Apolipoprotein E/APOE3 Protein, Human (HEK293, hFc)

Cat. No.:	HY-P701051
Synonyms:	Apolipoprotein E; Apo-E; APOE; apolipo E; APOE3
Species:	Human
Source:	HEK293
Accession:	P02649 (K19-H317)
Gene ID:	348
Molecular Weight:	60-70 kDa

PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22μm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	Apolipoprotein E (APOE) is a crucial player in lipoprotein-mediated lipid transport, serving as a core component of plasma lipoproteins involved in their production, conversion, and clearance. Functioning as an amphipathic molecule, APOE associates with various lipoprotein particles, including chylomicrons, chylomicron remnants, very low-density lipoproteins (VLDL), and intermediate density lipoproteins (IDL), with a preference for high-density lipoproteins (HDL). It engages with a range of cellular receptors, such as the LDL receptor (LDLR), LDL receptor-related proteins (LRP1, LRP2, and LRP8), and the very low-density lipoprotein receptor (VLDLR), facilitating cellular uptake of APOE-containing lipoprotein particles. Additionally, APOE exhibits heparin-binding activity, interacting with heparan-sulfate proteoglycans on cell surfaces, supporting the capture and receptor-mediated uptake of APOE-containing lipoproteins. APOE's main function involves mediating lipoprotein clearance through hepatocyte uptake and participating in the biosynthesis and uptake of VLDLs by peripheral tissues for triglyceride delivery and energy storage. It crucially contributes to lipid homeostasis, participating in reverse cholesterol transport and playing roles in the central nervous system, immune responses, and transcriptional regulation, notably in interactions with HCV during microbial infection.

Caution: Product has not been fully validated for medical applications. For research use only.

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