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Product datasheet for AP06007PU-M

AMPK alpha 1 (PRKAA1) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	ELISA, 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 peptide, corresponding to amino acids 150-200 of Human AMPKα1.
Specificity:	This antibody detects endogenous levels of AMPK alpha-1 and AMPK alpha-2 protein (region surrounding Asp168).
Formulation:	Phosphate buffered saline (PBS), pH 7.2 State: Aff - Purified State: Liquid purified Ig fraction Preservative: 0.05% Sodium azide
Concentration:	1.0 mg/ml
Purification:	Affinity chromatography using epitope-specific immunogen and the purity is > 95% (by SDS-PAGE)
Conjugation:	Unconjugated
Storage:	Store 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:	~ 63 kDa
Gene Name:	protein kinase AMP-activated catalytic subunit alpha 1
Database Link:	Entrez Gene 5562 Human Q13131

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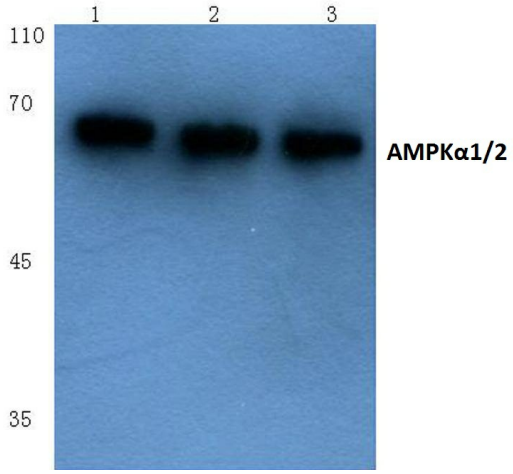
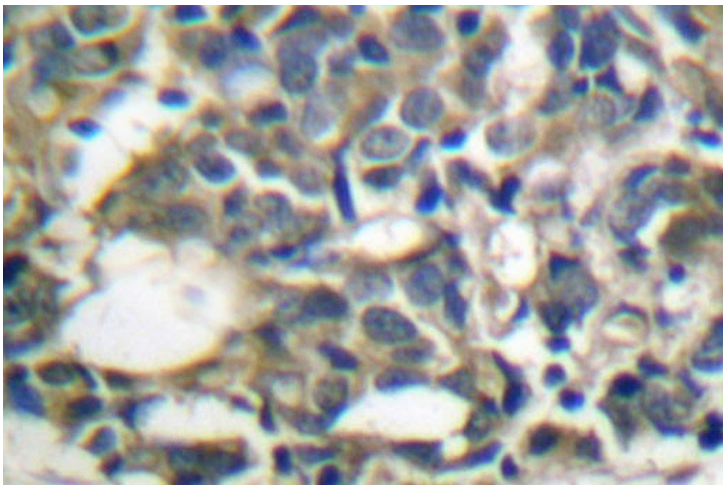
Background: AMPK is a heterotrimeric complex comprising a catalytic α subunit and regulatory β and γ subunits. It protects cells from stresses that cause ATP depletion by switching off ATP-consuming biosynthetic pathways. AMPK is activated by high AMP and low ATP through a mechanism involving allosteric 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: PRKAA1, PRKAA2, AMPK alpha-2 chain, AMPK alpha-1 chain

Product images:



Western blot (WB) analysis of AMPKa/2 antibody at 1/500 dilution Lane 1: HeLa cell lysate Lane 2: Mouse brain tissue lysate Lane 3: Rat brain tissue lysate



Immunohistochemical analysis using AMPK1/AMPK2 antibody in Paraffin-embedded human breast carcinoma tissue.