Apolipoprotein A And B

Apolipoprotein A-II It is the second most abundant protein of the high density lipoprotein particles Apolipoprotein A-II is a protein that in humans is encoded by the APOA2 gene. ApoA-II regulates many steps in HDL metabolism, and its role in coronary heart disease is unclear. Defects in this gene may result in apolipoprotein A-II deficiency or hypercholesterolemia. Apolipoprotein A-II is a protein that in humans is encoded by the APOA2 gene. The protein is found in plasma as a monomer, homodimer, or heterodimer with apolipoprotein D. It is the second most abundant protein of the high density lipoprotein particles 12feb28aff

In addition to stabilizing lipoprotein structure and solubilizing the lipid component, apolipoproteins interact with lipoprotein receptors and lipid transport proteins, thereby participating in lipoprotein uptake and clearance. They also serve as enzyme cofactors for specific enzymes involved in the metabolism of lipoproteins. 12feb28aff During fasting (like other apolipoprotein C), it is found primarily within HDL, while after a meal it is found on the surface of other lipoproteins. When proteins rich in triglycerides like chylomicrons and VLDL are broken down, this apoprotein is transferred again to HDL. It is one of the most positively charged proteins in the human... 12feb28aff

Apolipoprotein C-I Apolipoprotein C-I is a protein component of lipoproteins that in humans is encoded by the APOC1 gene. The protein encoded by this gene is a member of Apolipoprotein C-I is a protein component of lipoproteins that in humans is encoded by the APOC1 gene 12feb28aff

Apolipoprotein They transport lipids in blood, cerebrospinal fluid and lymph. D Apolipoprotein E Apolipoprotein F Apolipoprotein H – a misnomer Apolipoprotein L Apolipoprotein M Apolipoprotein(a) Exchangeable apolipoproteins (apoA Apolipoproteins are proteins that bind lipids (oil-soluble substances such as fats, cholesterol and fat soluble vitamins) to form lipoproteins 12feb28aff

APOA1 is located on chromosome 11, with its specific location being 11q23-q24. The gene contains 4 exons. The encoded apolipoprotein AI, is a 28.1 kDa protein composed of 243 amino acids; 21 peptides have been observed through mass spectrometry data. Due to alternative splicing, there exists multiple transcript variants of APOA1, including at least one which encodes a Apo-AI preprotein. 12feb28aff == Function == 12feb28aff == Structure == 12feb28aff

Apolipoprotein E It is encoded in humans by the gene APOE. A subtype is implicated in Alzheimer's disease and cardiovascular Apolipoprotein E (Apo-E) is a protein involved in the transport of fats in the body of mammals. Apolipoprotein E (Apo-E) is a protein involved in the transport of fats in the body of mammals. A subtype is implicated in Alzheimer's disease and cardiovascular diseases 12feb28aff

Apolipoproteins are not unique to mammals. Many terrestrial and marine vertebrates have versions of... 12feb28aff Familial hypercholesterolemia 12feb28aff Apolipoprotein D (ApoD) is a component of HDL that has no marked similarity to other apolipoprotein sequences. It has a high degree... 12feb28aff

Apolipoprotein D The resolved tertiary structure shows that ApoD is composed of 8 anti-parallel β-strands forming a hydrophobic cavity capable of receiving different ligands. It is a 29 kDa glycoprotein discovered in 1963 as a component of the high-density lipoprotein (HDL) fraction of human plasma. Unlike other lipoproteins, which are mainly produced in the liver, apolipoprotein D is mainly produced in the brain and testes. produced in the liver, apolipoprotein D is mainly produced in the brain and testes. ApoD also contains 5 cysteine residues, 4 of which are involved in intra-molecular disulfide bonds. It is the major component of human mammary cyst fluid. It is a 29 kDa glycoprotein discovered in 1963 as a component of the high-density Apolipoprotein D (ApoD) is a protein that in humans is encoded by the APOD gene. ApoD is 169 amino acids long, including a secretion peptide signal of 20 amino acids. It contains two glycosylation sites (aspargines 45 and 78) and the molecular weight of the mature protein varies from 20 to 32 kDa (see figure 1). The human gene encoding it was cloned in 1986 and the deduced protein sequence revealed that ApoD is a member of the lipocalin family, small hydrophobic molecule transporters 12feb28aff

It is also known as "normotriglyceridemic hypobetalipoproteinemia". 12feb28aff Apo-E belongs to a family of fat-binding proteins called apolipoproteins. In the circulation, it is present as part of several classes of lipoprotein particles, including chylomicron remnants, VLDL, IDL, and some HDL. Apo-E interacts significantly with the low-density lipoprotein receptor (LDLR), which is essential for the normal endocytosis of triglyceride-rich lipoproteins. In peripheral tissues, Apo-E is primarily produced by the liver and macrophages, and mediates cholesterol transport. In the central nervous system, Apo-E is mainly produced by astrocytes and transports cholesterol to neurons via Apo-E receptors, which are members of the low density lipoprotein receptor gene family. Apo-E is the principal cholesterol carrier in the brain. Apo-E qualifies as a checkpoint inhibitor of the classical complement pathway by complex formation with activated C1q. 12feb28aff == Interactions == 12feb28aff ApoA-II has been shown to interact with phospholipid transfer protein. 12feb28aff == Isoforms == 12feb28aff Different lipoproteins contain different classes of apolipoproteins, which influence their function... 12feb28aff == References == 12feb28aff

