Anti-Phospho-AMPK alpha 1 (T183) +AMPK alpha 2 (T172) Antibody [PSH14-13] - BSA and Azide free

HA751508

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P
Molecular Wt:	Predicted band size: 64 kDa
Clone number:	PSH14-13

Description: Catalytic subunit of AMP-activated protein kinase (AMPK), an energy sensor protein kinase that plays a key role in regulating cellular energy metabolism. In response to reduction of intracellular ATP levels, AMPK activates energy-producing pathways and inhibits energy-consuming processes: inhibits protein, carbohydrate and lipid biosynthesis, as well as cell growth and proliferation. AMPK acts via direct phosphorylation of metabolic enzymes, and by longer-term effects via phosphorylation of transcription regulators

Immunogen: Synthetic phosphopeptide corresponding to residues surrounding Thr183 of human AMPK alpha 1.

Positive control: NCI-H1299 cell lysate, NCI-H1299 treated with 0.5μM Oligomycin for 15 minutes cell lysate, SH-SY5Y treated with 0.5μM Oligomycin for 30 minutes cell lysate, C2C12 treated with 1mM AICAR for 30 minutes cell lysate, C6 cell lysate, C6 treated with 1μM Oligomycin for 30 minutes cell lysate, NCI-H1299 treated with 0.5μM Oligomycin for 15 minutes cell lysate then the membrane treated with λpp for 1 hour, human bain tissue untreated / treated, mouse bain tissue untreated / treated, rat bain tissue untreated / treated.

Subcellular location: Cytoplasm, Nucleus.

Database links: SwissProt: Q13131 Human | P54646 Human | Q5EG47 Mouse | Q8BRK8 Mouse | P54645 Rat | Q09137 Rat

Recommended Dilutions:

WB	1:2,000
IHC-P	1:200-1:1,000

Storage Buffer: 1*PBS (pH7.4).

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

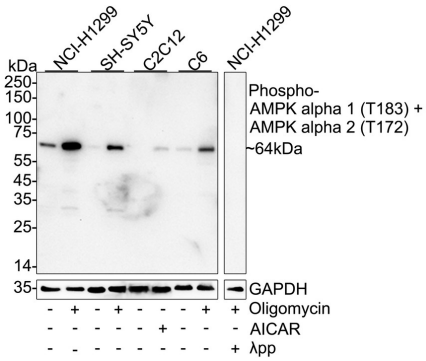

Fig1: Western blot analysis of Phospho-AMPK alpha 1 (T183) +AMPK alpha 2 (T172) on different lysates with Rabbit anti-Phospho-AMPK alpha 1 (T183) +AMPK alpha 2 (T172) antibody (HA751508) at 1/2,000 dilution.

Lane 1: NCI-H1299 cell lysate
Lane 2: NCI-H1299 treated with 0.5μM Oligomycin for 15 minutes cell lysate
Lane 3: SH-SY5Y cell lysate
Lane 4: SH-SY5Y treated with 0.5μM Oligomycin for 30 minutes cell lysate
Lane 5: C2C12 cell lysate
Lane 6: C2C12 treated with 1mM AICAR for 30 minutes cell lysate
Lane 7: C6 cell lysate
Lane 8: C6 treated with 1μM Oligomycin for 30 minutes cell lysate
Lane 9: NCI-H1299 treated with 0.5μM Oligomycin for 15 minutes cell lysate, then the membrane treated with λpp for 1 hour

Lysates/proteins at 20 μg/Lane.

Predicted band size: 64 kDa
Observed band size: 64 kDa

Exposure time: 59 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA751508) at 1/2,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

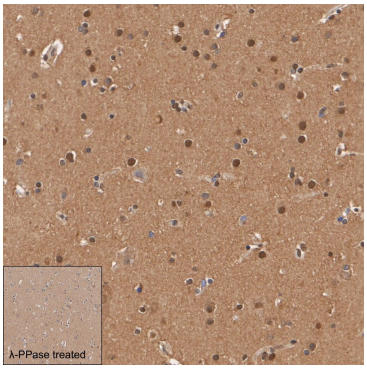

Fig2: Immunohistochemical analysis of paraffin-embedded human bain tissue untreated / treated with λpp with Rabbit anti-Phospho-AMPK alpha 1 (T183) +AMPK alpha 2 (T172) antibody (HA751508) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA751508) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

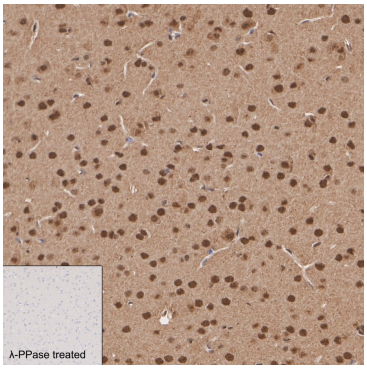

Fig3: Immunohistochemical analysis of paraffin-embedded mouse bain tissue untreated / treated with λpp with Rabbit anti-Phospho-AMPK alpha 1 (T183) +AMPK alpha 2 (T172) antibody (HA751508) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA751508) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

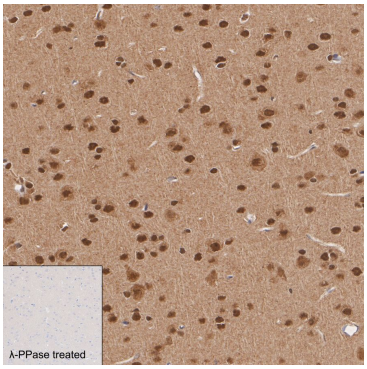

Fig4: Immunohistochemical analysis of paraffin-embedded rat bain tissue untreated / treated with λpp with Rabbit anti-Phospho-AMPK alpha 1 (T183) +AMPK alpha 2 (T172) antibody (HA751508) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA751508) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Background References

1. Albayrak G et al. Memantine shifts cancer cell metabolism via AMPK1/2 mediated energetic switch in A549 lung cancer cells. EXCLI J. 2021 Feb
2. Lin FC et al.Protective Effects of Kirenol against Lipopolysaccharide-Induced Acute Lung Injury through the Modulation of the Proinflammatory NFkappaB Pathway and the AMPK2-/Nrf2-Mediated HO-1/AOE Pathway. Antioxidants (Basel). 2021 Jan