

BACKGROUND

Apolipoprotein-E (apoE) is a protein component of plasma lipoproteins that mediates the binding, internalization and catabolism of lipoprotein particles. It can serve as a ligand for several lipoprotein receptors, including the LDL (apoB/E) receptor and the hepatic apoE (chylomicron remnant) receptor. apoE is produced in most organs and occurs in all plasma lipoprotein fractions, constituting 10-20% of VLDL (very low density lipoprotein) and 1-2% of HDL (high density lipoprotein). Three major isoforms of apoE have been described in human (E2, E3 and E4) which differ by only one or two amino acids. Estrogen receptor has been shown to upregulate apoE gene expression via the ER α -mediated pathway, indicating a potential role for apoE in atherosclerosis. This is consistent with studies in mice in which plasma apoE levels were raised, thereby protecting the mice from diet-induced atherosclerosis. apoE has also been shown to be a potent inhibitor of proliferation and thus may play a role in angiogenesis, tumor cell growth and metastasis.

CHROMOSOMAL LOCATION

Genetic locus: APOE (human) mapping to 19q13.32; ApoE (mouse) mapping to 7 A3.

SOURCE

apoE (F-9) is a mouse monoclonal antibody raised against amino acids 31-253 mapping within an internal region of apoE of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

apoE (F-9) is available conjugated to agarose (sc-390925 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390925 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390925 PE), fluorescein (sc-390925 FITC), Alexa Fluor[®] 488 (sc-390925 AF488), Alexa Fluor[®] 546 (sc-390925 AF546), Alexa Fluor[®] 594 (sc-390925 AF594) or Alexa Fluor[®] 647 (sc-390925 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-390925 AF680) or Alexa Fluor[®] 790 (sc-390925 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

apoE (F-9) is recommended for detection of apoE of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

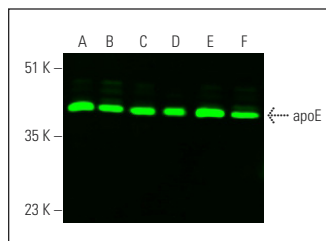
Suitable for use as control antibody for apoE siRNA (h): sc-29708, apoE siRNA (m): sc-29709, apoE shRNA Plasmid (h): sc-29708-SH, apoE shRNA Plasmid (m): sc-29709-SH, apoE shRNA (h) Lentiviral Particles: sc-29708-V and apoE shRNA (m) Lentiviral Particles: sc-29709-V.

Molecular Weight of apoE: 36 kDa.

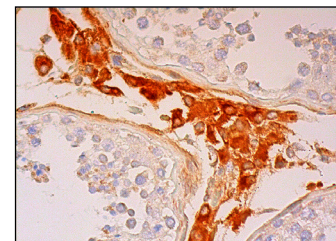
Positive Controls: Hep G2 cell lysate: sc-2227.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA

apoE (F-9): sc-390925. Near-infrared western blot analysis of apoE expression in Hep G2 (A), SK-N-MC (B), Caki-1 (C), EOC 20 (D), K-562 (E) and HEK293T (F) whole cell lysates. Blocked with UltraCruz[®] Blocking Reagent: sc-516214. Detection reagent used: m-IgG κ BP-CFL 680: sc-516180.



apoE (F-9): sc-390925. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic staining of Leydig cells.

SELECT PRODUCT CITATIONS

- Di Meco, A., et al. 2019. Gestational high fat diet protects 3xTg offspring from memory impairments, synaptic dysfunction, and brain pathology. *Mol. Psychiatry*. E-published.
- Brennan, K., et al. 2020. A comparison of methods for the isolation and separation of extracellular vesicles from protein and lipid particles in human serum. *Sci. Rep.* 10: 1039.
- Zhang, J., et al. 2020. Glutamate affects cholesterol homeostasis within the brain via the up-regulation of CYP46A1 and apoE. *Toxicology* 432: 152381.
- Chikazawa, M., et al. 2020. Glycolaldehyde is an endogenous source of lysine N-pyrrolation. *J. Biol. Chem.* 295: 7697-7709.
- Federico, A., et al. 2020. Mithramycin A and mithralog EC-8042 inhibit SETDB1 expression and its oncogenic activity in malignant melanoma. *Mol. Ther. Oncolytics* 18: 83-99.
- Sobue, A., et al. 2021. Microglial gene signature reveals loss of homeostatic microglia associated with neurodegeneration of Alzheimer's disease. *Acta Neuropathol. Commun.* 9: 1.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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