

**DATASHEET**

**AMPK alpha 1 Rabbit Polyclonal Antibody**

CAT. NO. APA11970

**KEY FEATURES**

|               |   |               |                     |
|---------------|---|---------------|---------------------|
| Target        | AMPK alpha 1  | Source / Host | Rabbit              |
| Reactivity    | Human, Mouse, Rat, Chicken  | Clonality     | Polyclonal          |
| Applications  | WB, IHC, IF/ICC   | Conjugation   | Unconjugated        |
| Form / Buffer | Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide. |               | Storage<br>at -20°C |

**BACKGROUND**

Catalytic subunit of AMP-activated protein kinase (AMPK), an energy sensor protein kinase that plays a key role in regulating cellular energy metabolism, an energy sensor protein kinase that plays a key role in regulating cellular energy metabolism. In response to reduction of intracellular ATP levels, AMPK activates energy-producing pathways and inhibits energy-consuming processes: inhibits protein, carbohydrate and lipid biosynthesis, as well as cell growth and proliferation. AMPK acts via direct phosphorylation of metabolic enzymes, and by longer-term effects via phosphorylation of transcription regulators.

**APPLICATION**

To ensure optimal assay performance, AREX recommends conducting reagent titration tailored to each testing system for optimal detection results.

|        |                |
|--------|----------------|
| WB     | 1:500 - 1:1000 |
| IHC    | 1:100 - 1:200  |
| IF/ICC | 1:100 - 1:500  |

\*Results are sample-specific. Please refer to your local assay conditions and test parameters for reference.

**PRODUCT OVERVIEW**

|                   |  |
|-------------------|--|
| Description       | Rabbit polyclonal antibody to AMPK alpha 1   |
| Specificity       | Recognizes endogenous levels of AMPK alpha 1 protein.  |
| Antibody Type     | Primary antibody   |
| Immunogen         | KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human AMPK alpha 1. The exact sequence is proprietary.  |
| Purification      | The antibody was purified by immunogen affinity chromatography.  |
| Molecular Weight  | Predicted: 64 kD; Observed: 63 kD  |
| Form/Buffer       | Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.  |
| Alternative Names | AMPK1; 5'-AMP-activated protein kinase catalytic subunit alpha-1; AMPK subunit alpha-1; Acetyl-CoA carboxylase kinase; ACACA kinase; Hydroxymethylglutaryl-CoA reductase kinase; HMGCR kinase; Tau-protein kinase PRKAA1 |
| Gene Symbol       | PRKAA1   |
| Entrez Gene       | 5562(Human); 105787(Mouse); 65248(Rat)   |
| SwissProt         | Q13131(Human); Q5EG47(Mouse); P54645(Rat)  |

\*AREX continuously optimizes our products. Webpage content may not reflect the latest updates. For inquiries, please contact [info@arexbio.com](mailto:info@arexbio.com) or your local distributor.

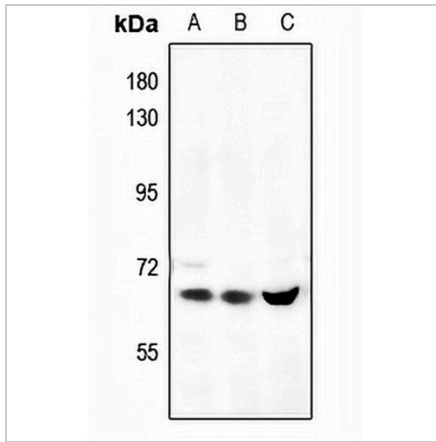
\*Clone Number, Reactivity, Source/Host and Clonality can be found in the product name and Key Features section above.

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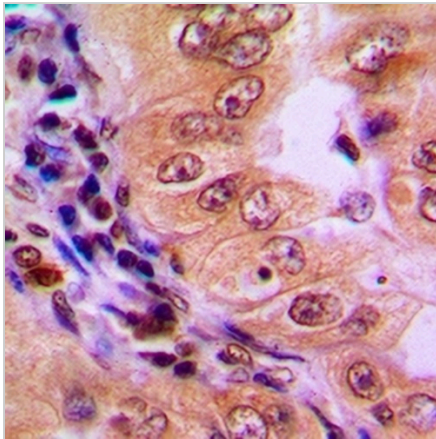
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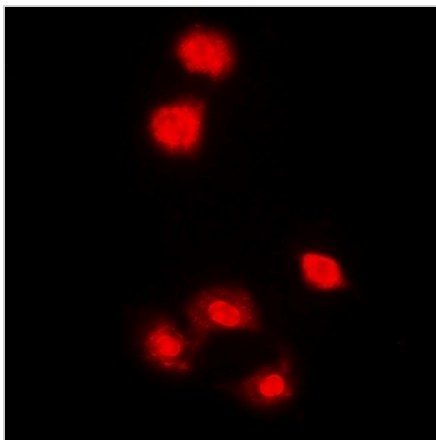
**DATA**



Western blot analysis of AMPK alpha 1 expression in HeLa (A), HEK293T (B), rat spleen (C) whole cell lysates. (Predicted band size: 64 kD; Observed band size: 63 kD)



Immunohistochemical analysis of AMPK alpha 1 staining in human lung cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of AMPK alpha 1 staining in HeLa cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark.

**STORAGE**

Store at 4°C short term. For long term storage, store at -20°C, avoiding freeze/thaw cycles.

**NOTE**

For Research Use Only. Not for diagnostic, therapeutics, prophylactic or in vivo use.