

ATP-citrate synthase (G-17): sc-30537

BACKGROUND

ATP-citrate synthase, also designated ATP-citrate lyase or citrate cleavage enzyme, is a cytoplasmic homotetramer belonging to the succinate/malate CoA ligase family. The gene coding for this protein maps against chromosome 17q21.2. ATP-citrate synthase catalyses the formation of acetyl-CoA and oxaloacetate from citrate and CoA. This product, Acetyl-CoA, is necessary for both fatty acid and cholesterol biosynthesis. ATP citrate-lyase is important in the biosynthesis of acetylcholine in nervous tissue.

REFERENCES

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2. Sato, R. et al. 2000. Transcriptional regulation of the ATP citrate-lyase gene by sterol regulatory element-binding proteins. *J. Biol. Chem.* 275: 12497-12502.
3. Berwick, D.C. et al. 2002. The identification of ATP-citrate lyase as a protein kinase B (Akt) substrate in primary adipocytes. *J. Biol. Chem.* 277: 33895-33900.
4. Moon, YA. et al. 2002. Characterization of *cis*-acting elements in the rat ATP citrate-lyase gene promoter. *Exp. Mol. Med.* 2002 34: 60-68.
5. Beigneux, A.P. et al. 2004. ATP-citrate lyase deficiency in the mouse. *J. Biol. Chem.* 279: 9557-9564.
6. Tosukhowong, P. et al. 2005. Effects of potassium-magnesium citrate supplementation on cytosolic ATP citrate lyase and mitochondrial aconitase activity in leukocytes: A window on renal citrate metabolism. *Int. J. Urol.* 12: 140-144.
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CHROMOSOMAL LOCATION

Genetic locus: ACLY (human) mapping to 17q21.2; AclY (mouse) mapping to 11 D.

SOURCE

ATP-citrate synthase (G-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ATP-citrate synthase of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-30537 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

ATP-citrate synthase (G-17) is recommended for detection of ATP-citrate synthase of mouse, rat, human and *Drosophila* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ATP-citrate synthase (G-17) is also recommended for detection of ATP-citrate synthase in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for ATP-citrate synthase siRNA (h): sc-45206, ATP-citrate synthase siRNA (m): sc-45207, ATP-citrate synthase shRNA Plasmid (h): sc-45206-SH, ATP-citrate synthase shRNA Plasmid (m): sc-45207-SH, ATP-citrate synthase shRNA (h) Lentiviral Particles: sc-45206-V and ATP-citrate synthase shRNA (m) Lentiviral Particles: sc-45207-V.

Molecular Weight of ATP-citrate synthase: 120 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.