SANTA CRUZ BIOTECHNOLOGY, INC.

apoD (C-1): sc-373965

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Lipids, such as phospholipids, triacylglycerols and cholesterol, are weakly soluble in aqueous solution and therefore are transported by circulation as components of lipoproteins. Lipoproteins are globular particles that consist of a non-polar core of triacylglycerols and cholesteryl esters surrounded by phospholipid, cholesterol and an amphiphilic coating of protein, known as apolip-oproteins (apo). These complexes allow the dissolution and shuttling of their non-polar lipid components. At least nine different apolipoproteins are distributed in significant amounts in different human lipoproteins. Apolipoprotein D (apoD) is a member of the lipocalin superfamily of transporter proteins that bind small hydrophobic molecules, including arachidonic acid (AA). The ability of apoD to bind AA implicates it in pathways associated with membrane phospholipid signal transduction and metabolism. apoD expression has been shown to correlate both with cell cycle arrest and with prognosis in several types of malignancy, including central nervous system astrocytomas and medulloblastomas.

CHROMOSOMAL LOCATION

Genetic locus: APOD (human) mapping to 3q29.

SOURCE

apoD (C-1) is a mouse monoclonal antibody raised against amino acids 1-189 representing full length apoD of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

apoD (C-1) is available conjugated to agarose (sc-373965 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-373965 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-373965 PE), fluorescein (sc-373965 FITC), Alexa Fluor® 488 (sc-373965 AF488), Alexa Fluor® 546 (sc-373965 AF546), Alexa Fluor® 594 (sc-373965 AF594) or Alexa Fluor® 647 (sc-373965 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-373965 AF680) or Alexa Fluor® 790 (sc-373965 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

apoD (C-1) is recommended for detection of apoD 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), 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 apoD siRNA (h): sc-45518, apoD shRNA Plasmid (h): sc-45518-SH and apoD shRNA (h) Lentiviral Particles: sc-45518-V.

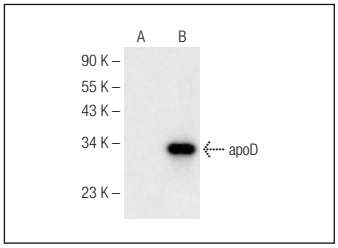
Molecular Weight of apoD: 30 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or human apoD transfected HEK293T whole cell lysate.

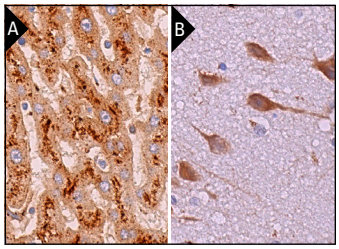
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



apoD (C-1): sc-373965. Western blot analysis of apoD expression in non-transfected (**A**) and human apoD transfected (**B**) HEK293T whole cell lysates.



apoD (C-1): sc-373965. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue showing cytoplasmic staining of neuronal cells (**B**).

SELECT PRODUCT CITATIONS

1. Li, H., et al. 2016. Cerebral apolipoprotein-D is hypoglycosylated compared to peripheral tissues and is variably expressed in mouse and human brain regions. PLoS ONE 11: e0148238.
2. Kielkopf, C.S., et al. 2018. Identification of a novel tetrameric structure for human apolipoprotein-D. J. Struct. Biol. 203: 205-218.
3. Bhatia, S., et al. 2019. Apolipoprotein D upregulation in Alzheimer's disease but not frontotemporal dementia. J. Mol. Neurosci. 67: 125-132.
4. Ma, P., et al. 2023. Promotion effect of TGF-β-Zfp423-ApoD pathway on lip sensory recovery after nerve sacrifice caused by nerve collateral compensation. Int. J. Oral Sci. 15: 23.

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.