

## Product datasheet for **AP20873PU-N**

### AMPK alpha 1 (PRKAA1) pThr174 Rabbit Polyclonal Antibody

#### Product data:

Product Type:	Primary Antibodies
Applications:	IHC, WB
Recommended Dilution:	<b>Western Blot:</b> 1/500-1/1000. <b>Immunohistochemistry on Paraffin Sections:</b> 1/50-1/200.
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Specificity:	This antibody detects endogenous levels of AMPK $\alpha$ 1 protein only when phosphorylated at Thr183 and AMPK $\alpha$ 2 protein only when phosphorylated at Thr172.
Formulation:	Phosphate buffered saline (PBS), pH 7.2. State: Aff - Purified State: Liquid purified Ig fraction (>95% pure by SDS-PAGE) Preservative: 0.05% Sodium Azide
Concentration:	1.0 mg/ml
Purification:	Affinity Chromatography using epitope-specific immunogen
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:	<a href="#">Entrez Gene 65248 Rat</a> <a href="#">Entrez Gene 105787 Mouse</a> <a href="#">Entrez Gene 5562 Human Q13131</a>



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**Background:**

AMPK is a heterotrimeric complex comprising a catalytic  $\alpha$  subunit and regulatory  $\beta$  and  $\gamma$  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 AMPK $\alpha$ 1 and AMPK $\alpha$ 2 genes encode 548 amino acid and 552 amino acid proteins, respectively.

**Synonyms:**

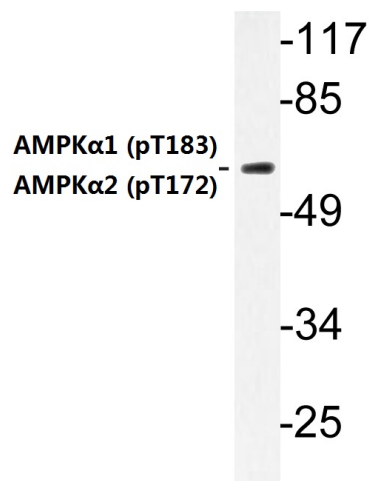
AMPK1, AMPK alpha-1 chain

**Protein Families:**

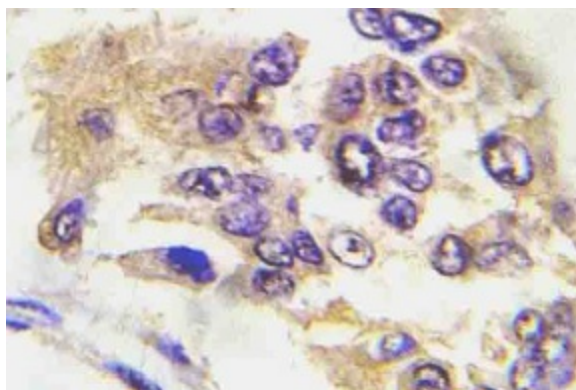
Druggable Genome, Protein Kinase

**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-AMPK $\alpha$ 1/2 antibody (Cat.-No.: AP20873PU-N) in extracts from HuvEc cells.



Immunohistochemistry analysis of Phospho-AMPK1 Antibody (pThr174) (Cat.-No AP20873PU-N) in paraffin-embedded human breast carcinoma tissue.