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APOE3 Human

Apolipoprotein E3 Human Recombinant
CYK0052

Product Overview

Name	APOE3 Human
Description	
Apolipoprotein E3 Human Recombinant	
Accession (Primary)	P02649
Synonyms	
Apolipoprotein E, LDLCQ5, APO-E, LPG, AD2, Alzheimer Disease 2 (APOE*E4-Associated, Late Onset), Apolipoprotein E3, APOE.	
Introduction	
Apolipoprotein E3 (ApoE) is a 34kDa protein component of serum chylomicrons, VLDL, and HDL particles. ApoE mediates the binding, uptake, and catabolism of these particles as a result of interactions with the ApoE receptor and LDL receptors in the liver and brain. ApoE is imperative in fatty acid homeostasis and memory formation. Polymorphisms encode 3 variants (ApoE2, 3, 4), which are differentially connected to the development of atherosclerosis and neurogenerative disorders, mainly Alzheimer's disease.	
Source	
Escherichia Coli.	
Physical Appearance	
Sterile Filtered clear solution.	
Formulation	
sterile filtered solution supplied in 10mM MOPS, 50mM NaCl, 0.2 %(w/v) CHAPS and 1mM TCEP, PH 7.5.	
Stability	
Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time.For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.	
Purity	
Greater than 95% as determined by SDS-PAGE.	
Amino acid sequence	
MHHHHHHKVE QAVETEPEPE LRQQTEWQSG QRWELALGRF WDYLRWVQTL SEQVQEELLS SQVTQELRAL MDETMKELKA YKSELEEQLT PVAEETRARL SKELQAAQAR LGADMEDVCG RLVQYRGEVQ AMLGQSTEEL RVRLASHLRK LRKRLLRDAD DLQKRLAVYQ AGAREGAERG LSAIRERLGP LVEQGRVRAA TVGSLAGQPL	

QERAQAWGER LRARMEEMGS RTRDRLDEVK EQVAEVRAKL EEQAQQIRLQ AEAFQARLKS WFEPLVEDMQ RQWAGLVEKV QAAVGTSAAP VPSDNH.

Biological Activity

Immobilized rHuApoE3 binds to rMuVLDLR with EC 50 less than 0.075-0.375 μg/ml.

Background

Apolipoprotein E3 Human Recombinant: Unlocking the Genetic Guardian for Brain Health Abstract: Apolipoprotein E3 (ApoE3), a significant variant of Apolipoprotein E, plays a vital role in lipid metabolism and safeguarding brain health. This research paper aims to provide a comprehensive understanding of ApoE3 human recombinant, elucidating its functions, genetic implications, and potential therapeutic applications. By exploring the intricacies of ApoE3, we gain valuable insights into its role as a genetic guardian of brain health and its potential as a therapeutic target for neurodegenerative disorders. This article presents a concise yet comprehensive analysis of ApoE3, emphasizing its impact on human well-being. Introduction: Unraveling the genetic factors that influence brain health is of paramount importance in comprehending the complexities of neurodegenerative diseases. ApoE3, a key player in lipid metabolism and neuronal maintenance, offers unique insights into these areas. This paper delves into the multifaceted nature of ApoE3, shedding light on its genetic implications and neuroprotective properties. Structure and Function of Apolipoprotein E3: ApoE3 possesses a complex molecular structure, comprising distinct domains that facilitate interactions with lipoproteins and cell surface receptors. Its essential role in lipid transport involves clearing triglyceride-rich lipoproteins, while also exerting neuroprotective effects through neuronal repair and anti-inflammatory activities. Genetic Implications of Apolipoprotein E3: The APOE gene, responsible for encoding ApoE3, undergoes genetic variations that influence individual susceptibility to neurodegenerative disorders. Remarkably, the presence of the ApoE3 allele is associated with a reduced risk of developing Alzheimer's disease, underscoring the genetic protective effect of ApoE3. Apolipoprotein E3 and Neurodegenerative Diseases: ApoE3 has garnered significant attention in the realm of neurodegenerative diseases, particularly Alzheimer's disease. It plays a crucial role in amyloid-beta clearance and tau protein metabolism, which are hallmark features of Alzheimer's disease pathology. By unraveling the intricate interplay between ApoE3 and neurodegenerative processes, novel therapeutic strategies may emerge. Production of Apolipoprotein E3 Human Recombinant: Advanced biotechnological techniques, such as recombinant DNA technology and protein expression systems, facilitate the production of ApoE3 human recombinant. These methods enable large-scale production, purification, and characterization of ApoE3, thereby paving the way for potential therapeutic applications. Therapeutic Potential of Apolipoprotein E3 Human Recombinant: Harnessing the therapeutic potential of ApoE3 represents a promising avenue for interventions in neurodegenerative disorders. Strategies aimed at enhancing ApoE3 expression or function may promote neuroprotection, aid in neuronal repair, and mitigate disease progression. Conclusion: Apolipoprotein E3 human recombinant holds great promise in the domains of lipid metabolism and neurodegeneration. Understanding the genetic implications and neuroprotective properties of ApoE3 is pivotal for unlocking its full therapeutic potential in combating neurodegenerative disorders. Ongoing research into the functions and mechanisms of ApoE3 will likely lead to innovative therapeutic strategies, fostering optimal brain health.

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Precautions

APOE3 Human is for research use only and not for use in diagnostic or therapeutic procedures.

Target Information: (P02649)

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