

Rabbit APOE Polyclonal Antibody | anti-APOE antibody

APOE Antibody (C-term)

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA290138	Rabbit	Human, Mouse (Predicted Reactivity: Monkey, Rabbit)	Western Blot, Immunohistochemistry, ELISA

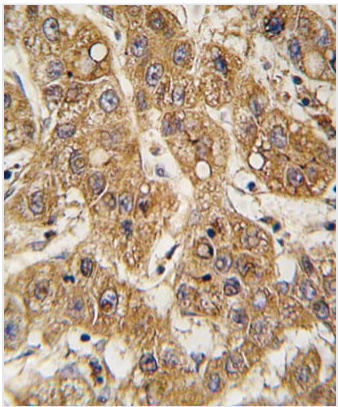
PRODUCT SYNONYMS

APOE; Polyclonal Antibody; APOE Antibody (C-term); Apolipoprotein E; Apo-E; anti-APOE antibody

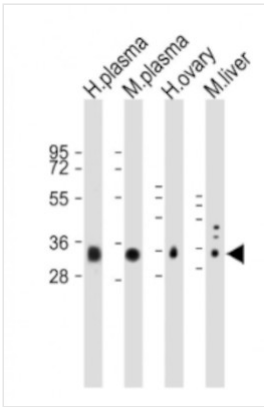
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse (Predicted Reactivity: Monkey, Rabbit)
Clonality	Polyclonal
Isotype	Rabbit Ig
Specificity	This APOE antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 263-292 amino acids from the C-terminal region of human APOE.
Purity/Purification	This antibody is purified through a protein A column, followed by peptide affinity purification.
Form/Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide.
Concentration	Vial Concentration: 0.5 (varies by lot)
Sequence Positions	263-292
Sequence Length	317
Applicable Applications for anti-APOE antibody	WB (Western Blot), IHC (Immunohistochemistry), ELISA

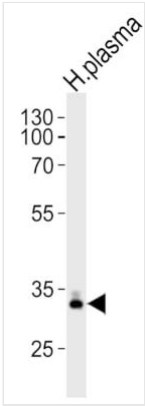
Function	APOE is an apolipoprotein, a protein associating with lipid particles, that mainly unctions in lipoprotein-mediated lipid transport between organs via the plasma and interstitial fluids (PubMed:6860692, PubMed:1911868, PubMed:14754908). APOE is a core component of plasma lipoproteins and is involved in their production, conversion and clearance (PubMed:6860692, PubMed:2762297, PubMed:1911868, PubMed:1917954, PubMed:9395455, PubMed:14754908, PubMed:23620513). Apolipoproteins are amphipathic molecules that interact both with lipids of the lipoprotein particle core and the aqueous environment of the plasma (PubMed:6860692, PubMed:2762297, PubMed:9395455). 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) (PubMed:6860692, PubMed:1911868). 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 (PubMed:2762297, PubMed:1917954, PubMed:7768901, PubMed:8939961, PubMed:12950167, PubMed:20030366, PubMed:2063194, PubMed:8756331, PubMed:20303980, PubMed:1530612, PubMed:7635945). Finally, APOE has also a heparin-binding activity and binds heparan- sulfate proteoglycans on the surface of cells, a property that supports the capture and the receptor-mediated uptake of APOE-containing lipoproteins by cells (PubMed:9395455, PubMed:9488694, PubMed:23676495, PubMed:7635945). A main function of APOE is to mediate lipoprotein clearance through the uptake of chylomicrons, VLDLs, and HDLs by hepatocytes (PubMed:1911868, PubMed:1917954, PubMed:9395455, PubMed:23676495, PubMed:29516132). APOE is also involved in the biosynthesis by the liver of VLDLs as well as their uptake by peripheral tissues ensuring the delivery of triglycerides and energy storage in muscle, heart and adipose tissues (PubMed:2762297, PubMed:29516132). By participating in the lipoprotein-mediated distribution of lipids among tissues, APOE plays a critical role in plasma and tissues lipid homeostasis (PubMed:2762297, PubMed:1917954, PubMed:29516132). APOE is also involved in two steps of reverse cholesterol transport, the HDLs-mediated transport of cholesterol from peripheral tissues to the liver, and thereby plays an important role in cholesterol homeostasis (PubMed:9395455, PubMed:14754908, PubMed:23620513). First, it is functionally associated with ABCA1 in the biogenesis of HDLs in tissues (PubMed:14754908, PubMed:23620513). Second, it is enriched in circulating HDLs and mediates their uptake by hepatocytes (PubMed:9395455). APOE also plays an important role in lipid transport in the central nervous system, regulating neuron survival and sprouting (PubMed:8939961, PubMed:25173806). APOE is also involved in innate and adaptive immune responses, controlling for instance the survival of myeloid-derived suppressor cells (By similarity). APOE, may also play a role in transcription regulation through a receptor-dependent and cholesterol-independent mechanism, that activates MAP3K12 and a non-canonical MAPK signal transduction pathway that results in enhanced AP-1-mediated transcription of APP (PubMed:28111074).
Cellular Location	Secreted. Secreted, extracellular space. Secreted, extracellular space, extracellular matrix Note=In the plasma, APOE is associated with chylomicrons, chylomicrons remnants, VLDL, LDL and HDL lipoproteins (PubMed:1911868, PubMed:8340399). Lipid poor oligomeric APOE is associated with the extracellular matrix in a calcium- and heparan-sulfate proteoglycans- dependent manner (PubMed:9488694). Lipidation induces the release from the extracellular matrix (PubMed:9488694).
Tissue Location	Produced by several tissues and cell types and mainly found associated with lipid particles in the plasma, the interstitial fluid and lymph (PubMed:25173806). Mainly synthesized by liver hepatocytes (PubMed:25173806). Significant quantities are also produced in brain, mainly by astrocytes and glial cells in the cerebral cortex, but also by neurons in frontal cortex and hippocampus (PubMed:3115992, PubMed:10027417). It is also expressed by cells of the peripheral nervous system (PubMed:10027417, PubMed:25173806). Also expressed by adrenal gland, testis, ovary, skin, kidney, spleen and adipose tissue and macrophages in various tissues (PubMed:25173806)
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 2 weeks. For long term storage store at -20 degree C in small aliquots to prevent freeze-thaw cycles.



