Apolipoprotein E (Apo E) (APO E) ELISA Kit for Rabbit

PRODUCT OVERVIEW

Product Name	Apolipoprotein E (Apo E) (Apo E), ELISA Kit
Full Product Name	Rabbit Apolipoprotein E (Apo E) ELISA Kit
Product Gene Name	Apo E elisa kit
Species Reactivity	Rabbit
Preparation and Storage	Store all reagents at 2-8 degree C.
Molecular Weight	36,154 Da
OMIM	611771
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for Apo E elisa kit	MBS2602464 is a ready-to-use microwell, strip plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the Apolipoprotein E (Apo E) (Apo E) ELISA Kit target analytes in biological samples. The concentration gradients of the kit standards or positive controls render a theoretical kit detection range in biological research samples containing Apo E. The ELISA analytical biochemical technique of the MBS2602464 kit is based on Apo E antibody-Apo E antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect Apo E antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, Apo E. Appropriate sample types may include undiluted body fluids and/or tissue homogenates, secretions. Quality control assays assessing reproducibility identified the intra-assay CV (%) and inter-assay CV(%).
Other Notes	Small volumes of Apo E elisa kit vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for Apo E. It may not necessarily be applicable to this product.

NCBI GI #	4557325
NCBI GeneID	348
NCBI Accession #	NP_000032.1
UniProt Secondary Accession #	Q9P2S4; B2RC15; C0JYY5
UniProt Related Accession #	P02649
GenBank Nucleotide #	NM_000041.2
NCBI Official Full Name	apolipoprotein E
NCBI Official Synonym Full Names	apolipoprotein E
NCBI Official Symbol	APOE
NCBI Official Synonym Symbols	AD2; LPG; LDLCQ5
UniProt Protein Name	Apolipoprotein E
Protein Family	Apolipoprotein
UniProt Gene Name	APOE
UniProt Synonym Gene Names	Apo-E

UniProt Entry Name	APOE_HUMAN
NCBI Protein Information	apolipoprotein E; apo-E; apolipoprotein E3
NCBI Summary for Apo E	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. [provided by RefSeq, Jul 2008]

UniProt Comments for Apo E	APOE: 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. Defects in APOE are a cause of hyperlipoproteinemia type 3 (HLPP3); 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). 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. 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); 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). 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. Belongs to the apolipoprotein A1/A4/E family. Protein type: Secreted; Secreted, signal peptide; Lipid-binding Chromosomal Location of Human Ortholog: 19q13.2 Cellular Component: Golgi apparatus; microtubule; extracellular space; lysosome; endoplasmic reticulum; early endosome; dendrite; extracellular region; nuclear envelope; extracellular matrix; chylomicron; extrinsic to external side of plasma membrane; membrane; cell soma; late endosome; cytoplasm; plasma membrane; nucleus; vesicle Molecular Function: heparin binding; lipid transporter activity; identical protein binding; protein homodimerization activity; metal chelating activity; beta-amyloid binding; cholesterol binding; antioxidant activity; protein binding; low-density lipoprotein receptor binding; hydroxyapatite binding; cholesterol transporter activity; phospholipid binding; lipid binding; tau protein binding Biological Process: lipoprotein catabolic process; phototransduction, visible light; negative regulation of MAP kinase activity; cGMP-mediated signaling; positive regulation of axon extension; axon regeneration in the peripheral nervous system; positive regulation of membrane protein ectodomain proteolysis; synaptic transmission, cholinergic; intracellular transport; triacylglycerol catabolic process; oligodendrocyte differentiation; negative regulation of neuron apoptosis; cholesterol catabolic process; long-chain fatty acid transport; cholesterol metabolic process; regulation of Cdc42 protein signal transduction; positive regulation of nitric-oxide synthase activity; negative regulation of blood coagulation; lipoprotein metabolic process; positive regulation of lipid biosynthetic process; regulation of axon extension; negative regulation of blood vessel endothelial cell migration; maintenance of cellular localization; cholesterol homeostasis; response to reactive oxygen species; response to ethanol; positive regulation of cGMP biosynthetic process; regulation of gene expression; lipoprotein biosynthetic process; negative regulation of endothelial cell proliferation; protein import; nitric oxide mediated signal transduction; regulation of neuronal synaptic plasticity; response to dietary excess; vasodilation; response to insulin stimulus; positive regulation of low-density lipoprotein receptor catabolic process; phospholipid efflux; retinoid metabolic process; negative regulation of cholesterol biosynthetic process; aging; receptor-mediated endocytosis; response to retinoic acid; negative regulation of lipid biosynthetic process; neurite regeneration; cytoskeleton organization and biogenesis; cholesterol efflux; cellular calcium ion homeostasis; G-protein coupled receptor protein signaling pathway; reverse cholesterol transport; triacylglycerol metabolic process; fatty acid homeostasis; negative regulation of inflammatory response; artery morphogenesis Disease: Macular Degeneration, Age-related, 1; Alzheimer Disease 2; Alzheimer Disease 4; Lipoprotein Glomerulopathy; Sea-blue Histiocyte Disease

Research Articles on Apo E	**1.** Study demonstrates that the apoE-epsilon4 polymorphism is a strong independent risk factor for cognitive dysfunction at 1 month and as early as 1 day post-carotid endarterectomy
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