

Purified anti-Apo E, 109-116 Antibody

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| Catalog# / Size | 852701 / 25 µg 852702 / 100 µg |
| Clone | A17067B |
| Regulatory Status | RUO |
| Other Names | Apolipoprotein E, Alzheimer Disease 2, LDLQC5, LPG, AD2 |
| Isotype | Mouse IgG2b, κ |
| Description | 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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| Verified Reactivity | Human |
| Antibody Type | Monoclonal |
| Host Species | Mouse |
| Formulation | Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide. |
| Preparation | The antibody was purified by affinity chromatography. |
| Concentration | 0.5 mg/ml |
| Storage & Handling | The antibody solution should be stored undiluted between 2°C and 8°C. |
| Application | WB - Quality tested Direct ELISA - Verified |
| Recommended Usage | Each lot of this antibody is quality control tested by Western blotting . 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. |
| Application References (PubMed link indicates BioLegend citation) | <ol style="list-style-type: none">1. Mahley RW. 2016. <i>Arterioscler Thromb Vasc Biol.</i> 36: 1305-1315.2. Riedel BC, et al. 2016. <i>J Steroid Biochem Mol Biol.</i> 160:134-47.3. Tai LM, et al. 2016. <i>Acta Neuropathol.</i> 131(5):709-23.4. Kim J, et al. 2014. <i>Mol. Cells.</i> 37:7675. Holtzman DM, et al. 2012. <i>Cold Spring Harb. Perspect. Med.</i> 2:a006312 |
| RRID | AB_2728597 (BioLegend Cat. No. 852701) AB_2728598 (BioLegend Cat. No. 852702) |

Antigen Details

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| Structure | 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. |
| Distribution | 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.

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| Function | 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. |
| Interaction | Tau, amyloid beta |
| Ligand/Receptor | LDL receptor, SORL1 |
| Biology Area | Cell Biology, Neurodegeneration, Neuroscience, Protein Misfolding and Aggregation |
| Molecular Family | Apolipoproteins |
| Antigen References | <ol style="list-style-type: none">1. Mahley RW. 2016. <i>Arterioscler Thromb Vasc Biol.</i> 36: 1305-1315.2. Riedel BC, et al. 2016. <i>J Steroid Biochem Mol Biol.</i> 160:134-47.3. Tai LM, et al. 2016. <i>Acta Neuropathol.</i> 131(5):709-23.4. Kim J, et al. 2014. <i>Mol. Cells.</i> 37:7675. Holtzman DM, et al. 2012. <i>Cold Spring Harb. Perspect. Med.</i> 2:a006312 |

Gene ID [348](#)

Related Protocols

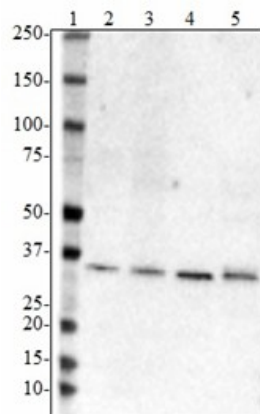
[Western Blotting Protocol](#)

[Sandwich ELISA Protocol](#)

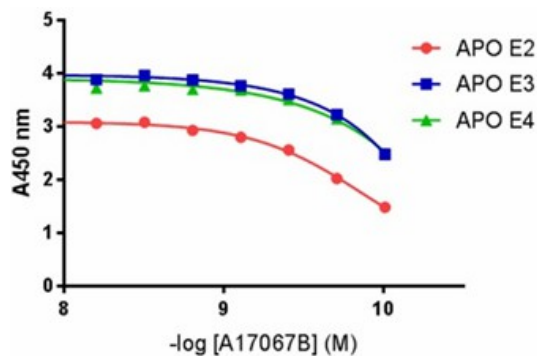
Other Formats

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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