

## AMPK $\alpha$ 2, Rabbit pAb

<b>CATALOG #:</b>	3117-100
<b>AMOUNT:</b>	100 $\mu$ g
<b>LOT #:</b>	_____
<b>HOST (ISOTYPE):</b>	Rabbit (Ig)
<b>IMMUNOGEN:</b>	KLH conjugated synthetic peptide selected from the C-terminal region of human PRKAA2.
<b>SPECIES REACTIVITY:</b>	Human
<b>FORMULATION:</b>	100 $\mu$ g (0.25 mg/ml) purified rabbit polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, eluted with high and low pH buffers and neutralized immediately, followed by dialysis against PBS.

### STORAGE CONDITIONS:

Maintain refrigerated at 2-8°C for up to 6 months or -20°C for long term storage.

### BACKGROUND DESCRIPTION:

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.

### BACKGROUND REFERENCES:

- Wyatt, C.N., J. Biol. Chem. 282 (11), 8092-8098 (2007)
- Cheung, S.T., Neoplasia 8 (9), 696-701 (2006)
- Lee-Young, R.S., Am. J. Physiol. Endocrinol. Metab. 291 (3), E566-E573 (2006)
- Gregory, S.G., Nature 441 (7091), 315-321 (2006)

### OTHER NAMES:

AMPK alpha-2 chain; 5'-AMP-activated protein kinase, catalytic alpha-2 chain

### SPECIFICITY:

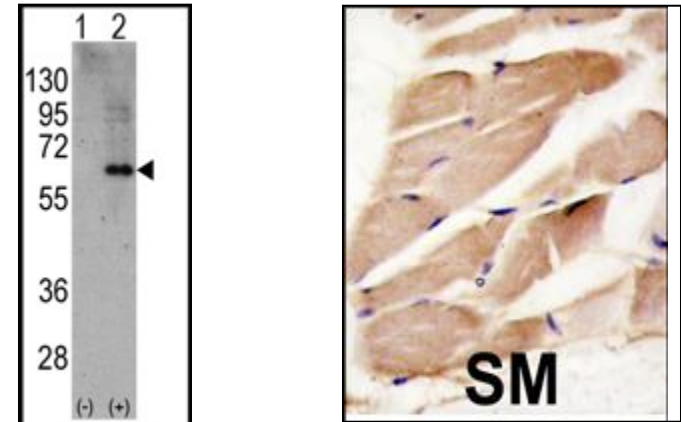
The antibody detects a ~ 62 kDa band, corresponding to the expected molecular mass of AMPK on immunoblots.

### APPLICATION (suggested concentration):

The antibody can be used for ELISA (0.25  $\mu$ g/ml), Western blotting (2.5 – 5.0  $\mu$ g/ml),

**FOR RESEARCH USE ONLY! Not to be used on humans.**

### APPLICATION DATA (Calculated MW = 62189 Da):



Western blot analysis of PRKAA2 (arrow) using rabbit pAb. 293 cell lysates (2  $\mu$ g/lane) either nontransfected (Lane 1) or transiently transfected with the PRKAA2 gene (Lane 2) (Origene Technologies).

Formalin-fixed and paraffin-embedded human skeletal muscle reacted with PRKAA2, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining.

### RELATED PRODUCTS:

#### Apoptosis Detection Kits & Reagents

- Annexin V Kits & Bulk Reagents
- Caspase Assay Kits & Reagents
- Mitochondrial Apoptosis Kits & Reagents
- Nuclear Apoptosis Kits & Reagents
- Apoptosis Inducers and Set
- Apoptosis siRNA Vectors

#### Cell Fractionation System

- Mitochondria/Cytosol Fractionation Kit
- Nuclear/Cytosol Fractionation Kit
- Membrane Protein Extraction Kit
- Cytosol/Particulate Rapid Separation Kit
- Mammalian Cell Extraction Kit
- FractionPREP Fractionation System