

ACOX1 (H-140): sc-98499

BACKGROUND

ACOX1 (acyl-coenzyme A oxidase 1), also known as SCOX or PALMCOX, is a 660 amino acid protein that localizes to the peroxisome and belongs to the acyl-CoA oxidase family. Existing as two alternatively spliced isoforms, ACOX1 uses FAD as a cofactor to catalyze the desaturation of very long chain acyl-CoA proteins to 2-*trans*-enoyl-CoA proteins, a reaction that utilizes oxygen and produces hydrogen peroxide. Defects in the gene encoding ACOX1 are the cause of pseudoneonatal adrenoleukodystrophy (pseudo-NALD), which is a single-enzyme disorder that is characterized by seizures, mental retardation, leukodystrophy, mild hepatomegaly and hearing deficits.

REFERENCES

1. Pacot, C., et al. 1993. Biochemical properties of liver peroxisomes from rat, guinea pig and human species and the influence of hormonal status on rat liver acyl-CoA oxidase mRNA content. *Biochimie* 75: 235-242.
2. Aoyama, T., et al. 1994. Molecular cloning and functional expression of a human peroxisomal acyl-coenzyme A oxidase. *Biochem. Biophys. Res. Commun.* 198: 1113-1118.

CHROMOSOMAL LOCATION

Genetic locus: ACOX1 (human) mapping to 17q25.1; Acox1 (mouse) mapping to 11 E2.

SOURCE

ACOX1 (H-140) is a rabbit polyclonal antibody raised against amino acids 436-571 mapping near the C-terminus of ACOX1 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.

APPLICATIONS

ACOX1 (H-140) is recommended for detection of ACOX1 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ACOX1 (H-140) is also recommended for detection of ACOX1 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for ACOX1 siRNA (h): sc-94104, ACOX1 siRNA (m): sc-140817, ACOX1 shRNA Plasmid (h): sc-94104-SH, ACOX1 shRNA Plasmid (m): sc-140817-SH, ACOX1 shRNA (h) Lentiviral Particles: sc-94104-V and ACOX1 shRNA (m) Lentiviral Particles: sc-140817-V.

Molecular Weight of ACOX1: 74 kDa.

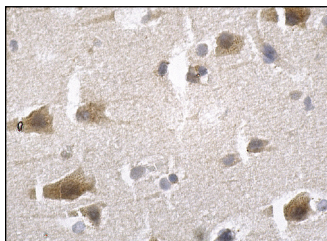
RESEARCH USE

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

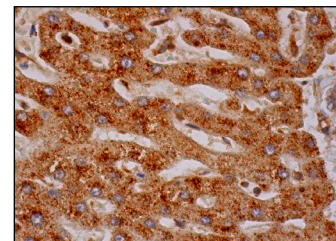
STORAGE

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

DATA



ACOX1 (H-140): sc-98499. Immunoperoxidase staining of formalin fixed, paraffin-embedded human brain tissue showing cytoplasmic staining of neuronal and glial cells.



ACOX1 (H-140): sc-98499. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes and bile duct cells.

SELECT PRODUCT CITATIONS

1. Liu, I.M., et al. 2011. Regulation of obesity and lipid disorders by extracts from *Angelica acutiloba* root in high-fat diet-induced obese rats. *Phytother. Res.* 26: 223-230.
2. Ghosh, S., et al. 2011. Altered glutathione homeostasis in heart augments cardiac lipotoxicity associated with diet-induced obesity in mice. *J. Biol. Chem.* 286: 42483-42493.
3. Chang, C.J., et al. 2011. Kaempferol regulates the lipid-profile in high-fat diet-fed rats through an increase in hepatic PPAR α levels. *Planta Med.* 77: 1876-1882.
4. Chang, C.J., et al. 2012. Myricetin increases hepatic peroxisome proliferator-activated receptor α protein expression and decreases plasma lipids and adiposity in rats. *Evid. Based Complement. Alternat. Med.* 2012: 787152.
5. Tzeng, T.F., et al. 2012. Vinegar-baked radix bupleuri regulates lipid disorders via a pathway dependent on peroxisome-proliferator-activated receptor- α in high-fat-diet-induced obese rats. *Evid. Based Complement. Alternat. Med.* 2012: 827278.
6. McIntosh, A.L., et al. 2013. Liver fatty acid binding protein gene-ablation exacerbates weight gain in high-fat fed female mice. *Lipids* 48: 435-448.

PROTOCOLS

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