Human Apolipoprotein E / APOE4 Protein, His Tag (MALS verified)

Catalog # APE-H52H9

Synonym

Apolipoprotein E,APOE,Apo-E

Source

Human APOE4, His Tag(APE-H52H9) is expressed from human 293 cells (HEK293). It contains AA Lys 19 - His 317 (Accession # P02649-1 (C130R)). Predicted N-terminus: Lys 19

Molecular Characterization

This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 36.2 kDa. The protein migrates as 35-42 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per μg by the LAL method / rFC method.

Purity

>90% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

Formulation

Lyophilized from 0.22 μm filtered solution in PBS, 5 mM CHAPS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

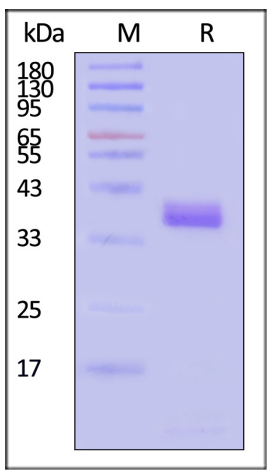
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

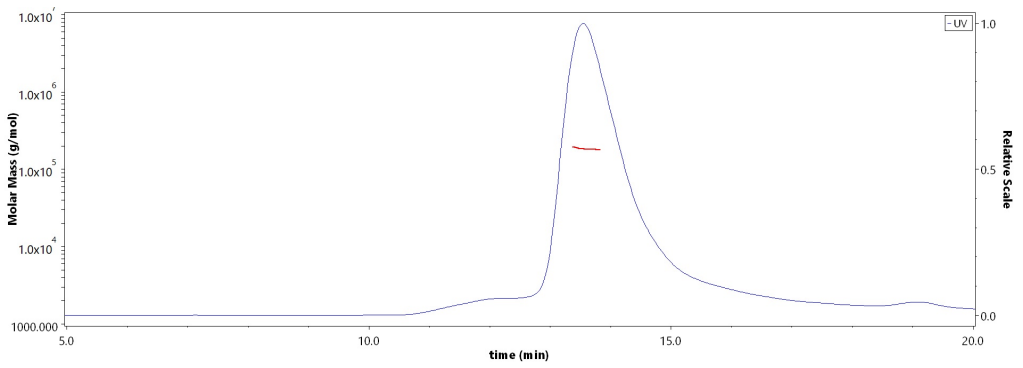
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



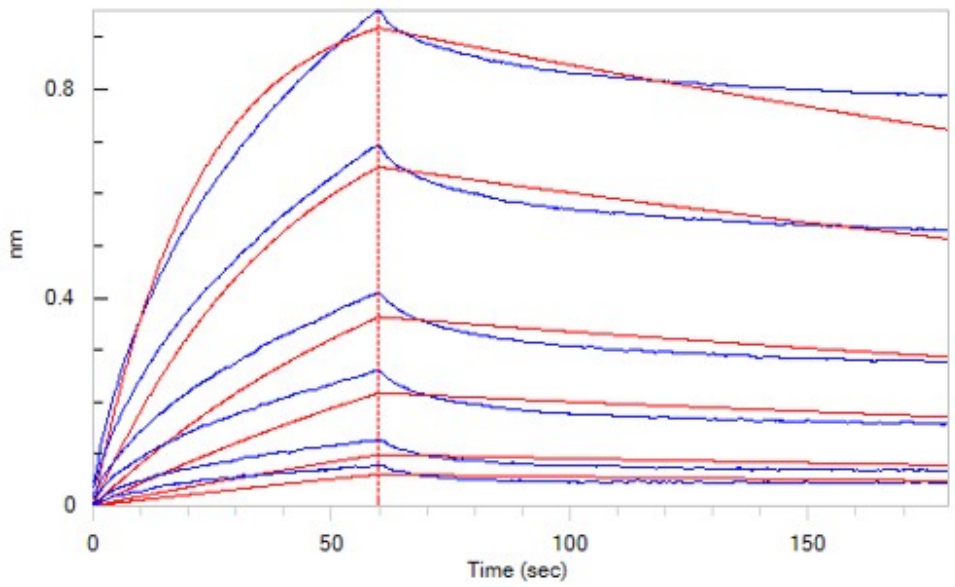
Human APOE4, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With Star Ribbon Pre-stained Protein Marker).

