

## AMPK $\alpha$ 1/2 Rabbit pAb

CatalogNo: YT0216 Orthogonal Validated 

### Key Features

#### Host Species

- Rabbit

#### Reactivity

- Human, Mouse, Rat, Monkey, Bovine, Fish

#### Applications

- WB, IHC, IF, ELISA

#### MW

- 63kD (Observed)

#### Isotype

- IgG

### Storage

**Storage\*** -15°C to -25°C/1 year (Do not lower than -25°C)

**Formulation** Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

### Recommended Dilution Ratios

WB 1:500-2000

IHC 1:100-500

IF/ICC 1:100-500

ELISA 1:5000-20000

### Basic Information

**Clonality** Polyclonal

### Immunogen Information

**Immunogen** The antiserum was produced against synthesized peptide derived from human AMPK alpha. AA range:140-189

**Specificity** AMPK $\alpha$ 1/2 Polyclonal Antibody detects endogenous levels of AMPK $\alpha$ 1/2 protein.

### Target Information

**Gene name** AAPK1/AAPK2

**Protein Name** 5'-AMP-activated protein kinase catalytic subunit alpha-1/2

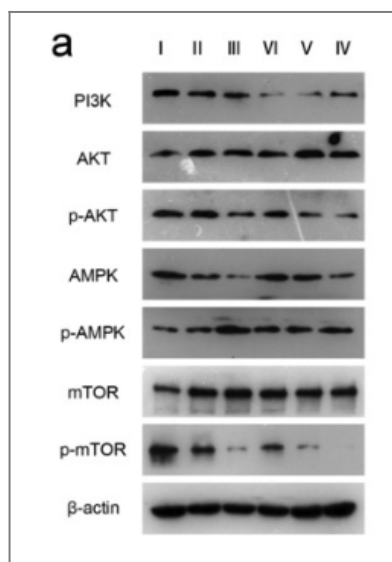
Organism	Gene ID	UniProt ID
Human	<a href="#">5562</a> ; <a href="#">5563</a> ;	<a href="#">Q13131</a> ; <a href="#">P54646</a> ;
Mouse	<a href="#">105787</a> ; <a href="#">108079</a> ;	
Rat	<a href="#">65248</a> ; <a href="#">78975</a> ;	<a href="#">P54645</a> ; <a href="#">Q09137</a> ;

**Cellular Localization** Cytoplasm . Nucleus . In response to stress, recruited by p53/TP53 to specific promoters. .

**Tissue specificity** Brain,Intestine,Liver,Mammary gland,Platelet,Testis

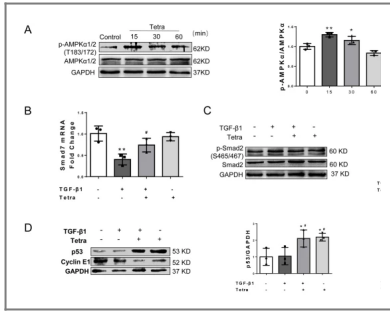
**Function** Catalytic activity:ATP + a protein = ADP + a phosphoprotein.,cofactor:Magnesium.,enzyme regulation:Binding of AMP results in allosteric activation, inducing phosphorylation on Thr-174 by STK11 in complex with STE20-related adapter-alpha (STRAD alpha) pseudo kinase and CAB39. Also activated 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 subunit.,sequence Caution:Translation N-terminally shortened.,similarity:Belongs to the protein kinase superfamily.,similarity:Belongs to the protein kinase superfamily. CAMK Ser/Thr protein kinase family. SNF1 subfamily.,similarity:Contains 1 protein kinase domain.,subunit:Heterotrimer of an alpha catalytic subunit, a beta and a gamma non-catalytic subunits. Interacts with FNIP1 and FNIP2.,

## Validation Data

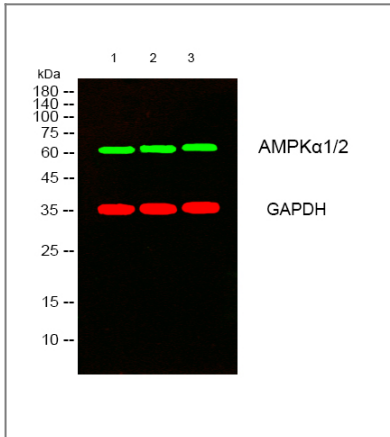


Kang, Min, et al. "Autophagy was activated against the damages of placentas caused by nano-copper oral exposure." *Ecotoxicology and Environmental Safety* 220 (2021): 112364.

