

apoE (R-20): sc-6385



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.

CHROMOSOMAL LOCATION

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

SOURCE

apoE (R-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of apoE of rat origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-6385 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

apoE (R-20) is recommended for detection of apoE of mouse and rat origin by Western Blotting (starting dilution 1:200, 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) 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.

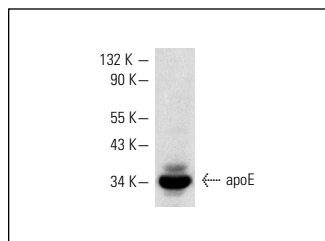
Molecular Weight of apoE: 36 kDa.

Positive Controls: rat liver extract: sc-2395.

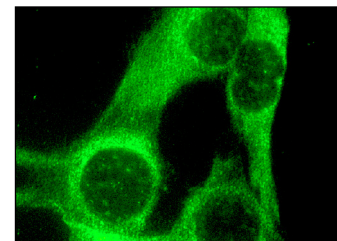
STORAGE

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

DATA



apoE (R-20): sc-6385. Western blot analysis of apoE expression in rat liver tissue extract.



apoE (R-20): sc-6385. Immunofluorescence staining of methanol-fixed BC₃H1 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Holt, T.G., et al. 2005. Biomarker discovery in rat plasma for estrogen receptor- α action. *Electrophoresis* 26: 4486-4494.
2. Iwata, A., et al. 2005. Traumatic brain injury induces biphasic upregulation of ApoE and ApoJ protein in rats. *J. Neurosci. Res.* 82: 103-114.
3. Lu, Y., et al. 2007. A role for LRP4 in neuronal cell viability is related to apoE-binding. *Brain Res.* 1177: 19-28.
4. Sato, K., et al. 2007. Critical role of ABCA1 transporter in sphingosine 1-phosphate release from astrocytes. *J. Neurochem.* 103: 2610-2619.
5. Kirpich, I.A., et al. 2010. Integrated hepatic transcriptome and proteome analysis of mice with high-fat diet-induced nonalcoholic fatty liver disease. *J. Nutr. Biochem.* 22: 38-45.
6. ElAli, A., et al. 2010. Apolipoprotein E controls ATP-binding cassette transporters in the ischemic brain. *Sci. Signal.* 3: ra72.
7. Zhang, L., et al. 2010. Aging-related atherosclerosis is exacerbated by arterial expression of tumor necrosis factor receptor-1: evidence from mouse models and human association studies. *Hum. Mol. Genet.* 19: 2754-2766.

RESEARCH USE

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

PROTOCOLS

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



Try **apoE (F-9): sc-390925** or **apoE (H-4): sc-393774**, our highly recommended monoclonal alternatives to apoE (R-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **apoE (F-9): sc-390925**.