SEC-MALS

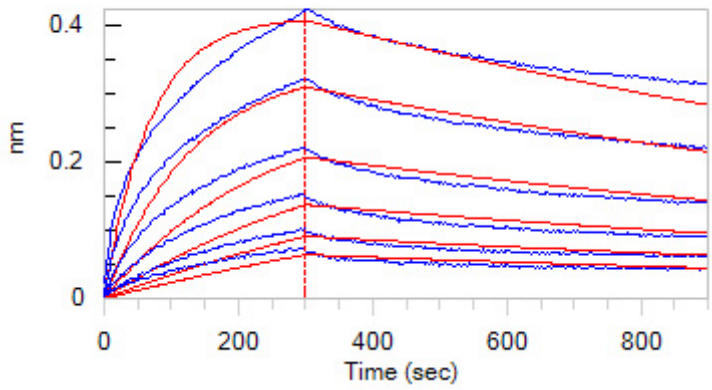


The purity of Human APOE4, His Tag (Cat. No. APE-H52H9) is more than 90% and the molecular weight of this protein is around 150-185 kDa verified by SEC-MALS.
Report

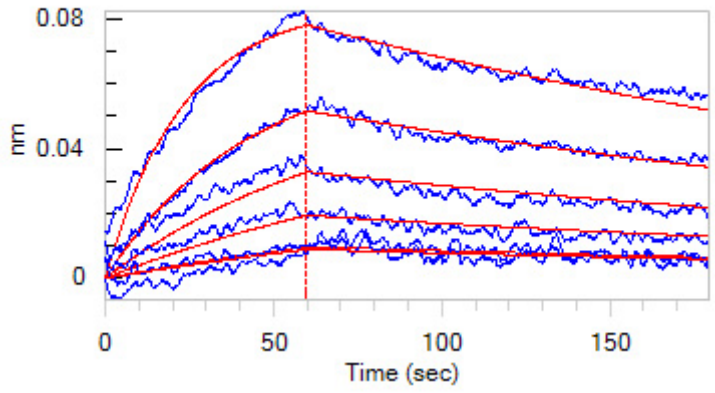
Bioactivity-BLI



Loaded Biotinylated Human TREM2, His,Avitag (Cat. No. TR2-H82E7) on SA Biosensor, can bind Human APOE4, His Tag (Cat. No. APE-H52H9) with an affinity constant of 90.2 nM as determined in BLI assay (ForteBio Octet Red96e) (QC tested).



Loaded Human TREM2, Fc Tag (Cat. No. TR2-H5254) on Protein A Biosensor, can bind Human APOE4, His Tag (Cat. No. APE-H52H9) with an affinity constant of 85.5 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).



Loaded Human LDL R, Fc Tag on Protein A Biosensor, can bind Human APOE4, His Tag (Cat. No. APE-H52H9) with an affinity constant of 42.8 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

Background

APOE is an apolipoprotein, a protein associating with lipid particles, that mainly functions in lipoprotein-mediated lipid transport between organs via the plasma and interstitial fluids. APOE is a core component of plasma lipoproteins and is involved in their production, conversion and clearance. Apoliproteins are amphipathic molecules that interact both with lipids of the lipoprotein particle core and the aqueous environment of the plasma. As such, APOE associates with chylomicrons, chylomicron remnants, very low density lipoproteins (VLDL) and intermediate density lipoproteins (IDL) but shows a preferential binding to high-density lipoproteins (HDL). It also binds a wide range of cellular receptors including the LDL receptor/LDLR, the LDL receptor-related proteins LRP1, LRP2 and LRP8 and the very low-density lipoprotein receptor/VLDLR that mediate the cellular uptake of the APOE-containing lipoprotein particles.