

## apoA-I (2G4): sc-69755



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.
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.

## CHROMOSOMAL LOCATION

Genetic locus: APOA1 (human) mapping to 11q23.3; ApoA1 (mouse) mapping to 9 A5.2.

## SOURCE

apoA-I (2G4) is a mouse monoclonal antibody raised against apoA-I protein of human origin.

## PRODUCT

Each vial contains IgG<sub>1</sub> in 100 µl of PBS with < 0.1% sodium azide, 0.1% gelatin, 1% glycerol and < 0.1% stabilizer protein.

## APPLICATIONS

apoA-I (2G4) is recommended for detection of apoA-I of mouse, rat and human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:100-1:5000), immunoprecipitation [1-2 µl per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution to be determined by researcher, dilution range 1:50-1:2500) and solid phase ELISA (starting dilution to be determined by researcher, dilution range 1:30-1:5000).

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.

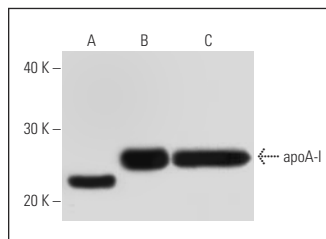
Molecular Weight of apoA-I: 28 kDa.

Positive Controls: apoA-I (m): 293T Lysate: sc-118477, human plasma extract: sc-364374 or HeLa whole cell lysate: sc-2200.

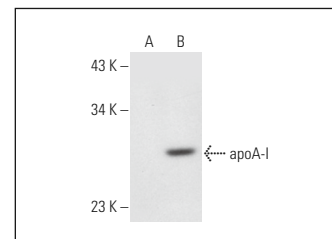
## STORAGE

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

## DATA



apoA-I (2G4): sc-69755. Western blot analysis of apoA-I in purified human apoA-I (A), purified human HDL (B) and human plasma (C).



apoA-I (2G4): sc-69755. Western blot analysis of apoA-I expression in non-transfected: sc-117752 (A) and mouse apoA-I transfected: sc-118477 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Centlow, M., et al. 2010. Differential proteome analysis of the preeclamptic placenta using optimized protein extraction. J. Biomed. Biotechnol. 2010: 458748.
2. Bai, J., et al. 2010. Secreted protein profile from Hep G2 cells incubated by S<sup>-</sup> and R<sup>+</sup> enantiomers of chiral drug warfarin-an analysis in cell-based system and clinical samples. Proteomics Clin. Appl. 4: 808-815.
3. Liu, F.J., et al. 2012. Differential proteomic analysis of pathway biomarkers in human breast cancer by integrated bioinformatics. Oncol. Lett. 4: 1097-1103.
4. Zhang, H., et al. 2012. Preliminary proteomic analysis of human serum from patients with laryngeal carcinoma. Eur. Arch. Otorhinolaryngol. 269: 557-563.
5. Toma, L., et al. 2021. CRISPR/dCas9 transcriptional activation of endogenous apolipoprotein AI and paraoxonase 1 in enterocytes alleviates endothelial cell dysfunction. Biomolecules 11: 1769.
6. Li, W., et al. 2022. Endothelial cells regulate astrocyte to neural progenitor cell *trans*-differentiation in a mouse model of stroke. Nat. Commun. 13: 7812.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.