

apoA-I (4): sc-135837

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

1. Duriez, P. and Fruchart, J.C. 1999. High-density lipoprotein subclasses and apolipoprotein A-I. *Clin. Chim. Acta* 286: 97-114.
2. Maezawa, I., et al. 2004. apoE isoforms and apoA-I protect from amyloid precursor protein carboxy-terminal fragment-associated cytotoxicity. *J. Neurochem.* 91: 1312-1321.
3. Maejima, T., et al. 2004. Effect of pitavastatin on apoA-I production in Hep G2 cell. *Biochem. Biophys. Res. Commun.* 324: 835-839.
4. 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.
5. 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.
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 apoA-I/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 (mouse) mapping to 9 A5.2.

SOURCE

apoA-I (4) is a mouse monoclonal antibody raised against amino acids 144-258 of apoA-I of rat origin.

RESEARCH USE

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

PRODUCT

Each vial contains 50 µg IgG₁ in 500 µl of PBS with < 0.1% sodium azide, 0.1% gelatin, 20% glycerol and 0.04% stabilizer protein.

APPLICATIONS

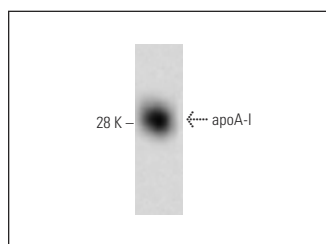
apoA-I (4) is recommended for detection of apoA-I of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for apoA-I siRNA (m): sc-63361, apoA-I shRNA Plasmid (m): sc-63361-SH and apoA-I shRNA (m) Lentiviral Particles: sc-63361-V.

Molecular Weight of apoA-I: 28 kDa.

Positive Controls: rat liver extract: sc-2395.

DATA



apoA-I (4): sc-135837. Western blot analysis of apoA-I expression in rat liver tissue extract.

SELECT PRODUCT CITATIONS

1. Lee, C.L., et al. 2018. The blood lipid regulation of *Monascus*-produced monascin and ankaflavin via the suppression of low-density lipoprotein cholesterol assembly and stimulation of apolipoprotein A-I expression in the liver. *J. Microbiol. Immunol. Infect.* 51: 27-37.

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 for detailed protocols and support products.