

APOB Human

Apolipoprotein-B Human

CYK0048

Product Overview

Name	APOB Human
Accession(Primary)	P04114
Description	Apolipoprotein-B Human

Target information (P04114)

Gene Name

About Gene Symbol

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.