abcam

Product datasheet

Recombinant human Apolipoprotein E ab280330

3 Images

Description

Product name	Recombinant human Apolipoprotein E
Purity	>= 95 % SDS-PAGE. >=95% Purity by HPLC
Endotoxin level	<=0.005 Eu/µg
Expression system	HEK 293 cells
Accession	**P02649**
Protein length	Full length protein
Animal free	Yes
Carrier free	Yes
Nature	Recombinant
Species	Human
Sequence	KVEQAVETEP EPELRQQTEW QSGQRWELAL GRFWDYLRWV QTLSEQVQEE LLSSQVTQEL RALMDETMKE LKAYKSELEE QLTPVAEETR ARLSKELQAA QARLGADMED VCGRLVQYRG EVQAMLGQST EELRVRLASH LRKLRKRLLR DADDLQKRLA VYQAGAREGA ERGLSAIRER LGPLVEQGRV RAATVGSLAG QPLQERAQAW GERLRARMEE MGSRTRDRLD EVKEQVAEVR AKLEEQAQQI RLQAEAFQAR LKSWFEPLVE DMQRQWAGLV EKVQAAVGTS AAPVPSDNH
Predicted molecular weight	34 kDa
Actual molecular weight	34 kDa
Molecular weight information	Predicted MW is 34293.74 Da. (+/- 10 Da by ESI-TOF). Observes MW is 34295.01 Da. Additional masses at 34660.26 and 34863.18 are due to residual O-glycans.
Amino acids	19 to 317
Additional sequence information	N-terminal glycine. Full-length mature chain lacking the signal peptide.

Specifications

Our **Abpromise guarantee** covers the use of **ab280330** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	SDS-PAGE Mass Spectrometry HPLC
Form	Lyophilized

Preparation and Storage

Stability and Storage	Shipped at Room Temperature. Store at Room Temperature. pH: 7.40 Constituents: 0.727% Dibasic monohydrogen potassium phosphate, 0.248% Monobasic dihydrogen potassium phosphate, 10.26% Trehalose Buffer lyophilized from.
Reconstitution	Reconstitute with phosphate buffered saline.Store lyophilized form at room temperature. Reconstitute, aliquot and store at -80°C for 12 months or +4°C for 1 week.Avoid repeated freeze-thaw.Lyophilized contents may appear as either a translucent film or a white power. This variance does not affect the quality of the product. Lyophilized contents may appear as either a translucent film or a white powder. This variance does not affect the quality of the product.

General Info

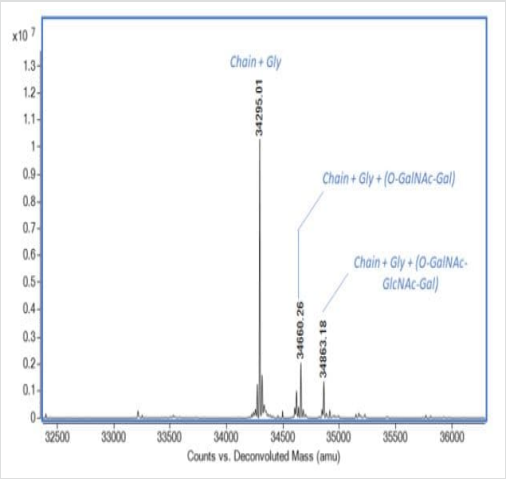
Function	Mediates the binding, internalization, and catabolism of lipoprotein particles. It can serve as a ligand for the LDL (apo B/E) receptor and for the specific apo-E receptor (chylomicron remnant) of hepatic tissues.
Tissue specificity	Occurs in all lipoprotein fractions in plasma. It constitutes 10-20% of very low density lipoproteins (VLDL) and 1-2% of high density lipoproteins (HDL). APOE is produced in most organs. Significant quantities are produced in liver, brain, spleen, lung, adrenal, ovary, kidney and muscle.
Involvement in disease	Defects in APOE are a cause of hyperlipoproteinemia type 3 (HLPP3) [MIM:107741]; also known as familial dysbetalipoproteinemia. Individuals with HLPP3 are clinically characterized by xanthomas, yellowish lipid deposits in the palmar crease, or less specific on tendons and on elbows. The disorder rarely manifests before the third decade in men. In women, it is usually expressed only after the menopause. The vast majority of the patients are homozygous for APOE*2 alleles. More severe cases of HLPP3 have also been observed in individuals heterozygous for rare APOE variants. The influence of APOE on lipid levels is often suggested to have major implications for the risk of coronary artery disease (CAD). Individuals carrying the common APOE*4 variant are at higher risk of CAD. Genetic variations in APOE are associated with Alzheimer disease type 2 (AD2) [MIM:104310]. It is a late-onset neurodegenerative disorder characterized by progressive dementia, loss of cognitive abilities, and deposition of fibrillar amyloid proteins as intraneuronal neurofibrillary tangles, extracellular amyloid plaques and vascular amyloid deposits. The major constituent of these plaques is the neurotoxic amyloid-beta-APP 40-42 peptide (s), derived proteolytically from the transmembrane precursor protein APP by sequential secretase processing. The cytotoxic C-terminal fragments (CTFs) and the caspase-cleaved products such as C31 derived from APP, are also implicated in neuronal death. Note=The APOE*4 allele is genetically associated with the common late onset familial and sporadic forms of Alzheimer disease. Risk for AD increased from 20% to 90% and mean age at onset decreased from 84 to 68 years with increasing number of

