

## AMPK $\beta$ , Rabbit pAb

<b>CATALOG #:</b>	3108-100
<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 N-terminal region of human PRKAB1.
<b>SPECIES REACTIVITY:</b>	Human, Mouse

### FORMULATION:

100  $\mu$ g (0.25 mg/ml) purified rabbit Ig polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G 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:

AMPK beta-1 chain is a regulatory 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. This subunit may be a positive regulator of AMPK activity. The myristoylation and phosphorylation of this subunit have been shown to affect the enzyme activity and cellular localization of AMPK. This subunit may also serve as an adaptor molecule mediating the association of the AMPK complex.

### BACKGROUND REFERENCES:

1. Minokoshi, Y., et al., Nature 428(6982):569-574 (2004).
2. Andersson, U., et al., J. Biol. Chem. 279(13):12005-12008 (2004).
3. Landree, L.E., et al., J. Biol. Chem. 279(5):3817-3827 (2004).
4. Carling, D., Trends Biochem. Sci. 29(1):18-24 (2004).
5. Shaw, R.J., et al., Proc. Natl. Acad. Sci. U.S.A. 101(10):3329-3335 (2004).

### OTHER NAMES:

5'-AMP-activated protein kinase, beta-1 subunit, AMPK beta-1 chain, AMPKb

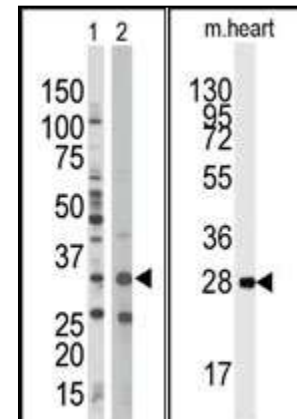
### SPECIFICITY:

The antibody detects a ~30 kDa band, corresponding to the expected molecular mass of AMPK  $\beta$  (PRKAB1) on immunoblots.

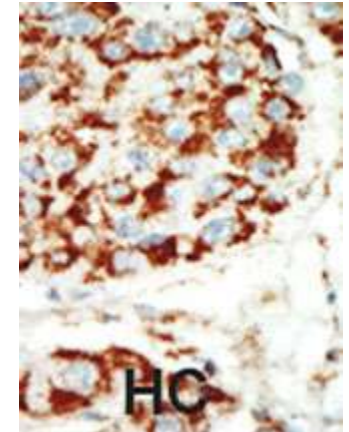
### APPLICATION (suggested concentration):

The antibody can be used for ELISA (0.25  $\mu$ g/ml), Western blotting (0.5 – 2.5  $\mu$ g/ml) and Immunohistochemistry (2.5-5.0  $\mu$ g/ml).

### APPLICATION DATA (Calculated MW = 30251 Da):



(LEFT) The anti-AMPK $\beta$  pAb (Cat. #3108-100) is used in Western blot to detect AMPK $\beta$  in Jurkat cell lysate (Lane 1) and mouse spleen tissue lysate (Lane 2). (RIGHT) Western blot analysis of mouse heart lysates (35  $\mu$ g/lane).



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. HC = hepatocarcinoma.

### 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