

Recombinant Human Apolipoprotein E, E4 Isoform

Cat. No. APOE-694H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	This recombinant human ApoE4 is a 34.4 kDa protein containing 300 amino acid residues produced in <i>E. coli</i> .
Species	Human
Source	E.coli
Description	ApoE review: ApoE belongs to a group of proteins that bind reversibly with lipoprotein and play an important role in lipid metabolism. In addition to facilitating solubilization of lipids, these proteins help to maintain the structural integrity of lipoproteins, serve as ligands for lipoprotein receptors, and regulate the activity of enzymes involved in lipid metabolism. More recently, it has been studied for its role in several biological processes not directly related to lipoprotein transport, such as Alzheimer's and ApoE4, immunoregulation and ApoE4, cognition and ApoE4, apolipoprotein E diseases etc. Significant quantities of ApoE are produced in liver and brain and to some extent in almost every organ. ApoE exists in three major isoforms; apolipoprotein E 2, apolipoprotein E 3, and apolipoprotein E 4, which translate into three ApoE4 alleles, normal ApoE-ε3 and dysfunctional ApoE-ε2 and ApoE-ε4 with differing from one another by a single amino-acid substitution at positions 112 and 158. Creative Biomart provides high quality recombinant human ApoE4 and isoforms etc.
Amino Acid Sequence	MKVEQAVETE PEPELRQQTE WQSGQRWELA LGRFWDYLRW VQTLSEQVQE ELLSSQVTQE LRALMDETMK ELKAYKSELE EQLTPVAEET RARLSKELQA AQARLGADME DVRGRLVQYR GEVQAMLGQS TEELRVRLAS HLRKLRKRL

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RDADDLQKRL AVYQAGAREG AERGLSAIRE RLGPLVEQGR VRAATVGSLA
GQPLQERAQA WGERLRARME EMGSRTDRDL DEVKEQVAEV RAKLEEQAQQ
IRLQAEAFQA RLKSWFEPLV EDMQRQWAGL VEKVQAAVGT SAAPVPSDNH GE.

Note

If suitable for use (ie, if this material is not being used labelling), we recommend adding 0.1% protease free BSA to dilution buffers to minimize absorption on containers.

Supplied

Lyophilized powder with no additives.

Purity

>90% by SDS-Page and HPLC analysis. Endotoxin level is less than 0.1ng per ug (1EU/ug) of ApoE.

Reconstitution

Lyophilized ApoE should be reconstituted in water to a concentration of 0.1-1mg/ml. Allow to set at least 30 minute sat 4°C, Mix Well. If desired, centrifuge for 1-2 minutes at 1000 rpm to concentrate material in vial. This solution can be diluted into other buffered solutions or stored at 0°C for future use.

Storage

The lyophilized powder is stable at room temperature but it is best stored desiccated below 0°C. Reconstituted ApoE should be stored in working aliquots at -20°C. Avoid frequent freeze thaw cycles.

GENE INFORMATION

Gene Name

APOE apolipoprotein E [Homo sapiens]

Synonyms

APOE; apolipoprotein E; AD2; LPG; LDLCQ5; MGC1571; apolipoprotein E3; Apo-E

Gene ID

348

mRNA Refseq

NM_000041

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Protein Refseq	NP_000032
MIM	107741
UniProt ID	P02649
Chromosome Location	19q13.31
Pathway	Alzheimer's disease; Metabolism of lipids and lipoproteins
Function	antioxidant activity; beta-amyloid binding; cholesterol transporter activity; lipid transporter activity; low-density lipoprotein receptor binding; phosphatidylcholine-sterol O-acyltransferase activator activity; protein heterodimerization activity; very-low-density lipoprotein receptor binding
PDB rendering based on 1b68.	