

#3661 Store at -20°C

## Phospho-Acetyl-CoA Carboxylase (Ser79) Antibody



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TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB, IP, IHC-P	H M R Mk	Endogenous	280	Rabbit	#Q13085, #O00763	31, 32

### Product Usage Information

#### Application

Western Blotting  
Immunoprecipitation  
Immunohistochemistry (Paraffin)

#### Dilution

1:1000  
1:100  
1:800

### Storage

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

### Specificity / Sensitivity

Phospho-Acetyl-CoA Carboxylase (Ser79) Antibody detects endogenous levels of ACC only when phosphorylated at serine 79. The antibody recognizes both ACCalpha and ACCbeta.

### Species predicted to react based on 100% sequence homology:

Chicken, Bovine

### Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser79 of rat ACC. Antibodies are purified by protein A and peptide affinity chromatography.

### 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).

### 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.
6. Hadad, S.M. et al. (2009) *BMC Cancer* 9, 307.
7. Fullerton, M.D. et al. (2013) *Nat Med* 19, 1649-54.

### Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

### Western Blot Buffer

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

### Applications Key

**WB:** Western Blotting **IP:** Immunoprecipitation **IHC-P:** Immunohistochemistry (Paraffin)

### Cross-Reactivity Key

**H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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  
**GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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