

# ACOT11 (N-14): sc-103367

## BACKGROUND

Acyl-CoA thioesterases (ACOTs) are a group of enzymes that catalyze the hydrolysis of acyl-CoA to form coenzyme A (CoA) and a free fatty acid. Through their catalytic activity, ACOTs are able to regulate the level of fatty acids and acyl-CoAs within the cell. ACOT11 (acyl-CoA thioesterase 11), also known as BFIT, KIAA0707 or THEA, is a 607 amino acid protein that localizes to the cytoplasm and contains one START domain and 2 acyl coenzyme A hydrolase domains. ACOT11 is expressed as two alternatively spliced isoforms, the first of which is present in liver, testis, spleen, brain, lung and stomach, and the second of which is present in kidney and uterus. ACOT11 functions as an acyl-CoA thioesterase that has catalytic activity towards medium (C12) and long-chain (C18) fatty acyl-CoA substrates.

## REFERENCES

- Adams, S.H., Chui, C., Schilbach, S.L., Yu, X.X., Goddard, A.D., Grimaldi, J.C., Lee, J., Dowd, P., Colman, S. and Lewin, D.A. 2001. BFIT, a unique acyl-CoA thioesterase induced in thermogenic brown adipose tissue: cloning, organization of the human gene and assessment of a potential link to obesity. *Biochem. J.* 360: 135-142.
- Hunt, M.C. and Alexson, S.E. 2002. The role Acyl-CoA thioesterases play in mediating intracellular lipid metabolism. *Prog. Lipid Res.* 41: 99-130.
- Mashek, D.G., Bornfeldt, K.E., Coleman, R.A., Berger, J., Bernlohr, D.A., Black, P., DiRusso, C.C., Farber, S.A., Guo, W., Hashimoto, N., Khodiyar, V., Kuypers, F.A., Maltais, L.J., Nebert, D.W., Renieri, A., Schaffer, J.E., Stahl, A., Watkins, P.A., Vasilou, V. and Yamamoto, T.T. 2004. Revised nomenclature for the mammalian long-chain acyl-CoA synthetase gene family. *J. Lipid Res.* 45: 1958-1961.
- Yamada, J. 2005. Long-chain acyl-CoA hydrolase in the brain. *Amino Acids* 28: 273-278.
- Hunt, M.C., Yamada, J., Maltais, L.J., Wright, M.W., Podesta, E.J. and Alexson, S.E. 2005. A revised nomenclature for mammalian acyl-CoA thioesterases/hydrolases. *J. Lipid Res.* 46: 2029-2032.
- Hunt, M.C., Rautanen, A., Westin, M.A., Svensson, L.T. and Alexson, S.E. 2006. Analysis of the mouse and human acyl-CoA thioesterase (ACOT) gene clusters shows that convergent, functional evolution results in a reduced number of human peroxisomal ACOTs. *FASEB J.* 20: 1855-1864.
- Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 606803. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: ACOT11 (human) mapping to 1p32.3; Acot11 (mouse) mapping to 4 C7.

## SOURCE

ACOT11 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of ACOT11 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-103367 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

ACOT11 (N-14) is recommended for detection of ACOT11 of mouse, rat and human 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); non cross-reactive with other ACOT family members.

ACOT11 (N-14) is also recommended for detection of ACOT11 in additional species, including canine and bovine.

Suitable for use as control antibody for ACOT11 siRNA (h): sc-88130, ACOT11 siRNA (m): sc-105034, ACOT11 shRNA Plasmid (h): sc-88130-SH, ACOT11 shRNA Plasmid (m): sc-105034-SH, ACOT11 shRNA (h) Lentiviral Particles: sc-88130-V and ACOT11 shRNA (m) Lentiviral Particles: sc-105034-V.

Molecular Weight of ACOT11: 68 kDa.

Positive Controls: LNCaP cell lysate: sc-2231.

## 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.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **ACOT11 (D-4): sc-398738** or **ACOT11 (J4B2): sc-135626**, our highly recommended monoclonal alternatives to ACOT11 (N-14).