Store at -20°C

#11818

Phospho-Acetyl-CoA Carboxylase (Ser79) (D7D11) Rabbit mAb

100 µl (10 western blots)

rev. 06/09/14

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Entrez-Gene ID #31, 32
UniProt ID #Q13085, O00763

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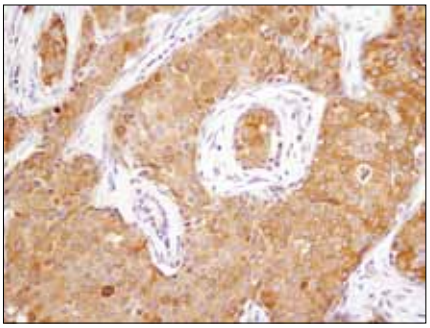
Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP, IHC-P, IF-IC Endogenous	H, M	280 kDa	Rabbit IgG**

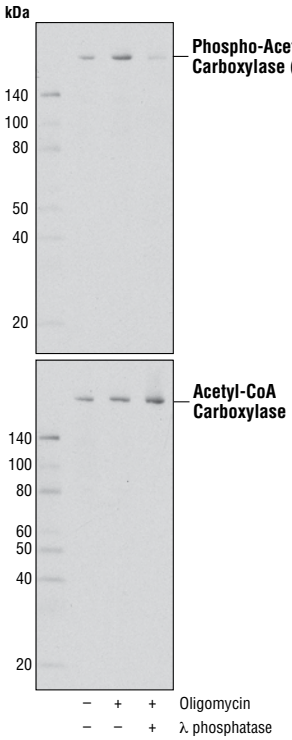
Background: Acetyl-CoA carboxylase (ACC) catalyzes the carboxylation of acetyl-CoA to malonyl-CoA (1). It is the key enzyme in the biosynthesis and oxidation of fatty acids (1). In rodents, the 265 kDa ACC1 (ACCα) form is primarily expressed in lipogenic tissues, while 280 kDa ACC2 (ACCβ) is the main isoform in oxidative tissues (1,2). However, in humans, ACC2 is the predominant isoform in both lipogenic and oxidative tissues (1,2). Phosphorylation by AMPK at Ser79 or by PKA at Ser1200 inhibits the enzymatic activity of ACC (3). ACC is a potential target of anti-obesity drugs (4,5).

Specificity/Sensitivity: Phospho-Acetyl-CoA Carboxylase (Ser79) (D7D11) Rabbit mAb recognizes endogenous levels of acetyl-CoA carboxylase protein only when phosphorylated at Ser79.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser79 of human acetyl-CoA carboxylase protein.



Immunohistochemical analysis of paraffin-embedded human breast carcinoma using Phospho-Acetyl-CoA Carboxylase (Ser79) (D7D11) Rabbit mAb.



Western blot analysis of extracts from SH-SY5Y cells, untreated or treated with Oligomycin #9996 (0.5 µM, 30 min), using Phospho-Acetyl-CoA Carboxylase (Ser79) (D7D11) Rabbit mAb (upper) or Acetyl-CoA Carboxylase (C83B10) Rabbit mAb #3676 (lower). The phospho-specificity of the antibody was verified by λ phosphatase treatment.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. *Do not aliquot the antibody.*

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:50
Immunohistochemistry (Paraffin)	1:400†
Unmasking buffer:	Citrate
Antibody diluent:	SignalStain® Antibody Diluent #8112
Detection reagent:	SignalStain® Boost (HRP, Rabbit) #8114

†*Optimal IHC dilutions determined using SignalStain® Boost IHC Detection Reagent.*

Immunofluorescence (IF-IC)	1:250

Background References:

(1) Castle, J.C. et al. (2009) *PLoS One* 4, e4369.

(2) Kreuz, S. et al. (2009) *Diabetes Metab Res Rev* 25, 577-86.

(3) Ha, J. et al. (1994) *J Biol Chem* 269, 22162-8.

(4) Abu-Elheiga, L. et al. (2001) *Science* 291, 2613-6.

(5) Levert, K.L. et al. (2002) *J Biol Chem* 277, 16347-50.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween®20 at 4°C with gentle shaking, overnight.

