



# AMPK $\alpha$ 1/2 Monoclonal Antibody

|                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Catalog No</b>                  | YP-mAb-14657                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Isotype</b>                     | IgG                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Reactivity</b>                  | Human;Mouse;Rat                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Applications</b>                | WB                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Gene Name</b>                   | AAPK1/AAPK2                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Immunogen</b>                   | The antiserum was produced against synthesized peptide derived from human AMPK alpha. AA range:140-189                                                                                                                                                                                                                                                                                                                                |
| <b>Specificity</b>                 | AMPK $\alpha$ 1/2 Monoclonal Antibody detects endogenous levels of AMPK $\alpha$ 1/2 protein.                                                                                                                                                                                                                                                                                                                                         |
| <b>Formulation</b>                 | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.                                                                                                                                                                                                                                                                                                                                                               |
| <b>Source</b>                      | Monoclonal, Mouse,IgG                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Purification</b>                | The antibody was affinity-purified from mouse antiserum by affinity-chromatography using epitope-specific immunogen.                                                                                                                                                                                                                                                                                                                  |
| <b>Dilution</b>                    | WB 1:500-1:2000                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Concentration</b>               | 1 mg/ml                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Purity</b>                      | ≥90%                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Storage Stability</b>           | -20°C/1 year                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Synonyms</b>                    | AMPK $\alpha$ 1/2;AAPK1/AAPK2;5'-AMP-activated protein kinase catalytic subunit alpha-1/2;PRKAA1;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;PRKAA2;AMPK                                                                                                        |
| <b>Observed Band</b>               | 63kD                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Calculated Molecular Weight</b> | 63kD                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Cell Pathway</b>                | Cytoplasm . Nucleus . In response to stress, recruited by p53/TP53 to specific promoters. .                                                                                                                                                                                                                                                                                                                                           |
| <b>Tissue Specificity</b>          | Brain,Intestine,Liver,Mammary gland,Platelet,Testis                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Function</b>                    | catalytic activity:ATP + a protein = ADP + a phosphoprotein., cofactor:Magnesium.,enzyme regulation:Binding of AMP results in allosteric activation, inducing phosphorylation on Thr-174 by STK11 in complex with STE20-related adapter-alpha (STRAD alpha) pseudo kinase and CAB39. Also activated by phosphorylation by CAMKK2 triggered by a rise in intracellular calcium ions, without detectable changes in the AMP/ATP ratio., |



function:Responsible for the regulation of fatty acid synthesis by phosphorylation of acetyl-CoA carboxylase. It also regulates cholesterol synthesis via phosphorylation and inactivation of hormone-sensitive lipase and hydroxymethylglutaryl-CoA reductase. Appears to act as a metabolic stress-sensing protein kinase switching off biosynthetic pathways when cellular ATP levels are depleted and when 5'-AMP rises in response to fuel limitation and/or hypoxia. This is a catalytic s

#### Background

The protein encoded by this gene belongs to the ser/thr protein kinase family. It is the catalytic subunit of the 5'-prime-AMP-activated protein kinase (AMPK). AMPK is a cellular energy sensor conserved in all eukaryotic cells. The kinase activity of AMPK is activated by the stimuli that increase the cellular AMP/ATP ratio. AMPK regulates the activities of a number of key metabolic enzymes through phosphorylation. It protects cells from stresses that cause ATP depletion by switching off ATP-consuming biosynthetic pathways. Alternatively spliced transcript variants encoding distinct isoforms have been observed. [provided by RefSeq, Jul 2008],

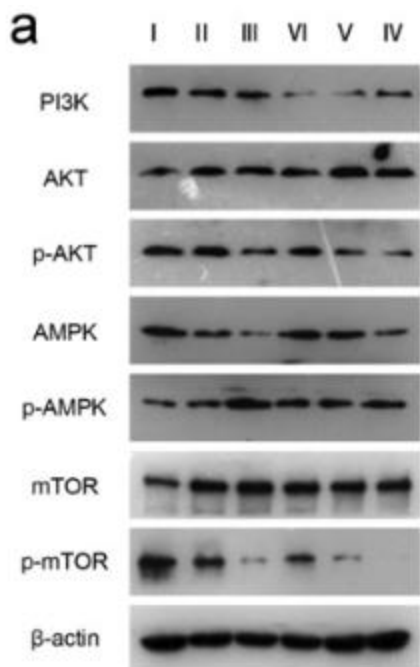
#### matters needing attention

Avoid repeated freezing and thawing!

#### Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

### Products Images



Western Blot analysis of various cells using AMPK $\alpha$  1/2 Monoclonal Antibody