SANTA CRUZ BIOTECHNOLOGY, INC.

apoA-I (069-01): sc-58230

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. Cohen, J.C., et al. 2004. Multiple rare alleles contribute to low plasma levels of HDL cholesterol. Science 305: 869-872.

CHROMOSOMAL LOCATION

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

SOURCE

apoA-I (069-01) is a mouse monoclonal antibody raised against full length native apoA-I of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

apoA-I (069-01) 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), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with apolipoprotein B (apoB).

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.

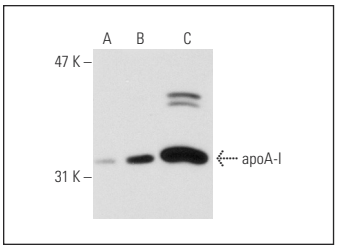
Molecular Weight of apoA-I: 28 kDa.

Positive Controls: apoA-I (m): 293T Lysate: sc-118477, HeLa whole cell lysate: sc-2200 or apoA-I (h): 293T Lysate: sc-111827.

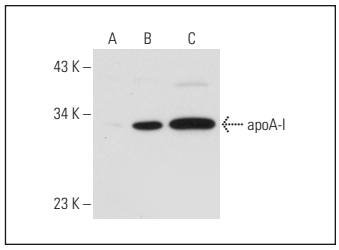
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



apoA-I (069-01): sc-58230. Western blot analysis of apoA-I expression in non-transfected 293T: sc-117752 (**A**), human apoA-I transfected 293T: sc-111827 (**B**) and HeLa (**C**) whole cell lysates.



apoA-I (069-01): sc-58230. Western blot analysis of apoA-I expression in non-transfected 293T: sc-117752 (**A**), mouse apoA-I transfected 293T: sc-118477 (**B**) and HeLa (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Anagnostopoulos, A.K., et al. 2010. Proteomic analysis of amniotic fluid in pregnancies with Klinefelter syndrome foetuses. J. Proteomics 73: 943-950.
2. Tsezou, A., et al. 2010. Impaired expression of genes regulating cholesterol efflux in human osteoarthritic chondrocytes. J. Orthop. Res. 28: 1033-1039.
3. Ng, K.M., et al. 2011. Exogenous expression of human apoA-I enhances cardiac differentiation of pluripotent stem cells. PLoS ONE 6: e19787.
4. Gazouli, M., et al. 2013. Serum protein profile of Crohn's disease treated with infliximab. J. Crohns Colitis 7: e461-e470.
5. Braoudaki, M., et al. 2013. Protein biomarkers distinguish between high- and low-risk pediatric acute lymphoblastic leukemia in a tissue specific manner. J. Hematol. Oncol. 6: 52.
6. Rahman, M.M., et al. 2019. Acidification effects on isolation of extracellular vesicles from bovine milk. PLoS ONE 14: e0222613.

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.