

Anti-phospho-Acetyl CoA Carboxylase (Ser79)

Polyclonal Antibody

Cat. # 07-303

Lot # DAM1661071

pack size: 200 µg

Store at 2-8°C

FOR RESEARCH USE ONLY



Certificate of Analysis

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Applications	Species Cross-Reactivity	Antibody Isotype	Epitope/Region	Host Species	Molecular Weight	Accession #
WB	H, (M, R, Ca, Ch, B)	N/A	N-terminal	Rb	257 kDa	NP_942131

Background

Acetyl CoA carboxylase (ACC) is a biotin-dependent enzyme that catalyzes carboxylation of acetyl-CoA to produce malonyl-CoA through its two catalytic activities, biotin carboxylase (BC) and carboxyltransferase (CT). ACC is a multi-subunit enzyme in most prokaryotes, whereas it is a large, multi-domain enzyme in most eukaryotes. The activity of ACC can be controlled at the transcriptional level as well as by small molecule modulators and covalent modification. Human genome contains the genes for two different ACCs - ACACA and ACACB. The activity of the enzyme is controlled by the reversible phosphorylation. The activities of the enzyme is inhibited if phosphorylated; the phosphorylation takes place when the hormones, glucagon or epinephrine bind to the receptors or the energy status of the cell is low, leading to the activation of the AMP-activated protein kinase. The presence of fatty acid inhibits the activities of the enzyme. When insulin binds to its receptors of the cell, it activates a phosphatase to dephosphorylate the enzyme; the activities of the acetyl CoA carboxylase is thus enhanced. Acetyl CoA carboxylase has recently become a target in the design of new anti-obesity and antibiotic drugs.

Presentation

Protein A purified in buffer containing in 0.1M Tris-Glycine (pH7.4), 150 mM NaCl, with 0.05% NaN₃.

Concentration

0.5 mg/mL

Specificity

Recognizes Acetyl CoA Carboxylase phosphorylated at Serine 79, MW 257 kDa.

Species Cross-Reactivity

Human. Expected to react with Cow, Dog, Chicken, Rat and Mouse based on immunogen sequence homology.

Immunogen

KLH conjugated synthetic linear peptide (HMRSSM[pS]GLHLVK) corresponding to amino acid 73-85 of rat Acetyl CoA Carboxylase.

Method of Purification

Protein A chromatography

Storage and Handling

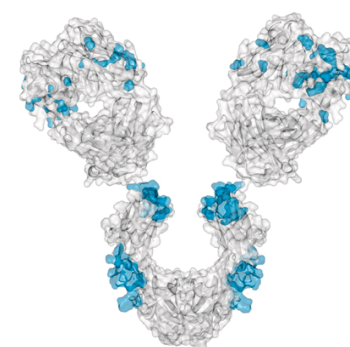
Stable for 1 year at 2-8°C from date of receipt.

Handling Recommendations: Upon receipt, and prior to removing the cap, centrifuge the vial and gently mix the solution.

Quality Control Testing

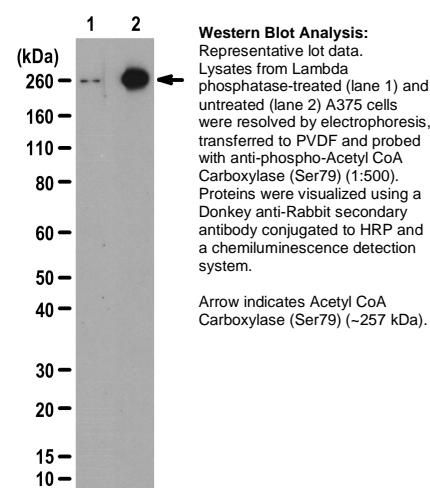
Evaluated by Western Blot on Lambda phosphatase-treated and untreated A375 cell lysate.

Western Blot Analysis: 1:500 dilution of this antibody detected endogenous phospho-Acetyl CoA Carboxylase (Ser79) in lysate from Lambda phosphatase-treated and untreated A375 cells.



References

- Andersson, U., et al. (2004). *J Biol Chem.* 279: 12005-8.
- Chan, A. Y., et al. (2004). *J Biol Chem.* 279: 32771-9.
- Miyazaki, M., et al. (2004). *J Biol Chem.* 279: 35017-24.
- Orci, L., et al. (2004). *Proc Natl Acad Sci U.S.A.* 101: 2058-63.
- Nagata, D., et al. (2003). *J Biol Chem.* 278: 31000-6.



APPLICATION LEGEND: WB Western Blotting IP Immunoprecipitation IC Immunocytochemistry IF Immunofluorescence IH Immunohistochemistry (Tissue)

SPECIES LEGEND: H Human M Mouse R Rat B Bovine Ca Canine Ch Chicken () Predicted Reactivity

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PROTOCOL**Western Blotting**

1. Perform SDS-polyacrylamide gel electrophoresis (SDS-PAGE) on cell lysate and transfer the proteins to a PVDF membrane. Wash the PVDF membrane twice with TBST.
2. Block the blotted PVDF membrane in freshly prepared 5% Milk/TBST for 30 minutes at room temperature with constant agitation.
3. Incubate the PVDF with the recommended dilution of Anti-phospho-Acetyl CoA Carboxylase (Ser79) diluted in 5% Milk/TBST for 2 hours at room temperature or overnight with agitation at 2-8°C.
4. Wash the PVDF 3 times with TBST.
5. Incubate the PVDF in the secondary reagent of choice (donkey anti-rabbit HRP conjugated IgG, Catalog # AP182P 1:50,000 dilution was used) in milk for 1 hour with agitation at room temperature.
6. Wash the PVDF 3-5 times with TBST.
7. Use Chemiluminescent ECL Detection System, Catalog # 2600 to visualize results. Use as directed.

RELATED PRODUCTS (specific)

cat #	description
07-439	■ Anti-Acetyl CoA Carboxylase
04-322	■ Anti-Acetyl CoA Carboxylase 1, Rabbit mAb
05-673	■ Anti-phospho-Acetyl CoA Carboxylase (Ser79), clone BK102
12-491	■ ACC2 (aa 175-271)

RELATED PRODUCTS (non-specific)

cat #	description
IPVH00010	■ Immobilon-P 26.5 cm x 3.75 m Roll PVDF 0.45 µm
IPFL00010	■ Immobilon-FL 26.5 cm x 3.75 m Roll PVDF 0.45 µm
IPVH07850	■ Immobilon-P 7 x 8.4 cm PVDF 0.45 mm (sheet) 50/pk
ISEQ00010	■ Immobilon-P SQ 26.5 cm x 3.75 m 1 roll PVDF 0.2 µm
ISEQ07850	■ Immobilon-P 7 x 8.4 cm PVDF 0.2 mm (sheet) 50/pk
IPFL07810	■ Immobilon-FL 7 x 8.4 cm PVDF 0.45 mm (sheet) 10/pk
WBKLS0100	■ Immobilon Western Chemilum HRP Substrate 100 mL
17-373	■ Spray & Glow™ ECL WB Detection System 1 ea
2060	■ Re-Blot Western Blot Recycling Kit
2500	■ Re-Blot Plus Western Blot Recycling Kit
B2080-175GM	■ Blot Quick Blocker Membrane Blocking Agent 175G

■ antibodies ■ Multiplex products ■ biotools ■ cell culture ■ enzymes ■ kits ■ proteins/peptides ■ siRNA/cDNA products

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