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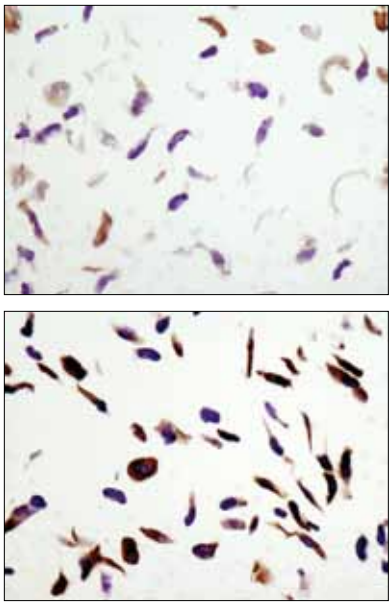
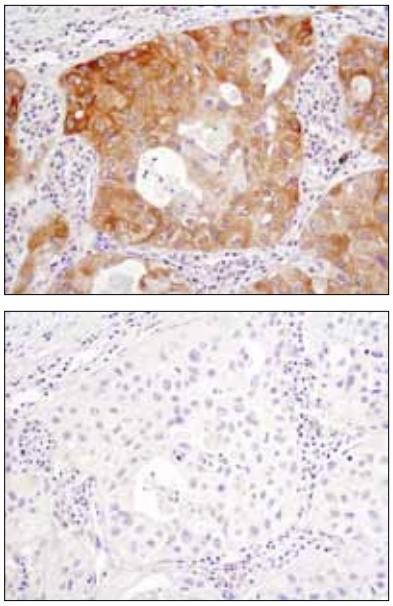
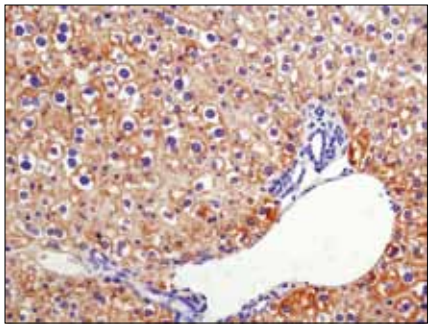
Applications: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide **Species Cross-Reactivity:** **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—Horse **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.



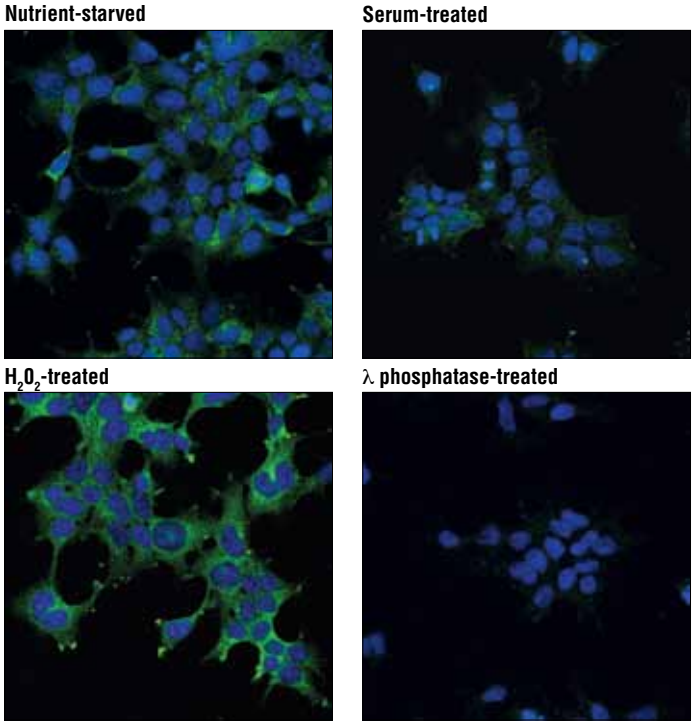
Immunohistochemical analysis of paraffin-embedded NCI-H2228 cell pellets, untreated (upper) or phenformin-treated (lower), using Phospho-Acetyl-CoA Carboxylase (Ser79) (D7D11) Rabbit mAb.



Immunohistochemical analysis of paraffin-embedded human lung carcinoma, untreated (upper) or λ phosphatase-treated (lower), using Phospho-Acetyl-CoA Carboxylase (Ser79) (D7D11) Rabbit mAb.



Immunohistochemical analysis of paraffin-embedded mouse liver using Phospho-Acetyl-CoA Carboxylase (Ser79) (D7D11) Rabbit mAb.



Confocal immunofluorescent analysis of 293 cells (all nutrient-starved with Krebs-Ringer bicarbonate buffer for 4 hr), starved only (upper left), serum-treated (10%, 30 min; upper right), H_2O_2-treated (10 mM, 10 min; lower left), or λ phosphatase-treated (2 hr; lower right), using Phospho-Acetyl-CoA Carboxylase (Ser79) (D7D11) Rabbit mAb (green). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).