

ACSS2 (N-16): sc-85259

BACKGROUND

ACSS2 (acyl-CoA synthetase short-chain family member 2), also known as ACAS2, ACS, ACSA or AceCS, is a 701 amino acid cytoplasmic protein that belongs to the ATP-dependent AMP-binding enzyme family. Existing as a monomer, ACSS2 functions to catalyze the ATP-dependent activation of acetate, a reaction that yields acetyl-CoA for use in energy generation and lipid synthesis. ACSS2 expression, which is highest in liver and kidney tissue, is regulated by the presence of unsaturated fatty acids and sterol regulatory element-binding proteins (SREBPs). Human ACSS2 exists as two alternatively spliced isoforms and shares 93% sequence identity with its mouse counterpart, suggesting a conserved role between species.

REFERENCES

1. Luong, A., Hannah, V.C., Brown, M.S. and Goldstein, J.L. 2000. Molecular characterization of human acetyl-CoA synthetase, an enzyme regulated by sterol regulatory element-binding proteins. *J. Biol. Chem.* 275: 26458-26466.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605832. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Schwer, B., Bunkenborg, J., Verdin, R.O., Andersen, J.S. and Verdin, E. 2006. Reversible lysine acetylation controls the activity of the mitochondrial enzyme acetyl-CoA synthetase 2. *Proc. Natl. Acad. Sci. USA* 103: 10224-10229.
4. Bionaz, M. and Loor, J.J. 2008. Gene networks driving bovine milk fat synthesis during the lactation cycle. *BMC Genomics* 9: 366.
5. Lu, Y., Dolle, M.E., Imholz, S., Slot, R.V., Verschuren, W.M., Wijmenga, C., Feskens, E.J. and Boer, J.M. 2008. Multiple genetic variants along candidate pathways influence plasma high-density lipoprotein cholesterol concentrations. *J. Lipid Res.* 49: 2582-2589.
6. Zahedi, R.P., Lewandrowski, U., Wiesner, J., Wortelkamp, S., Moebius, J., Schütz, C., Walter, U., Gambaryan, S. and Sickmann, A. 2008. Phosphoproteome of resting human platelets. *J. Proteome Res.* 7: 526-534.

CHROMOSOMAL LOCATION

Genetic locus: ACSS2 (human) mapping to 20q11.22; *Acss2* (mouse) mapping to 2 H1.

SOURCE

ACSS2 (N-16) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of ACSS2 of human origin.

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.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-85259 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ACSS2 (N-16) is recommended for detection of ACSS2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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); non cross-reactive with ACSS1.

ACSS2 (N-16) is also recommended for detection of ACSS2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ACSS2 siRNA (h): sc-72440, ACSS2 siRNA (m): sc-140835, ACSS2 shRNA Plasmid (h): sc-72440-SH, ACSS2 shRNA Plasmid (m): sc-140835-SH, ACSS2 shRNA (h) Lentiviral Particles: sc-72440-V and ACSS2 shRNA (m) Lentiviral Particles: sc-140835-V.

Molecular Weight of ACSS2: 78 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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


 MONOS
Satisfation
Guaranteed

Try **ACSS2 (A-9): sc-398559**, our highly recommended monoclonal alternatives to ACSS2 (N-16).