SANTA CRUZ BIOTECHNOLOGY, INC.

ACOX2 (A-7): sc-514320

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

ACOX2 (acyl-Coenzyme A oxidase 2), also known as BCOX, BRCOX, THCCox or BRCACOX, 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

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 trihydroxycoprostanic acids are oxidized by one single peroxisomal branched chain acyl-CoA oxidase in human liver and kidney. J. Biol. Chem. 268: 10335-10344.
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.

CHROMOSOMAL LOCATION

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

SOURCE

ACOX2 (A-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 651-672 near the C-terminus of ACOX2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ACOX2 (A-7) is available conjugated to agarose (sc-514320 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514320 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514320 PE), fluorescein (sc-514320 FITC), Alexa Fluor® 488 (sc-514320 AF488), Alexa Fluor® 546 (sc-514320 AF546), Alexa Fluor® 594 (sc-514320 AF594) or Alexa Fluor® 647 (sc-514320 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514320 AF680) or Alexa Fluor® 790 (sc-514320 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514320 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

ACOX2 (A-7) is recommended for detection of ACOX2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

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.

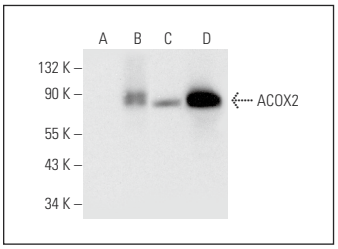
Molecular Weight of ACOX2: 77 kDa.

Positive Controls: ACOX2 (h): 293T Lysate: sc-116061, Hep G2 cell lysate: sc-2227 or human liver extract: sc-363766.

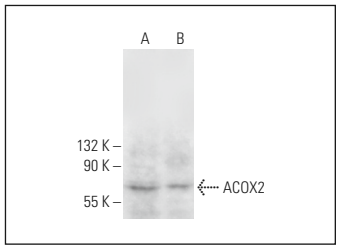
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



ACOX2 (A-7): sc-514320. 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 and human liver tissue extract (**D**).



ACOX2 (A-7): sc-514320. Western blot analysis of ACOX2 expression in c4 (**A**) and A-10 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Li, Y., et al. 2020. Evolution of altered tubular metabolism and mitochondrial function in sepsis associated acute kidney injury. Am. J. Physiol. Renal Physiol. 319: F229-F244.
2. Lasch, A., et al. 2021. More than additive effects on liver triglyceride accumulation by combinations of steatotic and non-steatotic pesticides in HepaRG cells. Arch. Toxicol. 95: 1397-1411.

RESEARCH USE

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