



# ACOT6 (Y-13): sc-104804

## 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. ACOT6 (acyl-CoA thioesterase 6) is a 207 amino acid protein that localizes to the cytoplasm and is thought to function as an acyl-CoA thioesterase, playing a role in the maintenance of fatty acid levels throughout the body. The gene encoding ACOT6 maps to human chromosome 14, which houses over 700 genes and comprises nearly 3.5% of the human genome. Chromosome 14 encodes the presenilin 1 (PSEN1) gene, which is one of the three key genes associated with the development of Alzheimer's disease (AD). The SERPINA1 gene is also located on chromosome 14 and, when defective, leads to the genetic disorder  $\alpha$ 1-antitrypsin deficiency, which is characterized by severe lung complications and liver dysfunction.

## REFERENCES

- 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.
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- 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.

## CHROMOSOMAL LOCATION

Genetic locus: ACOT6 (human) mapping to 14q24.3.

## 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.

## SOURCE

ACOT6 (Y-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ACOT6 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-104804 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

ACOT6 (Y-13) is recommended for detection of ACOT6 of 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.

Suitable for use as control antibody for ACOT6 siRNA (h): sc-92102, ACOT6 shRNA Plasmid (h): sc-92102-SH and ACOT6 shRNA (h) Lentiviral Particles: sc-92102-V.

Molecular Weight of ACOT6: 23 kDa.

## 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.