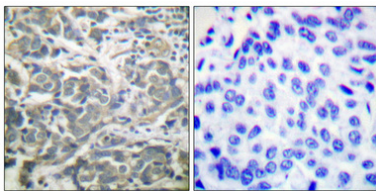
Immunohistochemical analysis of paraffin-embedded Mouse-colon tissue. 1,AMPK α 1/2 Polyclonal Antibody was diluted at 1:200 (4°C,overnight) . 2, Sodium citrate pH 6.0 was used for antibody retrieval (>98°C,20min) . 3,Secondary antibody was diluted at 1:200 (room tempeRature, 30min) . Negative control was used by secondary antibody only.



Western Blot analysis of various cells using AMPK α 1/2 Polyclonal Antibody diluted at 1: 500



Western Blot analysis of COS7 cells using AMPK α 1/2 Polyclonal Antibody diluted at 1: 500



Immunohistochemical analysis of paraffin-embedded Human breast cancer. Antibody was diluted at 1:100 (4°,overnight) . High-pressure and temperature Tris-EDTA,pH8.0 was used for antigen retrieval. Negative contrl (right) obtaned from antibody was pre-absorbed by immunogen peptide.