SANTA CRUZ BIOTECHNOLOGY, INC.

ACOX3 (m2): 293T Lysate: sc-118210

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

1. Vanhove, G.F., et al. 1993. The CoA esters of 2-methyl-branched chain fatty acids and of the bile acid intermediates di- and tri-hydroxycoprostanic acids are oxidized by one single peroxisomal branched chain acyl-CoA oxidase in human liver and kidney. J. Biol. Chem. 268: 10335-10344.
2. Vanhooren, J.C., et al. 1997. Evidence for the existence of a pristanoyl-CoA oxidase gene in man. Biochem. J. 325: 593-599.
3. Online Mendelian Inheritance in Man, OMIM™. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 603402. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
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.
5. Zha, S., et al. 2005. Peroxisomal branched chain fatty acid β-oxidation pathway is upregulated in prostate cancer. Prostate 63: 316-323.
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 (mouse) mapping to 5 B3.

PRODUCT

ACOX3 (m2): 293T Lysate represents a lysate of mouse ACOX3 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

APPLICATIONS

ACOX3 (m2): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive ACOX3 antibodies. Recommended use: 10-20 µl per lane.

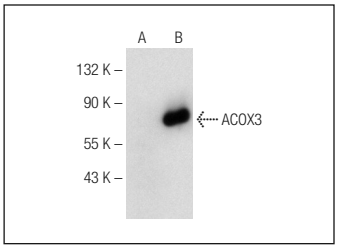
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

ACOX3 (G-9): sc-373977 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse ACOX3 expression in ACOX3 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



ACOX3 (G-9): sc-373977. Western blot analysis of ACOX3 expression in non-transfected: sc-117752 (**A**) and mouse ACOX3 transfected: sc-118210 (**B**) 293T whole cell lysates.

RESEARCH USE

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