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#4332

## ATP-Citrate Lyase Antibody

**For Research Use Only. Not for Use in Diagnostic Procedures.**

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Mk	Endogenous	125	Rabbit	#P53396	47

### Product Usage Information

#### Application

Western Blotting

#### Dilution

1:1000

### 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

ATP-Citrate Lyase Antibody detects endogenous levels of total ATP-citrate lyase.

### Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues of human ATP-citrate lyase. Antibodies are purified by protein A and peptide affinity chromatography

### Background

ATP-citrate lyase (ACL) is a homotetramer that catalyzes the formation of acetyl-CoA and oxaloacetate (OAA) in the cytosol, which is the key step for the biosynthesis of fatty acids, cholesterol and acetylcholine, as well as for gluconeogenesis (1). Nutrients and hormones regulate the expression level and phosphorylation of ATP-citrate lyase (1,2). It is phosphorylated by GSK-3 on Thr446 and Ser450 (3). Ser455 of ATP-citrate lyase has been reported to be phosphorylated by PKA and Akt (4,5). Phosphorylation on Ser455 abolishes the homotropic allosteric regulation by citrate and enhances the catalytic activity of the enzyme (2).

### Background References

1. Towle, H.C. et al. (1997) *Annu Rev Nutr* 17, 405-33.
2. Potapova, I.A. et al. (2000) *Biochemistry* 39, 1169-79.
3. Hughes, K. et al. (1992) *Biochem J* 288 ( Pt 1), 309-14.
4. Pierce, M.W. et al. (1982) *J Biol Chem* 257, 10681-6.
5. Berwick, D.C. et al. (2002) *J Biol Chem* 277, 33895-900.

### 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

**W:** Western Blotting

### Cross-Reactivity Key

**H:** Human **M:** Mouse **R:** Rat **Mk:** Monkey

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