

# ACOX1 (G-13): sc-107376

## 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. and Latruffe, N. 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.
3. Varanasi, U., et al. 1994. Isolation of the human peroxisomal acyl-CoA oxidase gene: organization, promoter analysis, and chromosomal localization. *Proc. Natl. Acad. Sci. USA* 91: 3107-3111.
4. Fan, C.Y., et al. 1996. Hepatocellular and hepatic peroxisomal alterations in mice with a disrupted peroxisomal fatty acyl-coenzyme A oxidase gene. *J. Biol. Chem.* 271: 24698-24710.
5. Fujiwara, C., et al. 2000. Catalase-less peroxisomes. Implication in the milder forms of peroxisome biogenesis disorder. *J. Biol. Chem.* 275: 37271-37277.
6. Suzuki, Y., et al. 2002. Peroxisomal acyl CoA oxidase deficiency. *J. Pediatr.* 140: 128-130.

## CHROMOSOMAL LOCATION

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

## SOURCE

ACOX1 (G-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region 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.

Blocking peptide available for competition studies, sc-107376 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

ACOX1 (G-13) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ACOX1 (G-13) is also recommended for detection of ACOX1 in additional species, including equine, canine, bovine and porcine.

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.

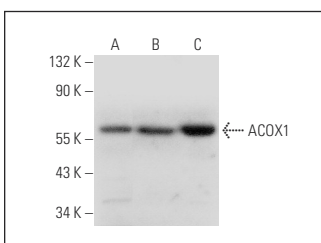
Molecular Weight of ACOX1: 74 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, K-562 whole cell lysate: sc-2203 or Hep G2 cell lysate: sc-2227.

## 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



ACOX1 (G-13): sc-107376. Western blot analysis of ACOX1 expression in MCF7 (A), K-562 (B) and Hep G2 (C) whole cell lysates.

## 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.