SANTA CRUZ BIOTECHNOLOGY, INC.

SOAT1 (H-125): sc-20951

BACKGROUND

SOAT1 (sterol O-acyltransferase 1), also designated ACAT1, is a homotetrameric enzyme that catalyzes the formation of cholesterol esters from cholesterol and long-chain fatty acyl coenzyme A. The gene encoding human SOAT1 maps to chromosome 1 and is expressed as a protein that localizes to the endoplasmic reticulum (ER) in several tissues, including liver, kidney, adrenal glands and macrophages. SOAT1 is involved in cellular cholesterol homeostasis as well as in foam cell formation and the subsequent progression of atherosclerosis. Several SOAT inhibitors have been developed for the treatment of atherosclerosis. SOAT2 (sterol O-acyltransferase 2), also known as ACAT2 (acyl coenzyme A), participates in lipoprotein assembly, catalyzing cholesterol esterification in mammalian cells. SOAT2 is an integral membrane protein that localizes to the endoplasmic reticulum of human intestinal cells. SOAT2 deficiency contributes to severe mental retardation and hypotonus.

CHROMOSOMAL LOCATION

Genetic locus: SOAT1 (human) mapping to 1q25.2; Soat1 (mouse) mapping to 1 G3.

SOURCE

SOAT1 (H-125) is a rabbit polyclonal antibody raised against amino acids 1-125 of SOAT1 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.

SOAT1 (H-125) is available conjugated to agarose (sc-20951 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP.

RESEARCH USE

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

APPLICATIONS

SOAT1 (H-125) is recommended for detection of SOAT1 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

SOAT1 (H-125) is also recommended for detection of SOAT1 in additional species, including canine.

Suitable for use as control antibody for SOAT1 siRNA (h): sc-29624, SOAT1 siRNA (m): sc-29625, SOAT1 shRNA Plasmid (h): sc-29624-SH, SOAT1 shRNA Plasmid (m): sc-29625-SH, SOAT1 shRNA (h) Lentiviral Particles: sc-29624-V and SOAT1 shRNA (m) Lentiviral Particles: sc-29625-V.

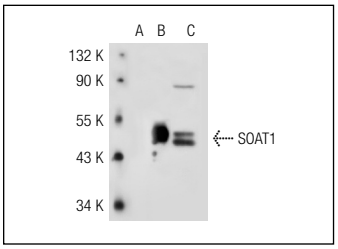
Molecular Weight of SOAT1: 50 kDa.

Positive Controls: rat kidney extract: sc-2394, KNRK whole cell lysate: sc-2214 or SOAT1 (h): 293T Lysate: sc-113987.

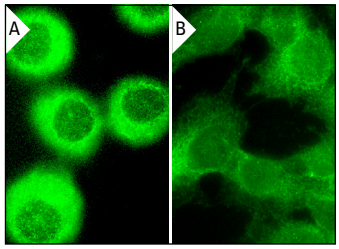
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

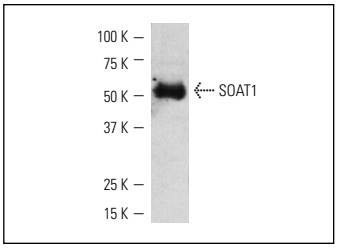
DATA



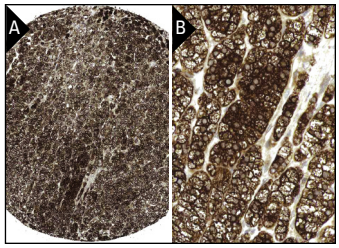
SOAT1 (H-125): sc-20951. Western blot analysis of SOAT1 expression in non-transfected 293T: sc-117752 (**A**), human SOAT1 transfected 293T: sc-113987 (**B**) and THP-1 (**C**) whole cell lysates.



SOAT1 (H-125): sc-20951. Immunofluorescence staining of methanol-fixed KNRK cells showing cytoplasmic localization (**A**). Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoplasmic localization (**B**).



SOAT1 (H-125): sc-20951. Western blot analysis of SOAT1 expression in rat kidney extract.



SOAT1 (H-125): sc-20951. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic staining of cortical cells at low (**A**) and high (**B**) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

STORAGE

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