apoA-I (464CT10.4.4): sc-517307



The Power to Question

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.
- 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. 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. Kockx, M., et al. 2004. apoA-l-stimulated apoE secretion from human macrophages is independent of cholesterol efflux. J. Biol. Chem. 279: 25966-25977.
- 9. 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.

CHROMOSOMAL LOCATION

Genetic locus: APOA1 (human) mapping to 11q23.3; Apoa1 (mouse) mapping to 9 A5.2.

SOURCE

apoA-I (464CT10.4.4) is a mouse monoclonal antibody raised against a synthetic peptide corresponding to amino acids 10-37 in the N-terminal region of apoA-I of human origin.

PRODUCT

Each vial contains 100 $\mu g\ lgG_1$ in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

apoA-I (464CT10.4.4) is recommended for detection of apoA-I of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

Suitable for use as control antibody for apoA-I siRNA (h): sc-41177, apoA-I siRNA (m): sc-63361, apoA-I shRNA Plasmid (h): sc-41177-SH, apoA-I shRNA Plasmid (m): sc-63361-SH, apoA-I shRNA (h) Lentiviral Particles: sc-41177-V and apoA-I shRNA (m) Lentiviral Particles: sc-63361-V.

Molecular Weight of apoA-I: 28 kDa.

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.

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3800 fax 831.457.3801 **Europe** +00800 4573 8000 49 6221 4503 0 **www.scbt.com**