Revision 7

Store at -20C

#13390

ATP-Citrate Lyase (D1X6P) Rabbit mAb

Cell Signaling TECHNOLOGY®

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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	Endogenous	125	Rabbit IgG	#P53396	47

Product Usage Information

Application	Dilution
Western Blotting	1:1000

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.

For a carrier free (BSA and azide free) version of this product see product #51077.

Specificity/Sensitivity

ATP-Citrate Lyase (D1X6P) Rabbit mAb recognizes endogenous levels of total ATP-citrate lyase protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val34 of human ATP citrate lyase protein.

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 nonfat dry milk, 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

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