

Anti-Phospho-AMPK alpha 2 (Ser173) Polyclonal Antibody

Product Details

Ig Type:	IgG
Reactivity:	Human,Mouse,Rat (predicted:Pig,Cow,Horse,Rabbit)
Molecular Weight:	Theoretical: 61 kDa. Actual: 61 kDa.
Purification:	Protein A purified

Applications

1. Blank control (black line): Hela.

Primary Antibody (green line): Rabbit Anti-phospho-AMPK alpha 2 (Ser173) antibody (TMAB-01389)

Dilution: 2 µg/Test;

Secondary Antibody (white blue line): Goat anti-rabbit IgG-AF488

Dilution: 0.5 µg/Test.

Isotype control (orange line): Normal Rabbit IgG

Protocol

The cells were fixed with 4% PFA (10 min at room temperature) and then permeabilized with 90% ice-cold methanol for 20 min at -20°C, The cells were then incubated in 5% BSA to block non-specific protein-protein interactions for 30 min at room temperature. Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature.

2. Sample:

Muscle (Mouse) Lysate at 40 µg

Heart (Mouse) Lysate at 40 µg

Primary: Anti-phospho-AMPK alpha 2 (Ser173) (TMAB-01389) at 1/500 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Verified Activity: Predicted band size: 61 kDa

Observed band size: 61 kDa

3. Paraformaldehyde-fixed, paraffin embedded (rat heart tissue); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 min; Blocking buffer (normal goat serum) at 37°C for 30 min; Antibody incubation with (p-AMPK alpha 2) Polyclonal Antibody, Unconjugated (TMAB-01389) at 1:400 overnight at 4°C, followed by a conjugated secondary for 20 min and DAB staining.

4. Blank control: HepG2. Primary Antibody (green line): Rabbit Anti-phospho-AMPK alpha 2 (Ser173) antibody (TMAB-01389)

Dilution: 1 µg/10⁶ cells;

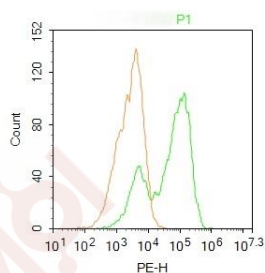
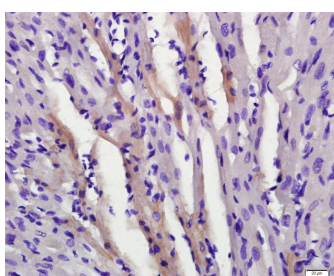
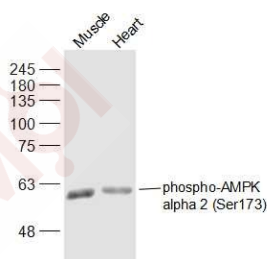
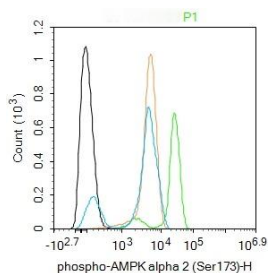
Isotype Control Antibody (orange line): Rabbit IgG.

Secondary Antibody: Goat anti-rabbit IgG-PE

Dilution: 1 µg/test.

Protocol

The cells were fixed with 4% PFA (10 min at room temperature) and then permeabilized with 90% ice-cold methanol for 20 min at -20°C. The cells were then incubated in 5% BSA to block non-specific protein-protein interactions for 30 min at room temperature. Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature.



Application: FCM,IF,IHC-Fr,IHC-P,WB

Recommended WB: 1:500-2000; IHC-P: 1:100-500; IHC-Fr: 1:100-500; IF: 1:100-500; FCM: 2ug/Test

Properties

Stability & Storage: Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.

Shipping: Shipping with blue ice.

Antigen Details

Immunogen: KLH conjugated Synthesised phosphopeptide: human AMPK alpha 2 around the phosphorylation site of Ser173

Antigen Species: Human

Gene ID: 5563

Uniprot ID: P54646

Synonyms: AMPK a2;AMPK alpha 2 (p-S173);Hydroxymethylglutaryl-CoA reductase kinase;AMPK subunit alpha-2;HMGCR kinase;PRKAA2;AMPK alpha 2 (p-Ser173);p-AMPK alpha 2 (Ser173);AMPK alpha 2 chain;AMPK2;AMPKa2;ACACA kinase;PRKAA;5'-AMP-activated protein kinase catalytic subunit alpha-2;Acetyl-CoA carboxylase kinase;AAPK2;Protein kinase AMP activated catalytic subunit alpha 2;AMPK-a2AMPKalpha2;p-AMPK alpha 2 (S173);Protein kinase AMP activated

alpha 2 catalytic subunit;AAPK1;AMPK 2

Biology Area: Integration of energy metabolism,Response to hypoxia,Metabolism,Integration of energy,Fatty acids,Hypoxia,Fatty acid oxidation,Metabolism,Other Kinases

Research Background

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. [provided by RefSeq, Jul 2008]

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