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 (acyl-CoA). 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-CoA:cholesterol acyltransferase-2), 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.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: SOAT1 (human) mapping to 1q25.2.

PRODUCT

SOAT1 (h): 293T Lysate represents a lysate of human SOAT1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

SOAT1 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive SOAT1 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.

SOAT1 (A-11): sc-136959 is recommended as a positive control antibody for Western Blot analysis of enhanced human SOAT1 expression in SOAT1 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-IgG κBP-HRP: sc-516102 or m-IgG κBP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-56214 and Western Blotting Luminol Reagent: sc-2048.

DATA

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

RESEARCH USE

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

PROTOCOLS

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.