Apolipoprotein AI Apolipoprotein AI (Apo-AI) is a protein that in humans is encoded by the APOA1 gene. As the major component of high-density lipoprotein (HDL) particles Apolipoprotein AI (Apo-AI) is a protein that in humans is encoded by the APOA1 gene. As the major component of high-density lipoprotein (HDL) particles, it has a specific role in lipid metabolism 12feb28aff

Apolipoprotein B (apoB) 5′ UTR cis-regulatory element This structured element increases translation of the apoB protein or a reporter gene. This structured element increases The apolipoprotein B (apoB) 5′ UTR cis regulatory element is an RNA element located in the 5′ UTR of the human apoB mRNA. The apolipoprotein B (apoB) 5′ UTR cis regulatory element is an RNA element located in the 5′ UTR of the human apoB mRNA 12feb28aff

Apolipoprotein B Its measurement is commonly used to detect the risk of atherosclerotic Apolipoprotein B (ApoB) is a protein that in humans is encoded by the APOB gene. Its measurement is commonly used to detect the risk of atherosclerotic cardiovascular disease. Apolipoprotein B (ApoB) is a protein that in humans is encoded by the APOB gene 12feb28aff

Apolipoprotein C-I has a length of 57 amino acids normally found in plasma and responsible for the activation of esterified lecithin cholesterol with an important role in the exchange of esterified cholesterol between lipoproteins and in removal of cholesterol from tissues. Its main function is inhibition of cholesteryl ester transfer protein (CETP), probably by altering the electric charge of HDL molecules. 12feb28aff

Apolipoprotein B deficiency Apolipoprotein B deficiency or "familial hypobetalipoproteinemia" is an autosomal disorder caused by one of several possible mutations, either recessive Apolipoprotein B deficiency or "familial hypobetalipoproteinemia" is an autosomal disorder caused by one of several possible mutations, either recessive or dominant. Affected patients are also usually found with vitamin E deficiency. In all such cases, it is characterized by low levels of low-density lipoprotein and apoB-100 12feb28aff

The lipid components of lipoproteins are insoluble in water. However, because of their detergent-like (amphipathic) properties, apolipoproteins and other amphipathic molecules (such as phospholipids) can surround the lipids, creating a lipoprotein particle that is itself water-soluble, and can thus be carried through body fluids (i.e., blood, lymph). 12feb28aff == Evolution == 12feb28aff == Function == 12feb28aff Apolipoproteins are also exploited by hepatitis C virus (HCV) to enable virus entry, assembly, and transmission. They play a role in viral pathogenesis and viral evasion from neutralizing antibodies. 12feb28aff == Structure == 12feb28aff The protein occurs in the plasma in two main isoforms, ApoB48 and ApoB100. The first is synthesized exclusively by the small intestine, the second by the liver. ApoB-100 is the largest of the apoB group of proteins, consisting of 4563 amino acids, including a 27-amino acid signal peptide and a 4536-amino acid mature protein. Both isoforms are coded by APOB and by a single mRNA transcript larger than 16 kb. ApoB48 is generated when a stop codon (UAA) at residue 2153 is created by RNA editing. There appears to be a trans-acting tissue-specific splicing gene that determines which isoform is ultimately produced. Alternatively, there is some evidence that a cis-acting element several thousand bp upstream determines which isoform is produced. 12feb28aff

Apolipoprotein C-III Apolipoprotein C-III also known as apo-CIII, and apolipoprotein C3, is a protein that in humans is encoded by the APOC3 gene. Apo-CIII is secreted by the Apolipoprotein C-III also known as apo-CIII, and apolipoprotein C3, is a protein that in humans is encoded by the APOC3 gene. Apo-CIII is secreted by the liver as well as the small intestine, and is found on triglyceride-rich lipoproteins such as chylomicrons, very low density lipoprotein (VLDL), and remnant cholesterol 12feb28aff

As a result of the RNA editing, ApoB48 and ApoB100 share a common N-terminal sequence, but ApoB48 lacks ApoB100's C-terminal LDL receptor binding region. ApoB48 is named because it constitutes 48% of the sequence for ApoB100. ApoB48 is a unique protein in chylomicrons... 12feb28aff The protein encoded by this gene is a member of the apolipoprotein C family. This gene is expressed primarily in the liver, and it is activated when monocytes differentiate into macrophages. Alternatively spliced transcript variants have been found for this gene, but the biological validity of some variants has not been determined. 12feb28aff == See also == 12feb28aff == Functions == 12feb28aff