SANTA CRUZ BIOTECHNOLOGY, INC.

ACOX3 (S-14): sc-135435

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

ACOX3 (acyl-coenzyme A oxidase 3), also known as BRCOX or PRCOX, is a 700 amino acid protein that localizes to peroxisomes and belongs to the acyl-CoA oxidase family. Using FAD as a cofactor, ACOX3 catalyzes the desaturation of 2-methyl branched fatty acids in peroxisomes, thereby playing an important role in peroxisomal fatty acid β-oxidation. Human ACOX3 shares 75% sequence identity with its rat counterpart, suggesting a conserved role between species. Multiple isoforms of ACOX3 exist due to alternative splicing events. The gene encoding ACOX3 maps to human chromosome 4, which encodes nearly 6% of the human genome and has the largest gene deserts (regions of the genome with no protein encoding genes) of all of the human chromosomes. Defects in some of the genes located on chromosome 4 are associated with Huntington's disease, Ellis-van Creveld syndrome, methylmalonic acidemia and polycystic kidney disease.

REFERENCES

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4. Hunt, M.C., et al. 2002. Characterization of an acyl-coA thioesterase that functions as a major regulator of peroxisomal lipid metabolism. J. Biol. Chem. 277: 1128-1138.
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6. Westin, M.A., et al. 2007. Peroxisomes contain a specific phytanoyl-CoA/pristanoyl-CoA thioesterase acting as a novel auxiliary enzyme in α- and β-oxidation of methyl-branched fatty acids in mouse. J. Biol. Chem. 282: 26707-26716.

CHROMOSOMAL LOCATION

Genetic locus: ACOX3 (human) mapping to 4p16.1; Acox3 (mouse) mapping to 5 B3.

SOURCE

ACOX3 (S-14) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of ACOX3 of human origin.

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-135435 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ACOX3 (S-14) is recommended for detection of ACOX3 isoforms 1 and 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other ACOX family members.

ACOX3 (S-14) is also recommended for detection of ACOX3 isoforms 1 and 2 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for ACOX3 siRNA (h): sc-89236, ACOX3 siRNA (m): sc-140819, ACOX3 shRNA Plasmid (h): sc-89236-SH, ACOX3 shRNA Plasmid (m): sc-140819-SH, ACOX3 shRNA (h) Lentiviral Particles: sc-89236-V and ACOX3 shRNA (m) Lentiviral Particles: sc-140819-V.

Molecular Weight of ACOX3: 78 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

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) 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.

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 or our catalog for detailed protocols and support products.