

Product Specification Sheet

Human Apolipoprotein A-IV (ApoA4) protein

□ Cat. # APOA45-N-50 Purified Human ApoA-IV protein

SIZE: 50 ug

Apolipoproteins are proteins that bind to fats (lipids). They form lipoproteins, which transport dietary fats through the bloodstream. Dietary fats are digested in the intestine and carried to the liver. Fats are also synthesized in the liver itself. Fats are stored in fat cells (adipocytes). Fats are metabolized as needed for energy in the skeletal muscle, heart, and other organs and are secreted in breast milk. Apolipoproteins also serve as enzyme co-factors, receptor ligands, and lipid transfer carriers that regulate the metabolism of lipoproteins and their uptake in tissues.

Apolipoprotein A-IV (also known as apoA-IV, apoAIV, or apoA4) is plasma protein that is coded by gene on chromosome 11 in close linkage to APOA1 and APOC3. The primary translation product of the APOA4 gene is a 396-residue preprotein, which undergoes proteolytic processing to yield apo A-IV, a 376-residue mature O-linked glycoprotein. In most mammals, including humans, apo A-IV synthesis is confined to the intestine; however in mice and rats hepatic synthesis also occurs. Apo A-IV is secreted into circulation on the surface of newly synthesized chylomicron particles. Intestinal fat absorption dramatically increases the synthesis and secretion of apo A-IV. Although its primary function in human lipid metabolism has not been established, apo A-IV has been found to: 1) activate lecithin-cholesterol acyltransferase and cholesterylester transfer protein in vitro; 2) play a role in the regulation of appetite and satiety in rodent models; 3) display anti-oxidant and anti-atherogenic properties in vitro and in rodent models; 4) modulate the efficiency of enterocyte and hepatic transcellular lipid transport in vitro[3]. Human apo A-IV deficiency has not been reported.

Source of Antigen, Antibodies, and positive controls

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Human ApoA4 was prepared from fresh, non-frozen plasma shown to be non reactive for HbsAG, anti-HCV, anti-HBc, and negative for anti-HIV 1 & 2 by FDA approved tests. It is >90% pure by SDS-PAGE, mol wt 46 kda. It is supplied (see lot sp concn on the vial) in 1 mM Na Bicarbonate buffer, pH 8.2, or lyophilized in the same buffer. Reconstitute in water or other buffers at 1mg/ml and store at -20oC or below. Stability is ~1 year.

General References: Karathanasis SK, (1986). Proc. Natl. Acad. Sci. U.S.A. 83 (22): 8457-61; Elshourbagy NA, (1987 J. Biol. Chem. 262 (17): 7973-81 Luo CC (1986). J.Mol Biol. 187, 325-340; Deeg, M A (2001) J. Lipid Res.42: 442-51

*This product is for In vitro research use only.

Related material available from ADI

GoatAnti-ApoA4 IgG #APOA45-A
Purified Human ApoA-IV protein control for WB #APOA45-C

ApoB, ApoC, ApoE -Beta amyloid 1-40, 1-42, APP, Parkin, Synucleins (α , β , γ), Presenilins 1, 2, ERAB

APOA45-N-50

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