9051 Mira Mesa Blvd, #910094
San Diego, CA 92191
Tel: 760-390-3989

APOB Human

Apolipoprotein-B Human
CYK0048

Product Overview

Name	APOB Human
Description	
Apolipoprotein-B Human	
Accession (Primary)	P04114
Synonyms	
APOB, APO-B, Apolipoprotein B.	
Introduction	
ApoB is the main apolipoprotein of LDL, IDL, VLDL and chylomicrons particles that serves as the carrier of lipids (fat molecules), as well as cholesterol, in the water surrounding the cells within every tissue across the body. Though all the functional aspects of Apolipoprotein B within the LDL and other elements are considered to be rather uncertain, it serves as the key organizing protein of all other carriers of lipids. across LDL membranes, apolipoprotein B also serves as a ligand for LDL receptors in many cells across the body, meaning, it shows that lipid carriers that are set to cross into cells with Apolipoprotein B receptors, this is the way that lipids are transported within and into cells.	
Source	
Human Plasma.	
Physical Appearance	
Sterile Filtered lyophilized (freeze-dried) powder.	
Formulation	
The protein was lyophilized from a 0.5mg/ml solution of 50mM Na2CO3 pH-10 containing 50mM NaCl and 10mM sodium deoxycholate.	
Stability	
Lyophilized APOB although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution, APOB should be stored at 4°C between 2-7 days and for future use below -18°C. For long-term storage, it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.	
Purity	
Greater than 95.0%.	
Solubility	
It is recommended to reconstitute the lyophilized APOB in sterile 18M-cm H 2 O not less than 100 µg/ml, which can	

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then be further diluted to other aqueous solutions.

Human Virus Test

Starting material donor has been tested and certified negative for antibodies to HIV-1,HIV-2, HCV, HBSAG.

Background

Apolipoprotein-B Human: Unveiling the Key Player in Cholesterol Transport Abstract: Apolipoprotein-B (ApoB), a pivotal component of lipoproteins, plays a critical role in cholesterol metabolism and transportation. It is primarily synthesized in the liver and intestines, existing in two main isoforms: ApoB-100 and ApoB-48. This research paper aims to provide a comprehensive overview of ApoB human, emphasizing its physiological functions, regulatory mechanisms, and implications in cardiovascular diseases. By delving into the intricacies of ApoB, we can gain valuable insights into its significance as a therapeutic target and potential biomarker. Introduction: The prevalence of cardiovascular diseases necessitates a deeper understanding of the mechanisms governing cholesterol metabolism. ApoB, an integral component of lipoproteins, holds the key to unlocking vital insights into cholesterol transport and its association with atherosclerosis. Structure and Function of Apolipoprotein-B: ApoB exhibits a complex molecular structure, consisting of functional domains that enable its interaction with lipids and receptors. ApoB-100, the longer isoform, is primarily associated with low-density lipoprotein (LDL) particles, while ApoB-48 is present in chylomicrons and chylomicron remnants. These isoforms serve distinct roles in lipoprotein metabolism and cholesterol delivery to peripheral tissues. Regulation of Apolipoprotein-B: The synthesis and secretion of ApoB are tightly regulated processes influenced by various factors, including dietary and genetic factors. Transcriptional and post-transcriptional mechanisms govern the expression and processing of ApoB, ensuring its proper function in cholesterol transport. Apolipoprotein-B and Cardiovascular Diseases: Elevated levels of ApoB-containing lipoproteins, such as LDL, have been implicated in the development of atherosclerosis and cardiovascular diseases. The ratio of ApoB to ApoA-I, known as the ApoB/ApoA-I ratio, serves as a reliable marker for cardiovascular risk assessment, with higher ratios indicating increased risk. Therapeutic Implications of Apolipoprotein-B: Targeting ApoB presents a promising avenue for managing dyslipidemia and reducing cardiovascular risk. Strategies aimed at reducing ApoB production or enhancing its clearance have shown efficacy in clinical trials, underscoring the potential of ApoB as a therapeutic target. Conclusion: Apolipoprotein-B human serves as a cornerstone in cholesterol transport, playing a crucial role in lipoprotein metabolism and its implications for cardiovascular health. By unraveling the intricate interplay between ApoB, cholesterol metabolism, and atherosclerosis, we can pave the way for novel therapeutic interventions and improved risk assessment in cardiovascular diseases.

Precautions

APOB Human is for research use only and not for use in diagnostic or therapeutic procedures.

Target Information: (P04114)

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