SANTA CRUZ BIOTECHNOLOGY, INC.

AADACL2 (T-14): sc-99752

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The assembly of very-low-density lipoproteins (VLDLs) in the secretory apparatus of the hepatocyte relies on the mobilization of triacylglycerol (TAG) from the cytosolic pool by lipolysis and re-esterification. However, some of the re-esterified TAG products are returned to the cytosolic pool in the liver, which protects vulnerable body tissues from excess lipotoxic non-esterified fatty acids in the plasma. Some of the lipases involved in this process include arylacetamide deacetylase (AADAC) and its related proteins AADACL1 and AADACL2. AADAC, a single pass type II membrane protein of the endoplasmic reticulum, is expressed in hepatocytes, intestinal mucosal cells, pancreas and adrenal gland. It plays an important role in the metabolic activation of arylamine substrates to ultimate carcinogens. AADACL1 hydrolyzes the metabolic intermediate 2-acetyl monoalkylglycerol, and its inactivation results in disruption of ether lipid metabolism in cancer cells and impaired cell migration and tumor growth.

REFERENCES

1. Probst, M.R., et al. 1991. Purification and characterization of a human liver arylacetamide deacetylase. Biochem. Biophys. Res. Commun. 177: 453-459.
2. Probst, M.R., et al. 1994. Human liver arylacetamide deacetylase. Molecular cloning of a novel esterase involved in the metabolic activation of arylamine carcinogens with high sequence similarity to hormone-sensitive lipase. J. Biol. Chem. 269: 21650-21656.
3. Yamazaki, K., et al. 1997. Radiation hybrid mapping of human arylacetamide deacetylase (AADAC) locus to chromosome 3. Genomics 44: 248-250.
4. Trickett, J.I., et al. 2001. Characterization of the rodent genes for arylacetamide deacetylase, a putative microsomal lipase, and evidence for transcriptional regulation. J. Biol. Chem. 276: 39522-39532.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 600338. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Gibbons, G.F., et al. 2004. Synthesis and function of hepatic very-low-density lipoprotein. Biochem. Soc. Trans. 32: 59-64.
7. Chiang, K.P., et al. 2006. An enzyme that regulates ether lipid signaling pathways in cancer annotated by multidimensional profiling. Chem. Biol. 13: 1041-1050.

CHROMOSOMAL LOCATION

Genetic locus: AADACL2 (human) mapping to 3q25.1.

SOURCE

AADACL2 (T-14) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of AADACL2 of human origin.

STORAGE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-99752 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

AADACL2 (T-14) is recommended for detection of AADACL2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 AADACL2 siRNA (h): sc-77978, AADACL2 shRNA Plasmid (h): sc-77978-SH and AADACL2 shRNA (h) Lentiviral Particles: sc-77978-V.

Molecular Weight of AADACL2: 46 kDa.

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) 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.

RESEARCH USE

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

PROTOCOLS

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