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Product datasheet for AP01523PU-M

AMPK alpha 1 (PRKAA1) pSer486 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IHC, WB
Recommended Dilution:	**Western Blot:** 1/500-1/1000. **Immunohistochemistry on Paraffin Sections:** 1/50-1/200.
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Synthetic phosphopeptide derived from Human AMPKα1 around the phosphorylation site of Serine 486.
Specificity:	p-AMPKα1 (S486) pAb detects endogenous levels of AMPKα1 protein only when phosphorylated at Ser486. The antibody does not cross-react with phosphorylated AMPKα2 or other related proteins.
Formulation:	Phosphate buffered saline (PBS) with 15 mM sodium azide, approx. pH 7.2. State: Aff - Purified State: Liquid purified Ig fraction
Concentration:	1.0 mg/ml
Purification:	Affinity chromatography
Conjugation:	Unconjugated
Storage:	Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Predicted Protein Size:	~ 65 kDa
Gene Name:	protein kinase AMP-activated catalytic subunit alpha 1
Database Link:	Entrez Gene 65248 RatEntrez Gene 105787 MouseEntrez Gene 5562 Human Q13131

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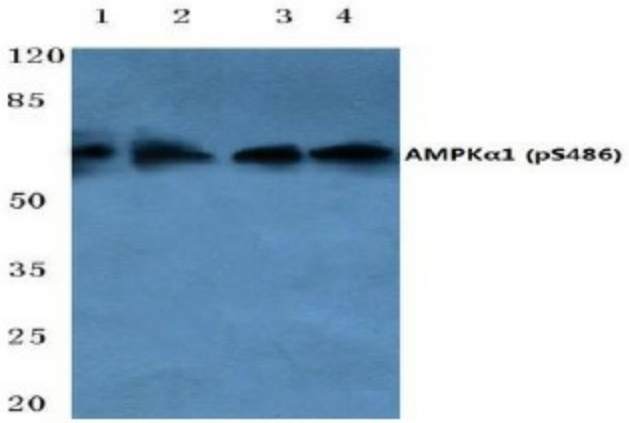
Background: AMPK (for 5'-AMP-activated protein kinase) is a heterotrimeric complex comprising a catalytic α subunit and regulatory β and γ subunits. It protects cells from stresses that cause ATP depletion by switching off ATP-consuming biosynthetic pathways. AMPK is activated by high AMP and low ATP through a mechanism involving allosteric regulation, promotion of phosphorylation by an upstream protein kinase known as AMPK kinase, and inhibition of dephosphorylation. Activated AMPK can phosphorylate and regulate in vivo hydroxymethylglutaryl- CoA reductase and acetyl-CoA carboxylase, which are key regulatory enzymes of sterol synthesis and fatty acid synthesis, respectively. The human AMPKα1 and AMPKα2 genes encode 548 amino acid and 552 amino acid proteins, respectively. Human AMPKβ1 encodes a 271 amino acid protein and human AMPKβ2 encodes a 272 amino acid protein. The human AMPKγ1 gene encodes a 331 amino acid protein. Human AMPKγ2 and AMPKγ3, which are 569 and 492 amino acid proteins, respectively, contain unique N-terminal domains and may participate directly in the binding of AMP within the AMPK complex.

Synonyms: AMPK1, AMPK alpha-1 chain

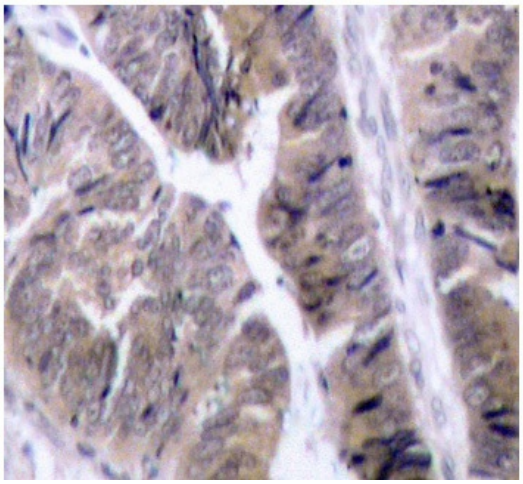
Protein Families: Druggable Genome, Protein Kinase

Protein Pathways: Adipocytokine signaling pathway, Hypertrophic cardiomyopathy (HCM), Insulin signaling pathway, mTOR signaling pathway, Regulation of autophagy

Product images:



Western blot (WB) analysis of p-AMPK1 antibody (pSer486) at 1/500 dilutrion: Lane 1: HEK293T cell lysate treated with UV. Lane 2: sp2/0 cell lysate treated with UV. Lane 3: PC12 cell lysate treated with UV.



Immunohistochemistry analyis of p-AMPK1 antibody (pSer486) in paraffin-embedded human colon carcinoma tissue.