Apolipoprotein E (APOE) Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	Apolipoprotein E (APOE), Polyclonal Antibody
Full Product Name	Cy3-Linked Polyclonal Antibody to Apolipoprotein E (APOE)
Product Gene Name	anti-APOE antibody
Product Synonym Names	Apo-E; AD2; Apoprotein; Alzheimer Disease 2 (E4-Associated, Late Onset
Clonality	Polyclonal
Host	Rabbit
Species Reactivity	Mouse, Rat
Concentration	>=100ug/ml (lot specific)
Matching Pairs	Unconjugated Antibody: APOE (MBS2004235) Cy3 Conjugated Antibody: APOE (MBS2046351)
Matching Pairs	Cy3 Conjugated Antibody: APOE (MBS2046351) Immunogen: APOE (MBS2010338)
Molecular Weight	36,154 Da
OMIM	M12529 mRNA
3D Structure	ModBase 3D Structure for P02649
Supply Chain Verification	Manufactured in a lab with traceable raw materials. Bulk orders can typically be prepared to the customer's specifications, please inquire.
Immunogen	APOE (Glu19~Arg168)
Conjugation	Cy3
Cross Reactivity	Mouse, Rat
Unconjugated Antibody	The unconjugated antibody version of this item is also available as catalog #MBS2004235
ISO Certification	Manufactured in an ISO 9001:2015 and ISO 13485:2016 Certified Laboratory.
Applications Tested/Suitable for anti-APOE antibody	Western Blot (WB), Immunocytochemistry (ICC), Immunohistochemistry (IHC) Formalin/Paraffin, ELISA (ELISA)
Related Product Information for anti-APOE antibody	MBS2046351 is an antibody targeting APOE. Also known as Cy3-Linked Polyclonal Antibody to Apolipoprotein E (APOE). Reactive in Mouse, Rat. Host: Rabbit.
Other Notes	Small volumes of anti-APOE antibody 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 APOE. It may not necessarily be applicable to this product.

NCBI GI #	705044152
NCBI GeneID	348
NCBI Accession #	NP_001289620.1

UniProt Primary Accession #	P02649
UniProt Secondary Accession #	Q9P2S4; B2RC15; C0JYY5
UniProt Related Accession #	P02649
GenBank Nucleotide #	NM_001302691.1
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; ApoE4; LDLCQ5
UniProt Protein Name	Apolipoprotein E
Protein Family	Apolipoprotein
UniProt Gene Name	APOE
UniProt Synonym Gene Names	Apo-E
NCBI Protein Information	apolipoprotein E
NCBI Summary for APOE	The protein encoded by this gene is a major apoprotein of the chylomicron. It binds to a specific liver and peripheral cell receptor, and is essential for the normal catabolism of triglyceride-rich lipoprotein constituents. This gene maps to chromosome 19 in a cluster with the related apolipoprotein C1 and C2 genes. Mutations in this gene 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, Jun 2016]

UniProt Comments for APOE	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: Lipid-binding; Secreted; Secreted, signal peptide Chromosomal Location of Human Ortholog: 19q13.32 Cellular Component: chylomicron; cytoplasm; early endosome; endoplasmic reticulum; extracellular matrix; extracellular region; extracellular space; Golgi apparatus; membrane; nucleus; plasma membrane Molecular Function: antioxidant activity; beta-amyloid binding; cholesterol binding; cholesterol transporter activity; heparin binding; identical protein binding; lipid binding; lipid transporter activity; low-density lipoprotein receptor binding; metal chelating activity; phospholipid binding; protein binding; protein homodimerization activity; tau protein binding Biological Process: cGMP-mediated signaling; cholesterol catabolic process; cholesterol efflux; cholesterol homeostasis; cholesterol metabolic process; cytoskeleton organization and biogenesis; fatty acid homeostasis; G-protein coupled receptor protein signaling pathway; intracellular transport; lipoprotein catabolic process; lipoprotein metabolic process; long-chain fatty acid transport; negative regulation of blood coagulation; negative regulation of blood vessel endothelial cell migration; negative regulation of cholesterol biosynthetic process; negative regulation of endothelial cell proliferation; negative regulation of inflammatory response; negative regulation of MAP kinase activity; negative regulation of neuron apoptosis; neurite regeneration; nitric oxide mediated signal transduction; phospholipid efflux; positive regulation of cGMP biosynthetic process; positive regulation of lipid biosynthetic process; positive regulation of low-density lipoprotein receptor catabolic process; positive regulation of membrane protein ectodomain proteolysis; positive regulation of nitric-oxide synthase activity; protein import; receptor-mediated endocytosis; regulation of axon extension; regulation of Cdc42 protein signal transduction; regulation of neuronal synaptic plasticity; retinoid metabolic process; reverse cholesterol transport; synaptic transmission, cholinergic; triacylglycerol catabolic process; triacylglycerol metabolic process; virus assembly Disease: Alzheimer Disease 2; Alzheimer Disease 4; Lipoprotein Glomerulopathy; Macular Degeneration, Age-related, 1; Sea-blue Histiocyte Disease
Research Articles on APOE	**1.** LDLR A(+)A(+) genotype, ApoB X(+) allele and ApoE E4 allele increased the risk of premature coronary artery disease by 1.8, 2.1 and 12.1 respectively.

Precautions	All of MyBioSource's Products are for scientific laboratory research purposes and are not for diagnostic, therapeutics, prophylactic or in vivo use. Through your purchase, you expressly represent and warrant to MyBioSource that you will properly test and use any Products purchased from MyBioSource in accordance with industry standards. MyBioSource and its authorized distributors reserve the right to refuse to process any order where we reasonably believe that the intended use will fall outside of our acceptable guidelines.
Disclaimer	While every efforts were made to ensure the accuracy of the information provided in this datasheet, MyBioSource will not be liable for any omissions or errors contained herein. MyBioSource reserves the right to make changes to this datasheet at any time without prior notice. It is the responsibility of the customer to report product performance issues to MyBioSource within 30 days of receipt of the product. Please visit our Terms & Conditions page for more information.
Product Note	Select online data sheet information is drawn from bioinformatics databases, occasionally resulting in ambiguous or non-relevant product information. It is the responsibility of the customer to review, verify, and evaluate the information to make sure it matches their requirements before purchasing the kit. Our ELISA Kit assays are dynamic research tools and sometimes they may be updated and improved. If the format of this assay is important to you then please request the current manual or contact our technical support team with a presales inquiry before placing an order. We will confirm the current details of the assay. We cannot guarantee the sample manual posted online is the most current manual, it is intended to serve as an example only. Please refer to the instructions For Use provided with the assay kit for precise details.

For Research Use Only. Not for use in diagnostic or therapeutic procedures.

MyBioSource | Tel: +1.858.633.0165 | Fax: +1.858.633.0166 | mybiosource.com/contact-us
Online datasheet: https://www.mybiosource.com/polyclonal-mouse-rat-antibody/apolipoprotein-e-apoe/2046351