

ACOX2 (2-RE10): sc-134244

BACKGROUND

ACOX2 (acyl-coenzyme A oxidase 2), also known as BCOX, BRCCOX, THCCox or BRCCOX, is a 681 amino acid protein that localizes to the peroxisome and belongs to the acyl-CoA oxidase family. Expressed in heart, kidney, liver, brain, lung, pancreas, placenta and skeletal muscle, ACOX2 functions as a branched-chain acyl-CoA oxidase that is involved in the degradation of bile acid intermediates and long branched fatty acids in peroxisomes. ACOX2 exists as a heterodimer and uses FAD as a cofactor to catalyze oxidation reactions. Defects in the gene encoding ACOX2 may be associated with Zellweger syndrome, an extremely rare congenital disorder that is characterized by the absence of peroxisomes and usually results in death before six months of age.

REFERENCES

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2. Baumgart, E., et al. 1996. Mammalian peroxisomal acyl-CoA oxidases. III. Molecular characterization of human branched chain fatty acyl-CoA oxidase. *Ann. N.Y. Acad. Sci.* 804: 678-679.
3. Baumgart, E., et al. 1996. Molecular characterization of the human peroxisomal branched-chain acyl-CoA oxidase: cDNA cloning, chromosomal assignment, tissue distribution, and evidence for the absence of the protein in Zellweger syndrome. *Proc. Natl. Acad. Sci. USA* 93: 13748-13753.
4. Moghrabi, N.N., et al. 1997. Assignment of the human peroxisomal branched-chain acyl-CoA oxidase gene to chromosome 3p21.1-p14.2 by rodent/human somatic cell hybridization. *Biochem. Biophys. Res. Commun.* 231: 767-769.
5. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 601641. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Yeh, C.S., et al. 2006. Fatty acid metabolism pathway play an important role in carcinogenesis of human colorectal cancers by Microarray-Bioinformatics analysis. *Cancer Lett.* 233: 297-308.
7. Nenicu, A., et al. 2007. Peroxisomes in human and mouse testis: differential expression of peroxisomal proteins in germ cells and distinct somatic cell types of the testis. *Biol. Reprod.* 77: 1060-1072.

CHROMOSOMAL LOCATION

Genetic locus: ACOX2 (human) mapping to 3p14.3; Acox2 (mouse) mapping to 14 A1.

STORAGE

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

PROTOCOLS

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

SOURCE

ACOX2 (2-RE10) is a mouse monoclonal antibody raised against recombinant ACOX2 protein of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

ACOX2 (2-RE10) is recommended for detection of ACOX2 of mouse 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ACOX2 siRNA (h): sc-78421, ACOX2 siRNA (m): sc-140818, ACOX2 shRNA Plasmid (h): sc-78421-SH, ACOX2 shRNA Plasmid (m): sc-140818-SH, ACOX2 shRNA (h) Lentiviral Particles: sc-78421-V and ACOX2 shRNA (m) Lentiviral Particles: sc-140818-V.

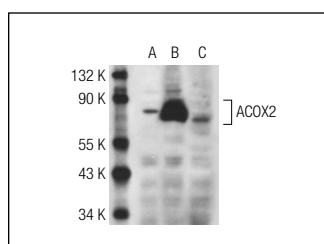
Molecular Weight of ACOX2: 77 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, ACOX2 (m): 293T Lysate: sc-118208 or ACOX2 (h): 293T Lysate: sc-116061.

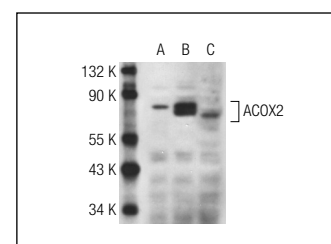
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker[™] compatible goat anti-mouse IgG-HRP: sc-2031 (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).

DATA



ACOX2 (2-RE10): sc-134244. Western blot analysis of ACOX2 expression in non-transfected 293T: sc-117752 (A), mouse ACOX2 transfected 293T: sc-118208 (B) and Hep G2 (C) whole cell lysates.



ACOX2 (2-RE10): sc-134244. Western blot analysis of ACOX2 expression in non-transfected 293T: sc-117752 (A), human ACOX2 transfected 293T: sc-116061 (B) and Hep G2 (C) whole cell lysates.

RESEARCH USE

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