

AMPK α 1 (Phospho Ser496) Rabbit pAb

CatalogNo: YP0010 **Orthogonal Validated** 

Key Features

Host Species

- Rabbit

Reactivity

- Human, Mouse, Rat, Canine, Fish

Applications

- WB, IHC, IF, ELISA

MW

- 62kD (Observed)

Isotype

- IgG

Storage

Storage* -15°C to -25°C/1 year (Do not lower than -25°C)

Formulation Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Recommended Dilution Ratios

WB 1:500-1:2000

IHC 1:100-1:300

ELISA 1:20000

IF 1:50-200

Basic Information

Clonality Polyclonal

Immunogen Information

Immunogen The antiserum was produced against synthesized peptide derived from human AMPK1 around the phosphorylation site of Ser496. AA range:451-500

Specificity

Phospho-AMPK α 1 (S496) Polyclonal Antibody detects endogenous levels of AMPK α 1 protein only when phosphorylated at S496. The name of modified sites may be influenced by many factors, such as species (the modified site was not originally found in human samples) and the change of protein sequence (the previous protein sequence is incomplete, and the protein sequence may be prolonged with the development of protein sequencing technology). When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports. The antibody binds to the following modification sequence (lowercase letters are modification sites):SGsVS

Target Information

Gene name PRKAA1

Protein Name 5'-AMP-activated protein kinase catalytic subunit alpha-1

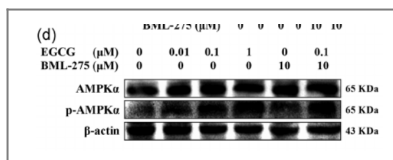
Organism	Gene ID	UniProt ID
Human	5562 ;	Q13131 ;
Mouse	105787 ;	Q5EG47 ;
Rat	65248 ;	P54645 ;

Cellular Localization Cytoplasm . Nucleus . In response to stress , recruited by p53/TP53 to specific promoters. .

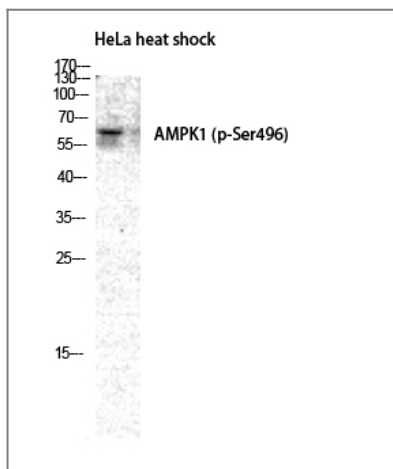
Tissue specificity Brain ,Intestine ,Liver ,Mammary gland ,Platelet ,Testis

Function 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. ,

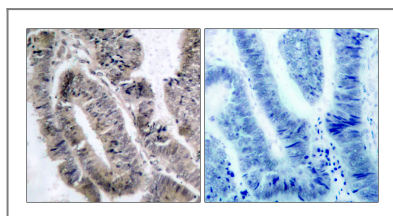
Validation Data



Ding, Hongyan, et al. "Epigallocatechin-3-gallate activates the AMP-activated protein kinase signaling pathway to reduce lipid accumulation in canine hepatocytes." *Journal of Cellular Physiology* 236.1 (2021): 405-416.



Western Blot analysis of HELA cells using Phospho-AMPKα1 (S496) Polyclonal Antibody diluted at 1:2000



Immunohistochemistry analysis of paraffin-embedded human colon carcinoma, using AMPK1 (Phospho-Ser485) Antibody. The picture on the right is blocked with the phospho peptide.

Contact information

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Please scan the QR code to access additional product information:
AMPKα1 (Phospho Ser496) Rabbit pAb

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