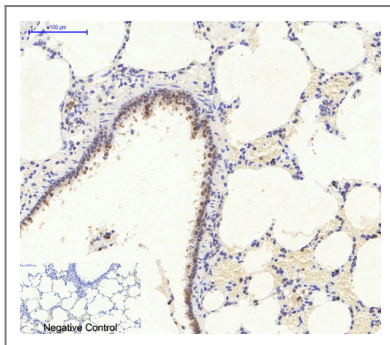
Gao, L., Wang, Ly., Liu, Zq. et al. TNAP inhibition attenuates cardiac fibrosis induced by myocardial infarction through deactivating TGF- $\beta$ 1/Smads and activating P53 signaling pathways. *Cell Death Dis* 11, 44 (2020)



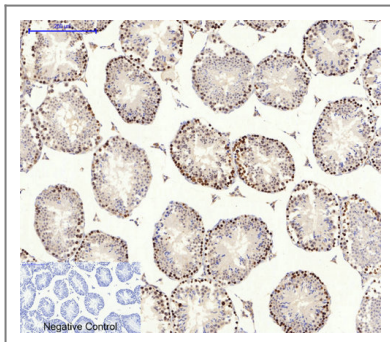
Western blot analysis of lysates from 1) K562 , 2) COS7 , 3) KB cells, (Green) primary antibody was diluted at 1:1000, 4° over night, secondary antibody(cat:RS23920)was diluted at 1:10000, 37° 1hour. (Red) GAPDH Monoclonal Antibody(2B8) (cat:YM3029) antibody was diluted at 1:5000 as loading control, 4° over night,secondary antibody(cat:RS23710)was diluted at 1:10000, 37° 1hour.



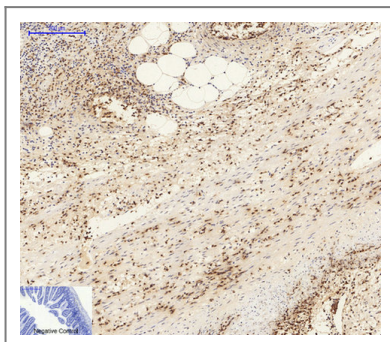
Immunohistochemical analysis of paraffin-embedded Rat-lung tissue. 1,AMPK $\alpha$ 1/2 Polyclonal Antibody was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room tempeRature, 30min). Negative control was used by secondary antibody only.

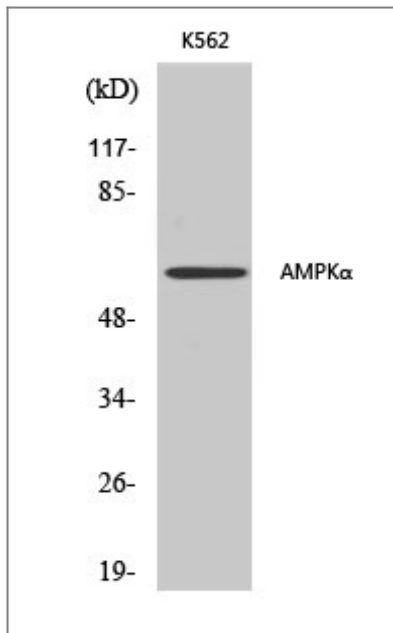


Immunohistochemical analysis of paraffin-embedded Mouse-testis tissue. 1,AMPK $\alpha$ 1/2 Polyclonal Antibody was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room tempeRature, 30min). Negative control was used by secondary antibody only.

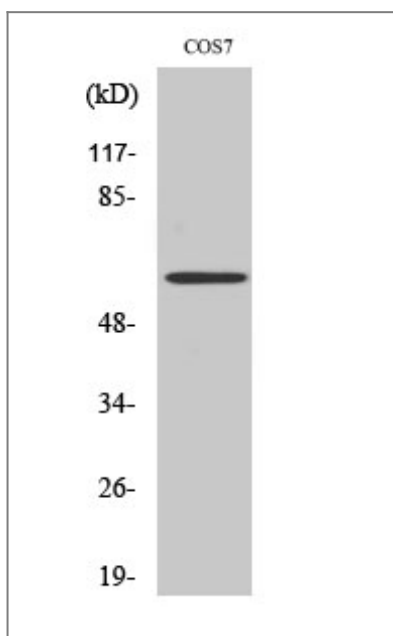


Immunohistochemical analysis of paraffin-embedded Mouse-colon tissue. 1,AMPK $\alpha$ 1/2 Polyclonal Antibody was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room tempeRature, 30min). Negative control was used by secondary antibody only.





Western Blot analysis of various cells using AMPK $\alpha$ 1/2 Polyclonal Antibody diluted at 1:500



Western Blot analysis of COS7 cells using AMPK $\alpha$ 1/2 Polyclonal Antibody diluted at 1:500

## Contact information

Orders: [order@immunoway.com](mailto:order@immunoway.com)  
Support: [tech@immunoway.com](mailto:tech@immunoway.com)  
Telephone: 877-594-3616 (Toll Free), 408-747-0185  
Website: <http://www.immunoway.com>  
Address: 2200 Ringwood Ave San Jose, CA 95131 USA



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