

Active Recombinant Full Length Human APOE4 Protein

Cat. No. APOE4-01HFL **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Active Recombinant Full Length Human APOE4 Protein was expressed in HEK293.
Species	Human
Source	HEK293
ProteinLength	1-317 aa
Description	Apolipoprotein E (ApoE) is a 299 amino acid protein, produced by the liver and circulating macrophages, that is a constituent of every plasma lipoprotein except the smallest low density lipoproteins (LDL). It is a key player in the recycling and redistribution of lipids and cholesterol. ApoE is a ligand with a high affinity for low density lipoprotein receptors (LDLR). It regulates the activity of enzymes that metabolize lipids and also make lipids soluble. Mice and humans that lack ApoE cannot remove excess lipoproteins from the plasma and have an increased risk of atherosclerosis. Defective binding of ApoE to its receptors will lead to accumulation of cholesterol-rich lipoprotein particles in the plasma; this is the cause of type III hyperlipoproteinemia. There are three main isoforms of ApoE all products of alleles at a single gene locus: E2 (Cys112, Cys158), E3 (Cys112, Arg158), and E4 (Arg112, Arg158).
Form	Lyophilized
AASequence	MKVEQAVETEPEPELRQQTEWQSGQRWELALGRFWDYLRWVQTLSEQVQEELLS SQVTQELRALMDETMKELKAYKSELEEQLTPVAEETRARLSKELQAAQARLGADME

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DVRGRLVQYRGEVQAMLGQSTEELRVRLASHLRKLRKLLRDADDLQKRLAVYQA
GAREGAERGLSAIRERLGPLVEQGRVRAATVGS LAGQPLQERAQAWGERLRARME
EMGSRTDRDLDEVKEQVAEVRAKLEEQAQQIRLQAEAFQARLKSWFEPLVEDMQR
QWAGLVEKVQAAVGTSAAPVPSDNH

Molecular Mass	35 kDa
Bio-activity	ELISA binding
Endotoxin	< 1 EU/μg
Purity	≥ 90% by SDS-PAGE
Application	ELISA, FA, WB
Storage	This lyophilized protein is stable for twelve months when stored at -20 centigrade to -70 centigrade. After aseptic reconstitution, this protein may be stored for one month at 2 centigrade to 8 centigrade or for three months at -20 centigrade to -70 centigrade in a manual defrost freezer. Avoid Repeated Freeze Thaw Cycles.
Storage Buffer	This lyophilized protein is 0.22 μm sterile filtered and lyophilized from 20 mM Sodium Phosphate, pH 7.8 + 0.5 mM DTT.
Reconstitution	Reconstitute at 0.1-1 mg/mL using filtered deionized water. Gently mix by vortexing and/or inversion until fully dissolved. Centrifuge if necessary.
Shipping	Ambient

GENE INFORMATION

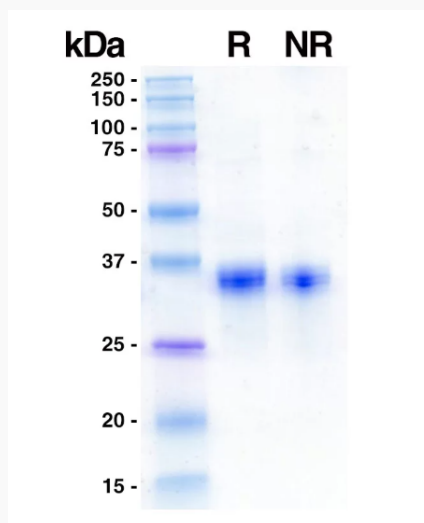
Gene Name APOE apolipoprotein E [Homo sapiens (human)]

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Official Symbol	APOE
Synonyms	APOE; apolipoprotein E; AD2; LPG; APO-E; ApoE4; LDLCQ5; apolipoprotein E; apolipoprotein E3
Gene ID	348
mRNA Refseq	NM_000041
Protein Refseq	NP_000032
MIM	107741
UniProt ID	P02649

SDS-PAGE


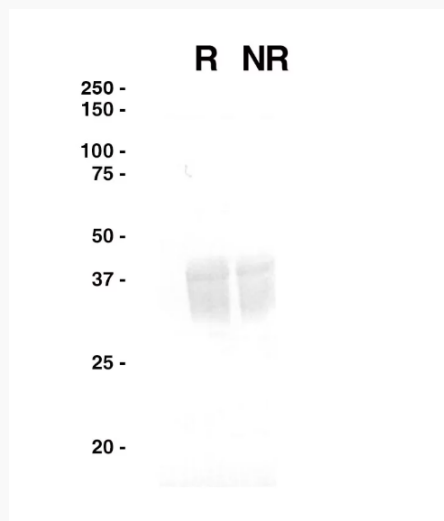
R: 5 µg reduced Recombinant Human ApoE4 NR: 5 µg non-reduced Recombinant Human ApoE4

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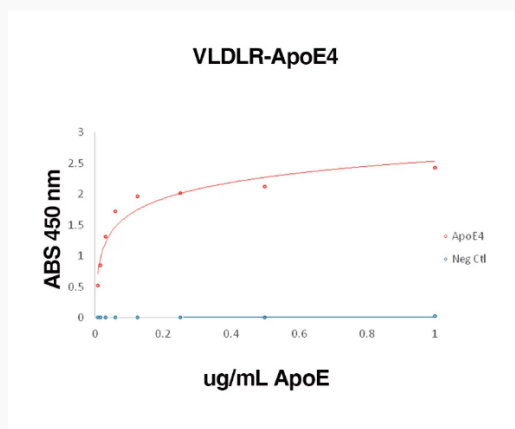
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WB



Purified Recombinant Human ApoE4 was separated on SDS-PAGE under both reducing and non-reducing conditions and probed with an anti-ApoE antibody.

Functional binding



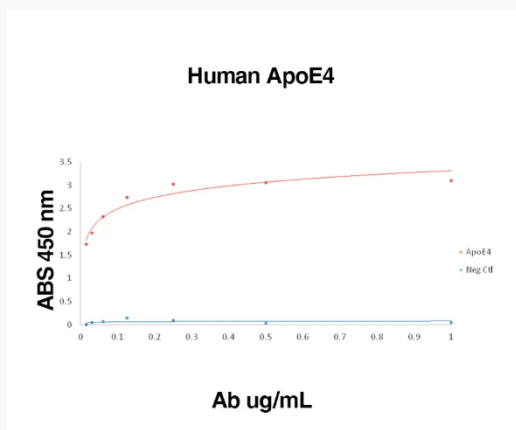
Functional binding of Recombinant Human VLDLR to Recombinant Human ApoE4 Binding was measured by ELISA. Recombinant Human VLDLR was immobilized at 1 µg/mL. Recombinant Human ApoE4 protein was titrated. Anti-ApoE antibody was used for detection.

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Direct binding



Direct binding of anti-ApoE antibody to Recombinant Human ApoE4 Binding was measured by ELISA. Recombinant Human ApoE4 was immobilized at 1 $\mu\text{g/mL}$. Anti-ApoE antibody was titrated.