Recombinant APOE protein (His tag)

Catalog Number	537412
Synonyms	Apo-E
Species	Human
Expression System	E. coli
Accession	P02649
Molecular Weight	Predictes a molecular mass of 33.22 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 37 kDa band.

Product Information

Sequence Region	42-317
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 42-317 aa (P02649) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human Apolipoprotein E (Apo-E) Fragment (residues 42-317) is a high-purity, stable protein designed for structural and biochemical research. This 276-amino acid fragment retains key functional characteristics of the full-length Apo-E, making it an ideal tool for studying lipid transport mechanisms, lipoprotein interactions, and receptor binding activities in vitro. Apolipoprotein E (Apo-E), encoded by the APOE gene in humans, is a critical apolipoprotein that mediates lipid transport through association with various lipoprotein particles including chylomicrons, VLDL, IDL, and HDL. It functions as a core component in lipoprotein production, conversion, and clearance, facilitating lipid distribution between organs via plasma and interstitial fluids. Apo-E interacts with multiple cellular receptors including LDLR, LRP1, LRP2, LRP8, and VLDLR, enabling cellular uptake of lipoprotein particles. The protein also exhibits heparin-binding activity, supporting capture by cell surface heparan-sulfate proteoglycans. Beyond its central role in systemic lipid homeostasis, Apo-E participates in reverse cholesterol transport through HDL biogenesis and clearance, contributes to lipid transport in the central nervous system, and is involved in immune responses. The protein is primarily secreted and associates with lipoprotein particles in plasma, with lipid-poor oligomeric forms binding to extracellular matrix components in a calcium- and heparan-sulfate-dependent manner.