SANTA CRUZ BIOTECHNOLOGY, INC.

apoE (M-293): sc-98574

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 one to 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.

REFERENCES

1. Mahley, R.W. 1988. Apolipoprotein E: cholesterol transport protein with expanding role in cell biology. Science 240: 622-630.
2. Shimano, H., et al. 1992. Overexpression of apolipoprotein E in transgenic mice: marked reduction in plasma lipoproteins except high density lipoprotein and resistance against diet-induced hypercholesterolemia. Proc. Natl. Acad. Sci. USA 89: 1750-1754.

CHROMOSOMAL LOCATION

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

SOURCE

apoE (M-293) is a rabbit polyclonal antibody raised against amino acids 19-311 mapping at the C-terminus of apoE of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

apoE (M-293) is recommended for detection of apoE of mouse, rat and, to a lesser extent, human origin by Western Blotting (starting dilution 1:200, 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.

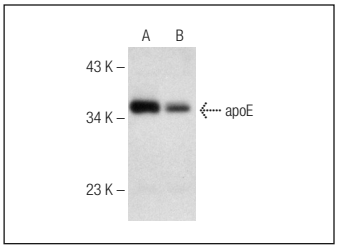
Molecular Weight for apoE: 36 kDa.

Positive Controls: mouse liver extract: sc-2256 or rat liver extract: sc-2395.

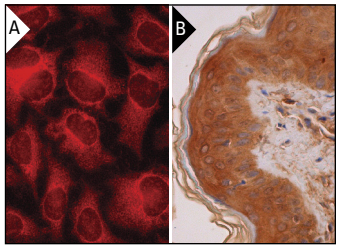
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



apoE (M-293): sc-98574. Western blot analysis of apoE expression in SK-N-MC (**A**) and Caki-1 (**B**) whole cell lysates.



apoE (M-293): sc-98574. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic staining of epidermal cells, keratinocytes and Islets of Langerhans (**B**).

SELECT PRODUCT CITATIONS

1. Yang, J., et al. 2011. Blocking the apolipoprotein E/amyloid-β interaction reduces fibrillar vascular amyloid deposition and cerebral microhemorrhages in TgSwDI mice. J. Alzheimers Dis. 24: 269-285.
2. Nunes, A.F., et al. 2012. TUDCA, a bile acid, attenuates amyloid precursor protein processing and amyloid-α deposition in APP/PS1 mice. Mol. Neurobiol. 45: 440-454.
3. Simões, A.E., et al. 2013. Efficient recovery of proteins from multiple source samples after TRIzol® or TRIzol®LS RNA extraction and long-term storage. BMC Genomics 14: 181.
4. Moutinho, M., et al. 2015. Cholesterol 24S-hydroxylase overexpression inhibits the liver X receptor (LXR) pathway by activating small guanosine triphosphate-binding proteins (sGTPases) in neuronal cells. Mol. Neurobiol. 51: 1489-1503.

STORAGE

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

RESEARCH USE

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