IHC (Immunohistochemisry)
Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted with APOE antibody (C-term) , which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



WB (Western Blot)
All lanes : Anti-APOE Antibody (C-term) at 1:1000 dilution Lane 1: Human plasma lysate Lane 2: Mouse plasma lysate Lane 3: Human ovary lysate Lane 4: Mouse liver lysate Lysates/proteins at 20 ?g per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 36 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



WB (Western Blot)
Western blot analysis of lysate from human plasma tissue lysate, using APOE Antibody (C-term). AAA290138 was diluted at 1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysate at 20ug.

ADDITIONAL INFORMATION

Related Product Information for anti-APOE antibody	Chylomicron remnants and very low density lipoprotein (VLDL) remnants are rapidly removed from the circulation by receptor-mediated endocytosis in the liver. Apolipoprotein E, a main apoprotein of the chylomicron, binds to a specific receptor on liver cells and peripheral cells. ApoE is essential for the normal catabolism of triglyceride-rich lipoprotein constituents. The APOE gene is mapped to chromosome 19 in a cluster with APOC1 and APOC2. Defects in apolipoprotein E result in familial dysbetalipoproteinemia, or type III hyperlipoproteinemia (HLP III),in which increased plasma cholesterol and triglycerides are the consequence of impaired clearance of chylomicron and VLDL remnants.
Product Categories/Family for anti-APOE antibody	Crown Antibodies; Cancer; Cardiovascular; Developmental Biology; Metabolism; Signal Transduction
References	Wood,K.C., Appl Physiol Nutr Metab 33 (4), 761-768 (2008) Pemberton,L., (er) HIV Med. (2008) In press Sundermann,E.E., (er) Horm Behav (2008) In press Christensen,H.,(er) BMC Geriatr 8, 14 (2008)

NCBI AND UNIPROT INFORMATION

NCBI GI #	4557325
NCBI GeneID	348
NCBI Accession #	NP_000032.1

NCBI GenBank Nucleotide #	NM_000041.3
UniProt Accession #	P02649; Q9P2S4; B2RC15; C0JYY5
NCBI Official Full Name	apolipoprotein E isoform b
NCBI Official Synonym Full Names	apolipoprotein E
NCBI Official Symbol	APOE
NCBI Official Synonym Symbols	AD2; LPG; APO-E; LDLCQ5
NCBI Protein Information	apolipoprotein E
UniProt Protein Name	Apolipoprotein E
UniProt Gene Name	APOE
UniProt Synonym Gene Names	Apo-E
UniProt Entry Name	APOE_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/apoe-antibody-western-blot-immunohistochemistry-elisa/290138>