

Product datasheet for **AP53442PU-N**

AMPK alpha 2 (PRKAA2) (Center)/(Thr172) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	FC, IHC, WB
Recommended Dilution:	Western Blot: 1/1000 (tested in K562 cell line lysates (35µg/lane). Immunohistochemistry on paraffin sections: 1/10 - 1/50. Flow Cytometry: 1/10 - 1/50. ELISA: 1/1000.
Reactivity:	Human
Host:	Rabbit
Isotype:	Ig
Clonality:	Polyclonal
Immunogen:	KLH conjugated synthetic peptide between 145-173 amino acids from the Central region of human PRKAA2 (Thr172)
Specificity:	This antibody reacts to PRKAA2.
Formulation:	PBS State: Aff - Purified State: Liquid purified Ig fraction Preservative: 0.09% (W/V) sodium azide
Concentration:	lot specific
Purification:	Affinity chromatography on Protein A
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:	62320 Da
Gene Name:	protein kinase AMP-activated catalytic subunit alpha 2
Database Link:	Entrez Gene 5563 Human P54646



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Background:

The protein encoded by this gene is a catalytic subunit of the AMP-activated protein kinase (AMPK). AMPK is a heterotrimer consisting of an alpha catalytic subunit, and non-catalytic beta and gamma subunits. AMPK is an important energy-sensing enzyme that monitors cellular energy status. In response to cellular metabolic stresses, AMPK is activated, and thus phosphorylates and inactivates acetyl-CoA carboxylase (ACC) and beta-hydroxy beta-methylglutaryl-CoA reductase (HMGCR), key enzymes involved in regulating de novo biosynthesis of fatty acid and cholesterol. Studies of the mouse counterpart suggest that this catalytic subunit may control whole-body insulin sensitivity and is necessary for maintaining myocardial energy homeostasis during ischemia.

Synonyms:

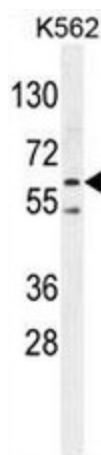
AMPK2, AMPK alpha-2 chain

Protein Families:

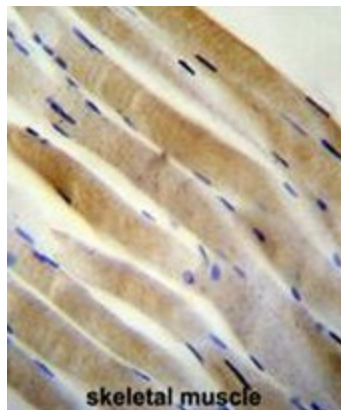
Druggable Genome, Protein Kinase

Protein Pathways:

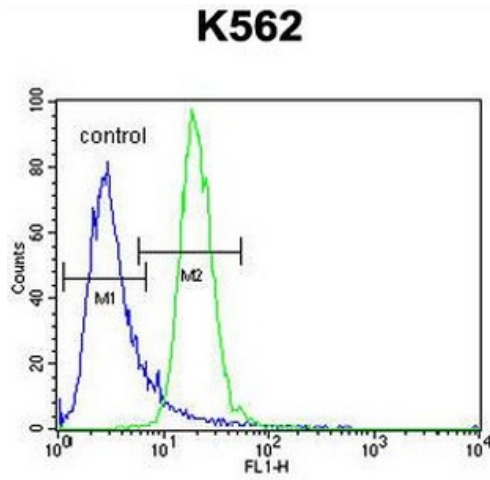
Adipocytokine signaling pathway, Hypertrophic cardiomyopathy (HCM), Insulin signaling pathway, mTOR signaling pathway, Regulation of autophagy

Product images:

PRKAA2 (Thr172) Antibody western blot analysis in K562 cell line lysates (35ug/lane). This demonstrates the PRKAA2 antibody detected the PRKAA2 protein (arrow).



PRKAA2 (Thr172) antibody (Center) immunohistochemistry analysis in formalin fixed and paraffin embedded human skeletal muscle followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the PRKAA2 (Thr172) antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.



PRKAA2 (Thr172) Antibody (Center) flow cytometric analysis of K562 cells (right histogram) compared to a negative control cell (left histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.