SANTA CRUZ BIOTECHNOLOGY, INC.

apoC-I (Y-13): sc-101263

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Apolipoproteins are protein components of plasma lipoproteins. The apolipoprotein C gene family encodes four homologous proteins designated apoC-I to -IV, which specifically modulate the metabolism of triglyceride-rich lipoproteins. The human apoC-I gene maps to chromosome 19q13.32 and is expressed primarily in the liver where it is activated when monocytes differentiate into macrophages. The human apoC-II gene maps to chromosome 19q13.32 and encodes a 79 amino acid single chain protein that is a necessary cofactor for the activation of lipoprotein lipase, the enzyme that hydrolyzes triglycerides in plasma and transfers the fatty acids to tissues. The human apoC-III gene maps to chromosome 11q23.3 and encodes a protein that may delay catabolism of triglyceride-rich particles by inhibiting lipoprotein lipase and hepatic lipase. The human apoC-IV gene maps to chromosome 19q13.32 and encodes a 127 amino acid protein that is primarily expressed in the liver.

REFERENCES

1. Breckenridge, W.C., et al. 1978. Hypertriglyceridemia associated with deficiency of apolipoprotein C-II. N. Engl. J. Med. 298: 1265-1273.
2. Allan, C.M., et al. 1995. Identification and characterization of a new human gene (APOC4) in the apolipoprotein E, C-I, and C-II gene locus. Genomics 28: 291-300.
3. Online Mendelian Inheritance in Man, OMIM™. 1998. Johns Hopkins University, Baltimore, MD. MIM Number: 207750. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: APOC1 (human) mapping to 19q13.32.

SOURCE

apoC-I (Y-13) is a mouse monoclonal antibody raised against recombinant apoC-I of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

apoC-I (Y-13) is recommended for detection of apoC-I of 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 apoC-I siRNA (h): sc-97370, apoC-I shRNA Plasmid (h): sc-97370-SH and apoC-I shRNA (h) Lentiviral Particles: sc-97370-V.

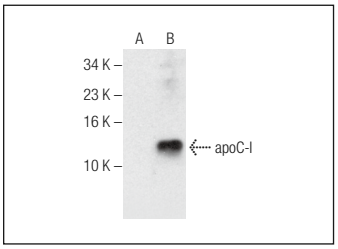
Molecular Weight of apoC-I: 9 kDa.

Positive Controls: human plasma extract: sc-364374, apoC-I (h2): 293T Lysate: sc-369652 or human liver extract: sc-363766.

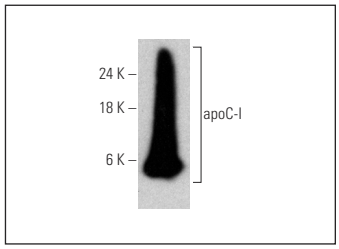
RECOMMENDED SUPPORT REAGENTS

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).

DATA



apoC-I (Y-13): sc-101263. Western blot analysis of apoC-I expression in non-transfected: sc-117752 (**A**) and human apoC-I transfected: sc-369652 (**B**) 293T whole cell lysates.



apoC-I (Y-13): sc-101263. Western blot analysis of apoC-I expression in human plasma.

SELECT PRODUCT CITATIONS

1. Dahabreh, D.F. and Medh, J.D. 2012. Activation of peroxisome proliferator activated receptor-γ results in an atheroprotective apolipoprotein profile in Hep G2 cells. Adv. Biol. Chem. 2: 218-225.
2. Wang, B., et al. 2021. Hepatitis C virus induces oxidation and degradation of apolipoprotein B to enhance lipid accumulation and promote viral production. PLoS Pathog. 17: e1009889.
3. Jayaraman, S., et al. 2021. Heparin binding triggers human VLDL remodeling by circulating lipoprotein lipase: relevance to VLDL functionality in health and disease. Biochim. Biophys. Acta Mol. Cell Biol. Lipids 1867: 159064.
4. Cheng, Q., et al. 2022. Serum proteome profiling reveals differentially expressed proteins between subjects with metabolically healthy obesity and nonalcoholic fatty liver disease. J. Proteomics 260: 104556.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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