

# Active Recombinant Full Length Human APOE4 Protein

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

## SPECIFICATION

<b>Product Overview</b>	Active Recombinant Full Length Human APOE4 Protein was expressed in HEK293.
<b>Species</b>	Human
<b>Source</b>	HEK293
<b>ProteinLength</b>	1-317 aa
<b>Description</b>	<p>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).</p>
<b>Form</b>	Lyophilized
<b>AASequence</b>	MKVEQAVETEPEPELRRQQTEWQSGQRWELALGRFWDYLRWVQTLSEQVQEELLS SQVTQELRALMDETMKELKAYKSELEEQLTPVAEETRARLSKELQAAQARLGADME

 Tel: 1-631-559-9269    1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)     Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

DVRGRLVQYRGEVQAMLGQSTEELRVRLASHLRKLRKLLRDADDLQKRLAVYQA  
 GAREGAERGLSAIRERLGPLVEQGRVRAATVGS LAGQPLQERAQAWGERLRARME  
 EMGSRTDRDLDEVKEQVAEVRAKLEEQAAQIQLQAEAFQARLKS WFEPLVEDMQR  
 QWAGLVEKVQAAVGTSAAPVPSDNH

<b>Molecular Mass</b>	35 kDa
<b>Bio-activity</b>	ELISA binding
<b>Endotoxin</b>	< 1 EU/μg
<b>Purity</b>	≥ 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

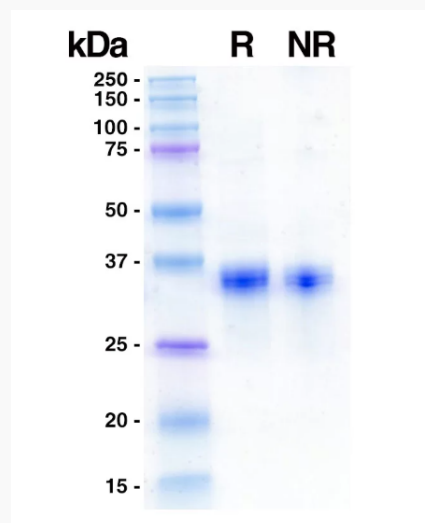
**Gene Name** APOE apolipoprotein E [ Homo sapiens (human) ]

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<b>Official Symbol</b>	<a href="#">APOE</a>
<b>Synonyms</b>	APOE; apolipoprotein E; AD2; LPG; APO-E; ApoE4; LDLCQ5; apolipoprotein E; apolipoprotein E3
<b>Gene ID</b>	<a href="#">348</a>
<b>mRNA Refseq</b>	<a href="#">NM_000041</a>
<b>Protein Refseq</b>	<a href="#">NP_000032</a>
<b>MIM</b>	<a href="#">107741</a>
<b>UniProt ID</b>	<a href="#">P02649</a>

**SDS-PAGE**


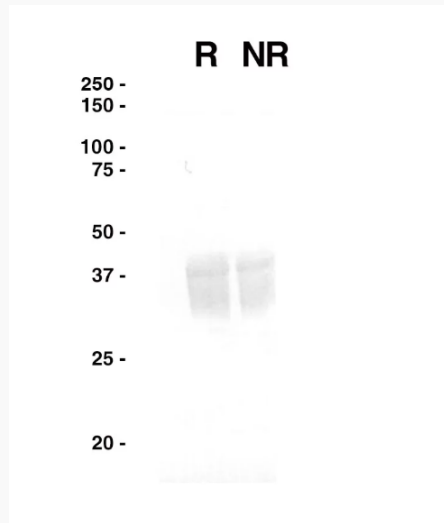
R: 5 µg reduced Recombinant Human ApoE4 NR: 5 µg non-reduced Recombinant Human ApoE4

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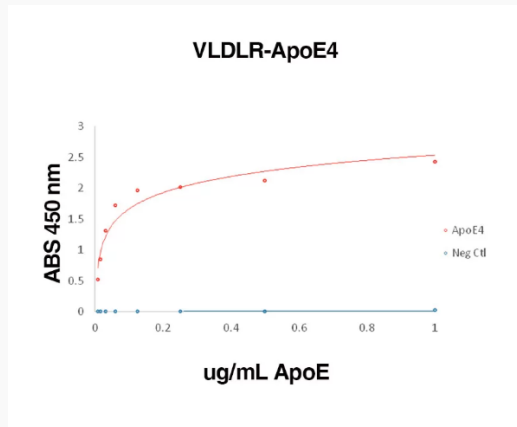
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**WB**



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**



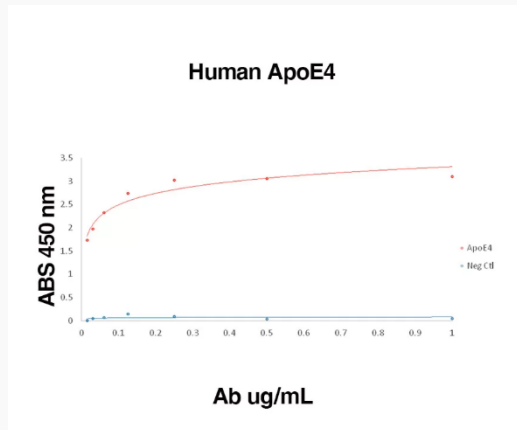
Functional binding of Recombinant Human VLDLR to Recombinant Human ApoE4 Binding was measured by ELISA. Recombinant Human VLDLR was immobilized at 1  $\mu$ g/mL. Recombinant Human ApoE4 protein was titrated. Anti-ApoE antibody was used for detection.

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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  $\mu$ g/mL. Anti-ApoE antibody was titrated.

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