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

Apo D Human

Apolipoprotein-D Human Recombinant
CYK0040

Product Overview

Name	Apo D Human
Description	
Apolipoprotein-D Human Recombinant	
Accession (Primary)	P05090
Synonyms	
Apolipoprotein D, Apo-D, ApoD.	
Introduction	
Apolipoprotein-D is mainly associated with high density lipoproteins in human plasma. Apolipoprotein-D is an atypical apolipoprotein and, based on its primary structure, Apolipoprotein-D is a member of the lipocalin family. Lipocalins adopt a beta-barrel tertiary structure and transport small hydrophobic ligands. Apolipoprotein-D binds cholesterol, progesterone, pregnenolone, bilirubin and arachidonic acid. Apolipoprotein-D is expressed in numerous tissues having high levels of expression in spleen, testes and brain. Apolipoprotein-D is present at high concentrations in the cyst fluid of women with gross cystic disease of the breast, a condition associated with increased risk of breast cancer. Apolipoprotein-D accumulates in regenerating peripheral nerves and in the cerebrospinal fluid of patients with neurodegenerative conditions, such as Alzheimer's disease. Apolipoprotein-D participates in maintenance and repair within the central and peripheral nervous systems. Apolipoprotein-D is a multi-ligand, multi-functional transporter and transports a ligand from 1 cell to another within an organ, scavenge a ligand within an organ for transport to the blood or could transport a ligand from the circulation to specific cells within a tissue.	
Source	
Escherichia Coli.	
Physical Appearance	
Filtered White lyophilized (freeze-dried) powder.	
Formulation	
Filtered (0.4 µm) and lyophilized from 1mg/ml in 4mM KH 2 PO 4 , 16mM Na 2 HPO 4 and 115mM NaCl pH 7.5.	
Stability	
Store lyophilized protein at -20°C. Aliquot the product after reconstitution to avoid repeated freezing/thawing cycles. Reconstituted protein can be stored at 4°C for a limited period of time; it does not show any change after two weeks at 4°C.	

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Purity

Greater than 90% as determined by SDS-PAGE.

Amino acid sequence

FHLGKCPNPP VQENFDVNKY PGRWYEIEKI PTTFENGRCI QANYSLMENG KIKVLNQELR ADGTVNQIEG EATPVNLTEP AKLEVKFSWF MPSAPYHILA TDYENYALVY SCTSISQSFH VDFAWILARN VALPPETVDS LKNILTSNNI DVKKMTVTDQ VNCPKLSAHHHHHH.

Solubility

It is recommended to add deionized H 2 O to a working volume of 0.5mg/ml and let the lyophilized pellet dissolve completely. Product is not sterile! Please filter this product by an appropriate sterile filter before using it in the cell culture.

Background

Apolipoprotein-D Human Recombinant: Illuminating the Role of a Multifaceted Lipid-Binding Protein Abstract: Apolipoprotein-D (ApoD), a multifunctional lipid-binding protein, has emerged as a fascinating player in lipid metabolism and neuroprotection. This research paper aims to provide an insightful overview of ApoD human recombinant, exploring its physiological functions, production methods, and potential therapeutic applications. By unraveling the complexities of ApoD, we gain valuable insights into its role in lipid homeostasis and its potential as a therapeutic target for neurodegenerative diseases. This article presents a concise yet comprehensive analysis of ApoD, humanizing its significance in the context of human health. Introduction: Understanding the intricate mechanisms underlying lipid metabolism and neuroprotection is crucial for the development of novel therapeutic strategies. ApoD, a versatile protein expressed in various tissues, offers unique insights into these areas. This paper delves into the multifaceted nature of ApoD, shedding light on its significance in lipid homeostasis and neuronal health. Structure and Function of Apolipoprotein-D: ApoD exhibits a complex molecular structure, comprising distinct domains that facilitate its binding to lipids and other biomolecules. It engages in diverse functions, including lipid transport, antioxidant defense, and modulation of neuroinflammatory responses. The versatility of ApoD underscores its pivotal role in maintaining cellular and tissue integrity. Regulation of Apolipoprotein-D Expression: The expression of ApoD is subject to intricate regulatory mechanisms influenced by hormonal and environmental cues. Understanding the factors governing ApoD expression provides valuable insights into its physiological roles and potential therapeutic applications. Apolipoprotein-D and Neurodegenerative Diseases: Growing evidence implicates ApoD in neuroprotection, particularly in the context of neurodegenerative diseases. ApoD exhibits neuroprotective properties by modulating oxidative stress, lipid peroxidation, and inflammatory responses, making it an intriguing target for therapeutic interventions. Production of Apolipoprotein-D Human Recombinant: Advanced biotechnological approaches, including recombinant DNA technology and protein expression systems, enable the production of ApoD human recombinant. These methods facilitate large-scale production, purification, and characterization of ApoD, paving the way for potential therapeutic applications. Therapeutic Potential of Apolipoprotein-D Human Recombinant: Targeting ApoD holds promise for the development of therapeutics aimed at neurodegenerative diseases. Modulating ApoD expression or function may provide neuroprotection, enhance neuronal survival, and mitigate the progression of

neurodegenerative disorders. Conclusion: Apolipoprotein-D human recombinant represents a captivating area of research, bridging the fields of lipid metabolism and neurodegeneration. Understanding the intricate interplay between ApoD, lipid homeostasis, and neuroprotection is crucial for unraveling its full therapeutic potential. Continued investigation into the functions and mechanisms of ApoD will likely lead to novel therapeutic strategies for neurodegenerative diseases.

Precautions

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

Target Information: (P05090)

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