	APOE*4 alleles in 42 families with late onset AD. Thus APOE*4 gene dose is a major risk factor for late onset AD and, in these families, homozygosity for APOE*4 was virtually sufficient to cause AD by age 80. The mechanism by which APOE*4 participates in pathogenesis is not known. Defects in APOE are a cause of sea-blue histiocyte disease (SBHD) [MIM:269600]; also known as sea-blue histiocytosis. This disorder is characterized by splenomegaly, mild thrombocytopenia and, in the bone marrow, numerous histiocytes containing cytoplasmic granules which stain bright blue with the usual hematologic stains. The syndrome is the consequence of an inherited metabolic defect analogous to Gaucher disease and other sphingolipidoses. Defects in APOE are a cause of lipoprotein glomerulopathy (LPG) [MIM:611771]. LPG is an uncommon kidney disease characterized by proteinuria, progressive kidney failure, and distinctive lipoprotein thrombi in glomerular capillaries. It mainly affects people of Japanese and Chinese origin. The disorder has rarely been described in Caucasians.
Sequence similarities	Belongs to the apolipoprotein A1/A4/E family.
Post-translational modifications	Synthesized with the sialic acid attached by O-glycosidic linkage and is subsequently desialylated in plasma. O-glycosylated with core 1 or possibly core 8 glycans. Thr-307 is a minor glycosylation site compared to Ser-308. Glycated in plasma VLDL of normal subjects, and of hyperglycemic diabetic patients at a higher level (2-3 fold). Phosphorylation sites are present in the extracelllular medium.
Cellular localization	Secreted.

Images

SDS-PAGE - Recombinant Human Apolipoprotein E (Active) (ab280330)

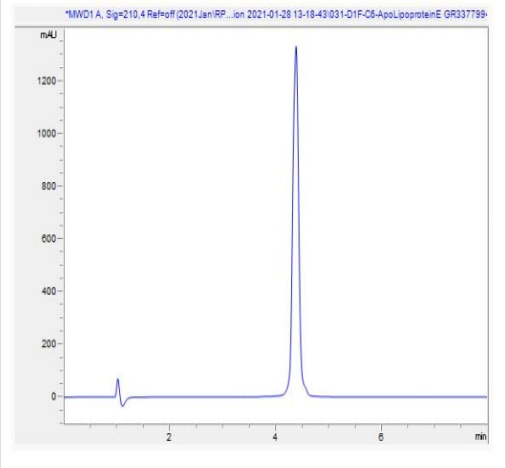
SDS-PAGE analysis of ab280330



Mass Spectrometry - Recombinant Human Apolipoprotein E (Active) (ab280330)

Mass determination by ESI-TOF.

Predicted MW is 34293.74 Da. (+/- 10 Da by ESI-TOF). Observes MW is 34295.01 Da. Additional masses at 34660.26 and 34863.18 are due to residual O-glycans.



HPLC - Recombinant Human Apolipoprotein E (Active) (ab280330)

HPLC analysis of ab280330

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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