Anti-Phospho-Acetyl Coenzyme A Carboxylase (S79) Antibody [PSH07-13] - BSA and Azide free

HA751134

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IF-Cell, IHC-P
Molecular Wt:	Predicted band size: 266 kDa
Clone number:	PSH07-13

Description: Acetyl-CoA carboxylase 1 also known as ACC-alpha or ACCa is an enzyme that in humans is encoded by the ACACA gene. Acetyl-CoA carboxylase (ACC) is a complex multifunctional enzyme system. ACC is a biotin-containing enzyme which catalyzes the carboxylation of acetyl-CoA to malonyl-CoA, the rate-limiting step in fatty acid synthesis. There are two ACC forms, alpha and beta, encoded by two different genes. ACC-alpha is highly enriched in lipogenic tissues. The enzyme is under long term control at the transcriptional and translational levels and under short term regulation by the phosphorylation/dephosphorylation of targeted serine residues and by allosteric transformation by citrate or palmitoyl-CoA.

Immunogen: Synthetic phospho-peptide corresponding to residues surrounding Ser79 of human Acetyl Coenzyme A Carboxylase aa 51-100.

Positive control: SH-SY5Y cell lysate, SH-SY5Y treated with 200nM Calyculin A and 1μM Okadaic Acid for 1 hour cell lysate, RAW264.7 cell lysate, RAW264.7 treated with 200nM Calyculin A and 1μM Okadaic Acid for 1 hour cell lysate, C6 cell lysate, C6 treated with 100nM Calyculin A for 30 minutes cell lysate, PC-12, mouse liver tissue, rat liver tissue.

Subcellular location: Cytoplasm, cytosol.

Database links: SwissProt: Q13085 Human | Q5SWU9 Mouse | P11497 Rat

Recommended Dilutions:

WB	1:2,000
IF-Cell	1:50
IHC-P	1:200

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

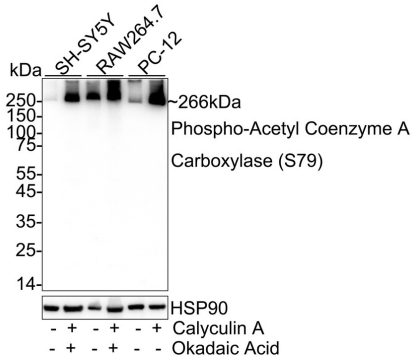

Fig1: Western blot analysis of Phospho-Acetyl Coenzyme A Carboxylase (S79) on different lysates with Rabbit anti-Phospho-Acetyl Coenzyme A Carboxylase (S79) antibody (HA751134) at 1/2,000 dilution.

Lane 1: SH-SY5Y cell lysate (20 µg/Lane)
Lane 2: SH-SY5Y treated with 200nM Calyculin A and 1µM Okadaic Acid for 1 hour cell lysate (20 µg/Lane)
Lane 3: RAW264.7 cell lysate (20 µg/Lane)
Lane 4: RAW264.7 treated with 200nM Calyculin A and 1µM Okadaic Acid for 1 hour cell lysate (20 µg/Lane)
Lane 5: C6 cell lysate (20 µg/Lane)
Lane 6: C6 treated with 100nM Calyculin A for 30 minutes cell lysate (20 µg/Lane)

Predicted band size: 266 kDa
Observed band size: 266 kDa

Exposure time: 30 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 (HA751134) 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.

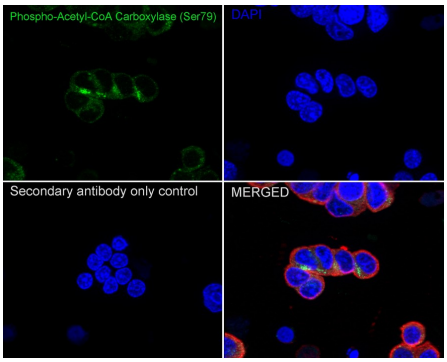

Fig2: Immunocytochemistry analysis of PC-12 cells labeling Phospho-Acetyl Coenzyme A Carboxylase (S79) with Rabbit anti-Phospho-Acetyl Coenzyme A Carboxylase (S79) antibody (HA751134) at 1/50 dilution.

Cells were fixed in 4% paraformaldehyde for 20 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 5 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-Phospho-Acetyl Coenzyme A Carboxylase (S79) antibody (HA751134) at 1/50 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (M1305-2, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

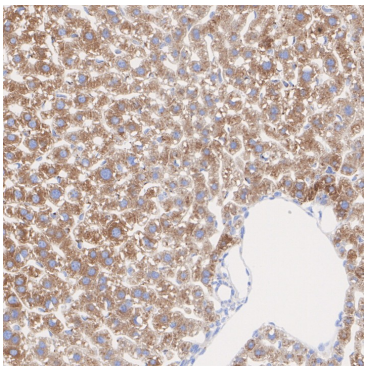

Fig3: Immunohistochemical analysis of paraffin-embedded mouse liver tissue with Rabbit anti-Phospho-Acetyl Coenzyme A Carboxylase (S79) antibody (HA751134) at 1/200 dilution.

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 (HA751134) 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.

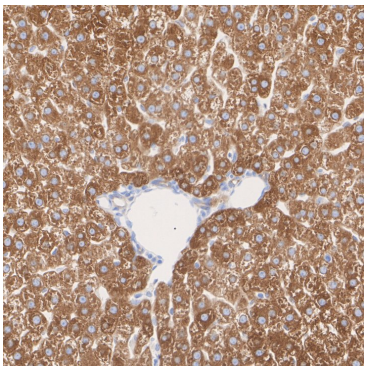

Fig4: Immunohistochemical analysis of paraffin-embedded rat liver tissue with Rabbit anti-Phospho-Acetyl Coenzyme A Carboxylase (S79) antibody (HA751134) at 1/200 dilution.

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 (HA751134) 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.

Background References

1. Yeudall S et al. Macrophage acetyl-CoA carboxylase regulates acute inflammation through control of glucose and lipid metabolism. Sci Adv. 2022 Nov
2. Bates J et al. Acetyl-CoA carboxylase inhibition disrupts metabolic reprogramming during hepatic stellate cell activation. J Hepatol. 2020 Oct