



apoA-I (C-18): sc-19029

BACKGROUND

Apolipoproteins are protein components of plasma lipoproteins. The human apoA-I gene 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. It 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 encodes the second most abundant protein of HDL particles, where it influences plasma levels of free fatty acids (FFA). The human apoA-IV gene 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 LCAT *in vitro*. The human apoA-V gene encodes a 366 amino acid protein that is believed to be an important determinant of plasma triglyceride levels.

REFERENCES

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3. Zhu, H.L., et al. 2004. Conformation and lipid binding of the N-terminal (1-44) domain of human apoA-I. *Biochemistry* 43: 13156-13164.
4. Maejima, T., et al. 2004. Effect of pitavastatin on apoA-I production in Hep G2 cell. *Biochem. Biophys. Res. Commun.* 324: 835-839.
5. Maiorano, J.N., et al. 2004. Identification and structural ramifications of a hinge domain in apoA-I discoidal high-density lipoproteins of different size. *Biochemistry* 43: 11717-11726.
6. Cohen, J.C., et al. 2004. Multiple rare alleles contribute to low plasma levels of HDL cholesterol. *Science* 305: 869-872.
7. Fullerton, S.M., et al. 2004. The effects of scale: variation in the apoA1/C3/A4/A5 gene cluster. *Hum. Genet.* 115: 36-56.
8. Natarajan, P., et al. 2004. Identification of an apoA-I structural element that mediates cellular cholesterol efflux and stabilizes ATP binding cassette transporter A1. *J. Biol. Chem.* 279: 24044-24052.
9. Kockx, M., et al. 2004. apoA-I-stimulated apoE secretion from human macrophages is independent of cholesterol efflux. *J. Biol. Chem.* 279: 25966-25977.

CHROMOSOMAL LOCATION

Genetic locus: APOA1 (human) mapping to 11q23.3.

SOURCE

apoA-I (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of apoA-I of human origin.

RESEARCH USE

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

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-19029 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

apoA-I (C-18) is recommended for detection of apoA-I 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 apoA-I siRNA (h): sc-41177, apoA-I shRNA Plasmid (h): sc-41177-SH and apoA-I shRNA (h) Lentiviral Particles: sc-41177-V.

Molecular Weight of apoA-I: 28 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

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) 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.

SELECT PRODUCT CITATIONS

1. Chen, Y.C., et al. 2006. Proteomic analysis of Down's syndrome patients with gout. *Clin. Chim. Acta* 369: 89-94.
2. Benoit, G., et al. 2007. Mesangiolipidosis in Alagille syndrome — relationship with apolipoprotein A-I. *Nephrol. Dial. Transplant.* 22: 2072-2075.
3. Hamza, M.S., et al. 2009. *De novo* identification of PPARγ/RXR binding sites and direct targets during adipogenesis. *PLoS ONE* 4: e4907.

STORAGE

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

PROTOCOLS

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