Rabbit anti AMPK-alpha(pT172) Polyclonal Antibody

Alternative Name(s): AMPKalpha; AMP-activated protein kinase alpha; AMPK; PRKAA1

Order Information

- **Description:** AMPK-alpha(pT172)
- **Catalogue:** 620-120
- **Lot:** See label
- **Size:** 100ug/200ul
- **Host:** Rabbit
- **Clone:** nan
- **Application:** IHC(P), WB
- **Reactivity:** Hu, Rt, Ms, Bv, Ck, Dg, In

ANTIGEN PREPARATION

A synthetic peptide surrounding to the epitope -LRTSC- with a phosphorylation site at Thr 172 of AMPK alpha protein from human origin. It is identical among human, mouse, rat, chicken, bovine, dog, and insect species.

BACKGROUND

AMP-activated protein kinase (AMPK) is highly conserved from yeast to plants and animals and plays a key role in the regulation of energy balance at both the cellular and the whole body levels. Once activated, it affects a metabolic switch from an anabolic to a catabolic state, both by acutely phosphorylating metabolic enzymes and, in the longer term, by regulating gene expression. AMPK is a heterotrimeric complex composed of a catalytic α subunit and regulatory β and γ subunits. Binding APM to the beta domains triggers increased phosphorylation at Thr172 on the activation loop of the alpha subunit. AMP Phosphorylation at Thr172 is catalyzed by the tumor suppressor kinase LKB1 or CaMKK-beta, TGF-beta activated kinase-1 (TAK1). AMPKα is also phosphorylated at Thr258 and Ser485 (for α1; Ser491 for α2).

PURIFICATION

The Rabbit IgG is purified by site-modified Epitope Affinity Purification.

FORMULATION

This affinity purified antibody is supplied in sterile Tris-buffered saline (pH7.2) containing antibody stabilizer

SPECIFICITY

This antibody recognizes AMPK alpha with a phosphorylated site of Thr 172. It does not cross-react with non-phosphospecific peptide.

STORAGE

The antibodies are stable for 24 months from date of receipt when stored at –20oC to –70oC. The antibodies can be stored at 2oC-8oC for three month without detectable loss of activity. Avoid repeated freezing-thawing cycles.

APPLICATIONS/SUGGESTED WORKING DILUTIONS*

- Western Blot: 0.1-1 µg/ml
- ELISA: 0.01-0.1 µg/ml
- Immunoprecipitation: 2-5 µg/ml
- IHC: 2-10 µg/ml
- Flow cytometry: Not tested
- Molecular Weight: 63.0
- Positive Control: Kidney Tissue
- Cellular Location: Cell Membrane

*Optimal dilutions should be determined by researchers for the specific applications.

FOR RESEARCH USE ONLY.

AbboMax, Inc 2528 Qume Drive, Suite 8, San Jose, California 95131, USA
1 408-573-1898 (Tel). 1 408-573-1858 (Fax). www.abbomax.com info@abbomax.com

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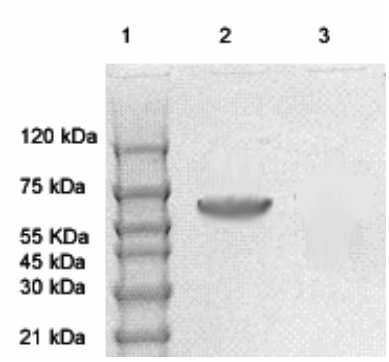
DATA ATTACHMENTS



Western Blot: The whole cell lysate derived from EGF stimulated A431 immunoblotted by Rabbit anti AMPK alpha 1 (pT172) antibody (Cat#620-120) at 1:500 (lane 2). BSA was loaded as a negative control (Lane 3). Observed a major immunoreactive band at molecular weight ~63kDa.

REFERENCES