SANTA CRUZ BIOTECHNOLOGY, INC.

apoE (F-9): sc-390925

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 ERα-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 µg 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 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390925 HRP), 200 µg/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 µg/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 µg/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 µg per 100-500 µg 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.

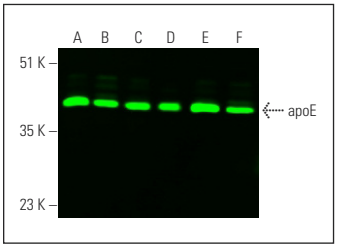
Molecular Weight of apoE: 36 kDa.

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

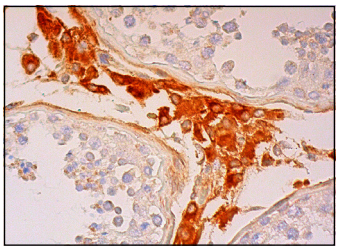
STORAGE

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-IgGκ 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

1. Chikazawa, M., et al. 2020. Glycolaldehyde is an endogenous source of lysine N-pyrrolation. J. Biol. Chem. 295: 7697-7709.
2. 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.
3. Mifflin, L., et al. 2021. A RIPK1-regulated inflammatory microglial state in amyotrophic lateral sclerosis. Proc. Natl. Acad. Sci. USA 118: e2025102118.
4. Isogawa, K., et al. 2021. Thioxothiazolidin derivative, 4-OST, inhibits melanogenesis by enhancing the specific recruitment of tyrosinase-containing vesicles to lysosome. J. Cell. Biochem. 122: 667-678.
5. Chand, S., et al. 2021. A comprehensive study to delineate the role of an extracellular vesicle-associated microRNA-29a in chronic methamphetamine use disorder. J. Extracell. Vesicles 10: e12177.
6. Singh, N., et al. 2022. Targeted BACE-1 inhibition in microglia enhances amyloid clearance and improved cognitive performance. Sci. Adv. 8: eabo3610.
7. Casadei, L., et al. 2022. *In situ* hybridization to detect DNA amplification in extracellular vesicles. J. Extracell. Vesicles 11: e12251.
8. Arnaud, L., et al. 2022. APOE4 drives inflammation in human astrocytes via TAGLN3 repression and NFκB activation. Cell Rep. 40: 111200.
9. Khandelwal, M., et al. 2022. AdipoRon induces AMPK activation and ameliorates Alzheimer's like pathologies and associated cognitive impairment in APP/PS1 mice. Neurobiol. Dis. 174: 105876.

RESEARCH USE

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