CELL APPLICATIONS, INC.

ATP Citrate Lyase Antibody

Cat. No. CG1023

Applications:	**WB, ELISA**
Detected MW:	**120 kDa**
Species & Reactivity:	**Human, Mouse, Rat**
Isotype:	**Rabbit IgG**

BACKGROUND

ATP Citrate Lyase (ACL) is the primary enzyme responsible for the synthesis of cytosolic acetyl-CoA in many tissues and has a central role in de novo lipid synthesis. The enzyme is a tetramer (relative molecular weight approximately 440,000) of apparently identical subunits. It catalyzes the formation of acetyl-CoA and oxaloacetate from citrate and CoA with a concomitant hydrolysis of ATP to ADP and phosphate. The product, acetyl-CoA, serves several important biosynthetic pathways, including lipogenesis and cholesterogenesis.[1] In nervous tissue, ATP Citrate-Lyase may be involved in the biosynthesis of acetylcholine. Two transcript variants encoding distinct isoforms have been identified for this gene.[2]

Three phosphorylation sites have been identified on ACL, namely threonine 446, serine 450, and serine 454. It is phosphorylated by GSK-3 on Thr446 and Ser450, and by PKA and Akt on Ser454. Phosphorylation on Ser454 abolishes the homotropic allosteric regulation by citrate and enhances the catalytic activity of the enzyme.[3]

References:
1. Ramakrishna, S. et al: Biochem. 29:7617-24, 1990
2. Hughes, K. et al: Biochem. J. 15:309-14, 1992
3. Berwick, D.C. et al: J. Biol. Chem. 277:33895-900, 2002

TECHNICAL INFORMATION

Source:
ATP Citrate Lyase Antibody is a rabbit antibody raised against a short peptide from carboxyl-terminal sequence of human ACL.

Specificity and Sensitivity:
This antibody detects endogenous levels of ACL proteins in normal cell lysates without cross-reactivity with other family members.

Storage Buffer: Rabbit IgG in phosphate buffered saline (without Mg2+ and Ca2+), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.

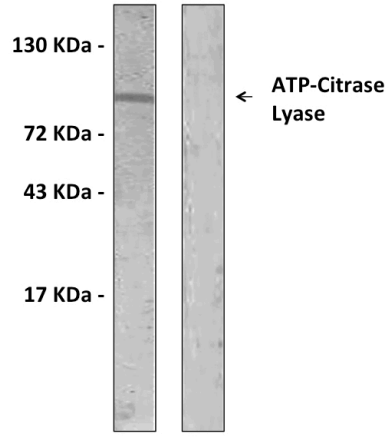
Storage:
Store at -20°C for at least one year. Store at 4°C for frequent use. Avoid repeated freeze-thaw cycles.

APPLICATIONS

Application:	*Dilution:
WB	1:500-1,000
IP	n/d
IHC	n/d
ICC	n/d
FACS	n/d
ELISA	1:5000

*****Optimal dilutions must be determined by end user.*

QUALITY CONTROL DATA



Immunoblotting analysis of extracts from COS7 cells, treated with Calyculin 50nM 30', using Anti-ATP-Citrate Lyase antibody. The lane on the left was treated with the Anti-ATP-Citrate Lyase antibody. The lane on the right (negative control) was treated with both Anti-ATP-Citrate Lyase antibody and the synthesized immunogen peptide.