SANTA CRUZ BIOTECHNOLOGY, INC.

apoA-IV (G-8): sc-374543

SANTA CRUZ BIOTECHNOLOGY

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.

CHROMOSOMAL LOCATION

Genetic locus: APOA4 (human) mapping to 11q23.3.

SOURCE

apoA-IV (G-8) is a mouse monoclonal antibody raised against a peptide mapping near the C-terminus of apoA-IV of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

apoA-IV (G-8) is available conjugated to agarose (sc-374543 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-374543 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374543 PE), fluorescein (sc-374543 FITC), Alexa Fluor® 488 (sc-374543 AF488), Alexa Fluor® 546 (sc-374543 AF546), Alexa Fluor® 594 (sc-374543 AF594) or Alexa Fluor® 647 (sc-374543 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374543 AF680) or Alexa Fluor® 790 (sc-374543 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

apoA-IV (G-8) is recommended for detection of apoA-IV of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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-IV siRNA (h): sc-41178, apoA-IV shRNA Plasmid (h): sc-41178-SH and apoA-IV shRNA (h) Lentiviral Particles: sc-41178-V.

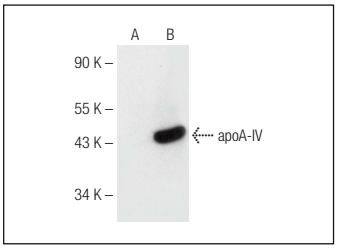
Molecular Weight of apoA-IV: 46 kDa.

Positive Controls: apoA-IV (h): 293T Lysate: sc-373359, Hep G2 cell lysate: sc-2227 or HeLa whole cell lysate: sc-2200.

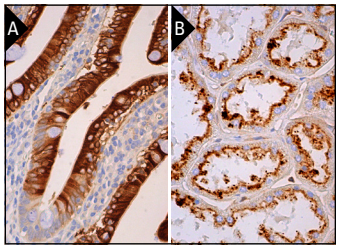
STORAGE

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

DATA



apoA-IV (G-8): sc-374543. Western blot analysis of apoA-IV expression in non-transfected: sc-117752 (**A**) and human apoA-IV transfected: sc-373359 (**B**) 293T whole cell lysates.



apoA-IV (G-8): sc-374543. Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic staining of glandular cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing apical membrane staining of cells in tubules (**B**).

SELECT PRODUCT CITATIONS

1. Zeng, J., et al. 2018. Increased serum protein levels by Yuanshi Shengmai Chenggu tablet in treatment of avascular osteonecrosis of the femoral head. Mol. Med. Rep. 17: 2121-2126.
2. McClatchy, D.B., et al. 2018. Quantitative temporal analysis of protein dynamics in cardiac remodeling. J. Mol. Cell. Cardiol. 121: 163-172.
3. Xu, X.R., et al. 2018. Apolipoprotein A-IV binds αIIbβ3 Integrin and inhibits thrombosis. Nat. Commun. 9: 3608.
4. Choi, J.W., et al. 2020. Proteome analysis of human natural killer cell derived extracellular vesicles for identification of anticancer effectors. Molecules 25: 5216.
5. Park, S.R., et al. 2021. Holistic characterization of single-hepatocyte transcriptome responses to high-fat diet. Am. J. Physiol. Endocrinol. Metab. 320: E244-E258.
6. Zhang, X., et al. 2022. Identification of serum biomarkers in patients with Alzheimer's disease by 2D-DIGE proteomics. Gerontology 68: 686-698.
7. Liu, X.H., et al. 2022. Apolipoprotein A-IV reduced metabolic inflammation in white adipose tissue by inhibiting IKK and JNK signaling in adipocytes. Mol. Cell. Endocrinol. 559: 111813.
8. Gruver, A.M., et al. 2023. Pathologist-trained machine learning classifiers developed to quantitate celiac disease features differentiate endoscopic biopsies according to modified marsh score and dietary intervention response. Diagn. Pathol. 18: 122.

PROTOCOLS

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