

apoE (H-4): sc-393774



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 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.

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.
3. Vogel, T., et al. 1994. Apolipoprotein E: a potent inhibitor of endothelial and tumor cell proliferation. *J. Cell. Biochem.* 54: 299-308.
4. de Knijff, P., et al. 1994. Genetic heterogeneity of apolipoprotein E and its influence on plasma lipid and lipoprotein levels. *Hum. Mutat.* 4: 178-194.
5. Orth, M., et al. 1996. Clearance of postprandial lipoproteins in normolipemics: role of the apolipoprotein E phenotype. *Biochim. Biophys. Acta* 1303: 22-30.

CHROMOSOMAL LOCATION

Genetic locus: Apoe (mouse) mapping to 7 A3.

SOURCE

apoE (H-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 293-301 at the C-terminus of apoE of rat origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-393774 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

apoE (H-4) is recommended for detection of apoE of mouse and rat 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 (m): sc-29709, apoE shRNA Plasmid (m): sc-29709-SH and apoE shRNA (m) Lentiviral Particles: sc-29709-V.

Molecular Weight of apoE: 36 kDa.

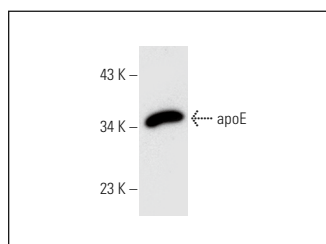
Positive Controls: rat liver extract: sc-2395.

RECOMMENDED SUPPORT REAGENTS

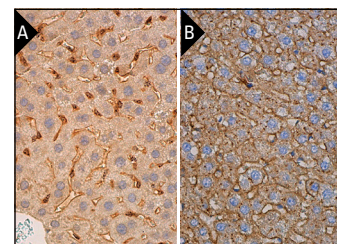
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.
- 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



apoE (H-4): sc-393774. Western blot analysis of apoE expression in rat liver tissue extract.



apoE (H-4): sc-393774. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse liver tissue showing cytoplasmic staining of hepatocytes and cytoplasmic and membrane staining of sinusoidal endothelial cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic and membrane staining of hepatocytes (B).

RESEARCH USE

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



See **apoE (F-9): sc-390925** for apoE antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.