SANTA CRUZ BIOTECHNOLOGY, INC.

apoE (E-8): sc-393302

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 ERa-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.

SOURCE

apoE (E-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 293-318 near the C-terminus of apoE of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

apoE (E-8) is available conjugated to agarose (sc-393302 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393302 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393302 PE), fluorescein (sc-393302 FITC), Alexa Fluor® 488 (sc-393302 AF488), Alexa Fluor® 546 (sc-393302 AF546), Alexa Fluor® 594 (sc-393302 AF594) or Alexa Fluor® 647 (sc-393302 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393302 AF680) or Alexa Fluor® 790 (sc-393302 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, apoE (E-8) is available conjugated to biotin (sc-393302 B), 200 µg/ml, for WB, IHC(P) and ELISA.

Blocking peptide available for competition studies, sc-393302 P, (100 µg 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.

PROTOCOLS

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

APPLICATIONS

apoE (E-8) is recommended for detection of precursor and mature apoE of 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) 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 shRNA Plasmid (h): sc-29708-SH and apoE shRNA (h) Lentiviral Particles: sc-29708-V.

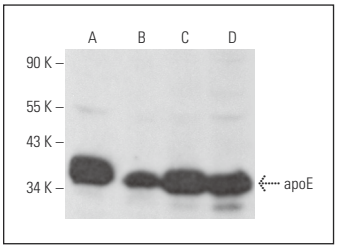
Molecular Weight of apoE: 36 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, human brain extract: sc-364375 or human kidney extract: sc-363764.

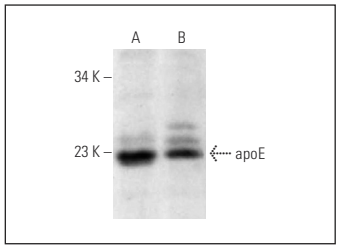
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



apoE (E-8): sc-393302. Western blot analysis of apoE expression in Hep G2 whole cell lysate (**A**) and human brain (**B**), human fetal liver (**C**) and human kidney (**D**) tissue extracts.



apoE (E-8) HRP: sc-393302 HRP. Direct western blot analysis of apoE expression in Hep G2 (**A**) and Caco-2 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Muñoz, S.S., et al. 2018. The serine protease HtrA1 contributes to the formation of an extracellular 25-kDa apolipoprotein E fragment that stimulates neuritogenesis. J. Biol. Chem. 293: 4071-4084.
2. Mouchard, A., et al. 2019. ApoE-fragment/Aβ heteromers in the brain of patients with Alzheimer's disease. Sci. Rep. 9: 3989.

RESEARCH USE

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