

## Purified anti-Apo E, 109-116 Antibody

<b>Catalog# / Size</b>	852701 / 25 µg 852702 / 100 µg
<b>Clone</b>	A17067B
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	Apolipoprotein E, Alzheimer Disease 2, LDLQC5, LPG, AD2
<b>Isotype</b>	Mouse IgG2b, κ
<b>Description</b>	Apolipoprotein E (Apo E) belongs to a class of apolipoproteins that mediate the binding, internalization, and catabolism of lipoprotein particles. Apo E is produced by the liver and macrophages in peripheral tissues where it regulates cholesterol metabolism. In the central nervous system, Apo E is primarily produced by astrocytes and plays an important role in transporting cholesterol to neurons via Apo E receptors. Apo E has three alleles (ApoE2, ApoE3 and ApoE4) that differ from each other by only one or two amino acids at positions 112 and 158. ApoE 4 is one of the largest known genetic risk factors for late-onset Alzheimer's disease. Furthermore, Apo E is associated with cardiovascular disease, Lipoprotein Glomerulopathy and Sea-Blue Histiocyte Disease.

### Product Details

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<b>Verified Reactivity</b>	Human
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
<b>Preparation</b>	The antibody was purified by affinity chromatography.
<b>Concentration</b>	0.5 mg/ml
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C.
<b>Application</b>	<a href="#">WB - Quality tested</a> <a href="#">Direct ELISA - Verified</a>
<b>Recommended Usage</b>	Each lot of this antibody is quality control tested by <a href="#">Western blotting</a> . For Western blotting, the suggested use of this reagent is 0.2 - 1.0 µg per ml. For Direct ELISA applications, a concentration range of 0.004 - 0.4 µg/mL is recommended. It is recommended that the reagent be titrated for optimal performance for each application.
<b>Application References</b> (PubMed link indicates BioLegend citation)	<ol style="list-style-type: none"><li>1. Mahley RW. 2016. <i>Arterioscler Thromb Vasc Biol.</i> 36: 1305-1315.</li><li>2. Riedel BC, <i>et al.</i> 2016. <i>J Steroid Biochem Mol Biol.</i> 160:134-47.</li><li>3. Tai LM, <i>et al.</i> 2016. <i>Acta Neuropathol.</i> 131(5):709-23.</li><li>4. Kim J, <i>et al.</i> 2014. <i>Mol. Cells.</i> 37:767</li><li>5. Holtzman DM, <i>et al.</i> 2012. <i>Cold Spring Harb. Perspect. Med.</i> 2:a006312</li></ol>
<b>RRID</b>	AB_2728597 (BioLegend Cat. No. 852701) AB_2728598 (BioLegend Cat. No. 852702)

### Antigen Details

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<b>Structure</b>	Human APO E is a 299 amino acid protein with a molecular mass of 32 kD, and exists as 3 major isoforms, APO E2, APO E3, and APO E4.
<b>Distribution</b>	Tissue sources: Ubiquitously expressed. Highest levels in liver, brain, spleen, adrenal gland, and kidney.

Cellular distribution: Plasma membrane, nucleus, endoplasmic reticulum, golgi apparatus, endosome, and extracellular.

<b>Function</b>	Apo E is involved in lipoprotein metabolism as well as the transport of fat-soluble vitamins, and cholesterol. Apo E also forms complexes with amyloid beta peptides leading to its uptake and degradation by microglia.
<b>Interaction</b>	Tau, amyloid beta
<b>Ligand/Receptor</b>	LDL receptor, SORL1
<b>Biology Area</b>	Cell Biology, Neurodegeneration, Neuroscience, Protein Misfolding and Aggregation
<b>Molecular Family</b>	Apolipoproteins
<b>Antigen References</b>	<ol style="list-style-type: none"><li>1. Mahley RW. 2016. <i>Arterioscler Thromb Vasc Biol.</i> 36: 1305-1315.</li><li>2. Riedel BC, et al. 2016. <i>J Steroid Biochem Mol Biol.</i> 160:134-47.</li><li>3. Tai LM, et al. 2016. <i>Acta Neuropathol.</i> 131(5):709-23.</li><li>4. Kim J, et al. 2014. <i>Mol. Cells.</i> 37:767</li><li>5. Holtzman DM, et al. 2012. <i>Cold Spring Harb. Perspect. Med.</i> 2:a006312</li></ol>

Gene ID [348](#)

## Related Protocols

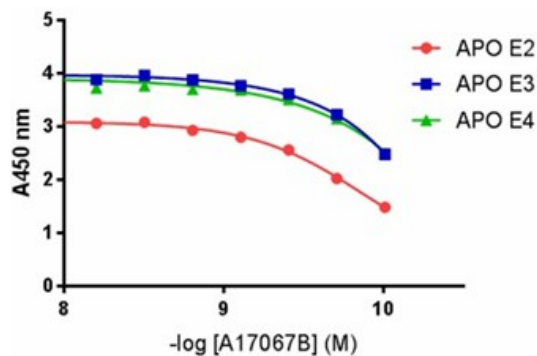
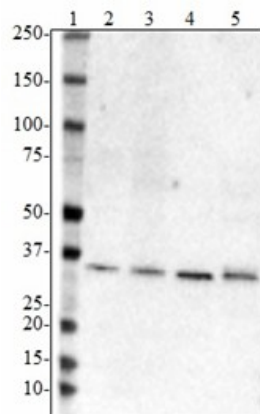
[Western Blotting Protocol](#)

[Sandwich ELISA Protocol](#)

## Other Formats

Purified anti-Apo E, 109-116

## Product Data



Western blot of purified anti-APO E, 109-116 antibody (clone A17067B). Lane 1: Molecular weight marker; Lane 2: 50 ng of recombinant human Apo E2; Lane 3: 50 ng of recombinant human Apo E3; Lane 4: 50 ng of recombinant human Apo E4; Lane 5: 16 µg of human plasma. The blot was incubated with 0.2 µg/mL of the primary antibody overnight at 4°C, followed by incubation with HRP-labeled goat anti-mouse IgG (Cat. No. 405306). Enhanced chemiluminescence (Cat. No. 426302) was used as the detection system.

Direct ELISA of purified anti-APO E, 109-116 antibody (clone A17067B) binding to plate-immobilized recombinant human APO E2, APO E3, and APO E4. ELISA was performed by coating wells with 100 ng of APO E proteins. The wells were then incubated with the primary antibody at 37°C for 45 minutes, followed by incubation with horseradish peroxidase labeled goat anti-mouse secondary antibody. TMB (3, 3', 5, 5' tetramethylbenzidine, Cat. No. 421501) was used as the detection system.

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