

# apoC-II (N-16): sc-19011

## 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 19q13.2 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 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 19q13.2 and encodes a 127 amino acid protein that is primarily expressed in the liver.

## REFERENCES

1. Breckenridge, W.C., Little, J.A., Steiner, G., Chow, A. and Poapst, M. 1978. Hypertriglyceridemia associated with deficiency of apolipoprotein C-II. N. Engl. J. Med. 298: 1265-1273.
2. Allan, C.M., Walker, D., Segrest, J.P. and Taylor, J.M. 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<sup>™</sup>. 1998. Johns Hopkins University, Baltimore, MD. MIM Number: 207750. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Jong, M.C. and Havekes, L.M. 2000. Insights into apolipoprotein C metabolism from transgenic and gene-targeted mice. Int. J. Tissue React. 22: 59-66.
5. Mak, P.A., Laffitte, B.A., Desrumaux, C., Joseph, S.B., Curtiss, L.K., Mangelsdorf, D.J., Tontonoz, P. and Edwards, P.A. 2002. Regulated expression of the apolipoprotein E/C-I/C-IV/C-II gene cluster in murine and human macrophages. A critical role for nuclear liver X receptors  $\alpha$  and  $\beta$ . J. Biol. Chem. 277: 31900-31908.
6. Kotite, L., Zhang, L.H., Yu, Z., Burlingame, A.L. and Havel, R.J. 2003. Human apoC-IV: isolation, characterization and immunochemical quantification in plasma and plasma lipoproteins. J. Lipid Res. 44: 1387-1394.

## CHROMOSOMAL LOCATION

Genetic locus: APOC2 (human) mapping to 19q13.32.

## SOURCE

apoC-II (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of apoC-II of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-19011 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

apoC-II (N-16) is recommended for detection of apoC-II 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 apoC-II siRNA (h): sc-41184, apoC-II shRNA Plasmid (h): sc-41184-SH and apoC-II shRNA (h) Lentiviral Particles: sc-41184-V.

Positive Controls: Jurkat whole cell lysate: sc-2204.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

## SELECT PRODUCT CITATIONS

1. Provost, P.R. and Tremblay, Y. 2010. Elevated expression of four apolipoprotein genes during the 32-35 week gestation window in the human developing lung. Early Hum. Dev. 86: 529-534.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **apoC-II (3E4): sc-293340**, our highly recommended monoclonal alternative to apoC-II (N-16).