SANTA CRUZ BIOTECHNOLOGY, INC.

apoA-II (L-20): sc-19035

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 apoA-I gene maps to chromosome 11q23 and encodes a single chain, 243 amino acid protein, which promotes cholesterol efflux from tissues to the liver for excretion. Apolipoprotein A-I is the major protein component of high density lipoprotein (HDL) in the plasma. apoA1 can function as a cofactor for lecithin cholesterolacyltransferase (LCAT), which is responsible for the formation of most plasma cholesteryl esters. The human apoA-II gene maps to chromosome 1q21-q23 and encodes the second most abundant protein of HDL particles, where it influences plasma levels of free fatty acids (FFA). The human apoA-IV gene maps to chromosome 11q23 and encodes a 396 amino acid preprotein, which after proteolytic processing is secreted from the intestine in association with chylomicron particles. apoA-IV is a potent activator of lecithin-cholesterol acyltransferase *in vitro*. The human apoA-V gene maps to chromosome 11q23 and encodes a 366 amino acid protein that is believed to be an important determinant of plasma triglyceride levels.

REFERENCES

1. Vergnes, L., et al. 1997. The apolipoprotein A-I/C-III/A-IV gene cluster: ApoC-III and ApoA-IV expression is regulated by two common enhancers. Biochim. Biophys. Acta 1348: 299-310.
2. Qin, S., et al. 2000. Phospholipid transfer protein gene knock-out mice have low high density lipoprotein levels, due to hypercatabolism, and accumulate apoA-IV-rich lamellar lipoproteins. J. Lipid Res. 41: 269-276.
3. Fournier, N., et al. 2000. Human ApoA-IV overexpression in transgenic mice induces cAMP-stimulated cholesterol efflux from J774 macrophages to whole serum. Arterioscler. Thromb. Vasc. Biol. 20: 1283-1292.
4. Deeg, M.A., et al. 2001. GPI-specific phospholipase D associates with an apoA-I- and apoA-IV-containing complex. J. Lipid Res. 42: 442-451.
5. Nazih, H., et al. 2001. Butyrate stimulates ApoA-IV-containing lipoprotein secretion in differentiated Caco-2 cells: role in cholesterol efflux. J. Cell. Biochem. 83: 230-238.
6. Verges, B., et al. 2001. Increased plasma apoA-IV level is a marker of abnormal postprandial lipemia: a study in normoponderal and obese subjects. J. Lipid Res. 42: 2021-2029.

CHROMOSOMAL LOCATION

Genetic locus: Apoa2 (rat) mapping to 13q24.

SOURCE

apoA-II (L-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of apoA-II of rat 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 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-19035 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

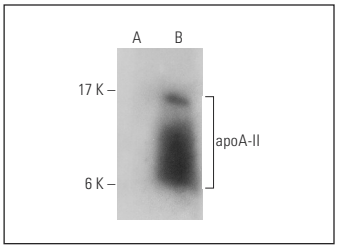
apoA-II (L-20) is recommended for detection of apoA-II of rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of apoA-II: 9 kDa.

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™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 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™ Mounting Medium: sc-24941.

DATA



apoA-II (L-20): sc-19035. Western blot analysis of apoA-II expression in non-transfected: sc-117752 (**A**) and mouse apoA-II transfected: sc-118480 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Cote, M., et al. 2011. Apolipoprotein A-I, A-II, and H mRNA and protein accumulation sites in the developing lung in late gestation. BMC Res. Notes 4: 235.

RESEARCH USE

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