SANTA CRUZ BIOTECHNOLOGY, INC.

SREBP-2 (A-12): sc-271616

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The low density lipoprotein (LDL) receptor mediates the endocytic uptake of cholesterol-carrying lipoproteins, thereby controlling cholesterol levels in cells and plasma. Transcription of the LDL receptor gene is controlled by a 10 base pair sequence in the 5' flanking region, designated sterol regulatory element 1 (SRE-1). When cellular sterol stores are depleted, the element is activated, the gene is transcribed and the cellular uptake of LDL increases. A set of SRE-binding proteins (SREBPs) have been identified, including two basic helix-loop-helix-leucine zipper (bHLH-Zip) transcription factors, designated SREBP-1 and SREBP-2. SREBP-1 and SREBP-2 have been shown to have the same specificity for SRE-1 *in vitro* and to activate the transcription of reporter genes containing SRE-1 in the same way.

CHROMOSOMAL LOCATION

Genetic locus: SREBF2 (human) mapping to 22q13.2; Srebf2 (mouse) mapping to 15 E1.

SOURCE

SREBP-2 (A-12) is a mouse monoclonal antibody raised against amino acids 812-975 of SREBP-2 of human origin.

PRODUCT

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

SREBP-2 (A-12) is available conjugated to agarose (sc-271616 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-271616 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271616 PE), fluorescein (sc-271616 FITC), Alexa Fluor® 488 (sc-271616 AF488), Alexa Fluor® 546 (sc-271616 AF546), Alexa Fluor® 594 (sc-271616 AF594) or Alexa Fluor® 647 (sc-271616 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271616 AF680) or Alexa Fluor® 790 (sc-271616 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

SREBP-2 (A-12) is recommended for detection of SREBP-2 of mouse, rat and 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 SREBP-2 siRNA (h): sc-36559, SREBP-2 siRNA (m): sc-36560, SREBP-2 shRNA Plasmid (h): sc-36559-SH, SREBP-2 shRNA Plasmid (m): sc-36560-SH, SREBP-2 shRNA (h) Lentiviral Particles: sc-36559-V and SREBP-2 shRNA (m) Lentiviral Particles: sc-36560-V.

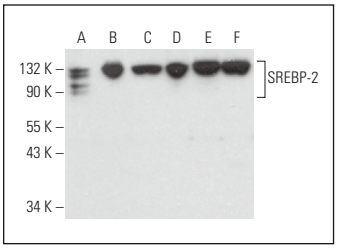
Molecular Weight of SREBP-2: 68/125 kDa.

Positive Controls: Daudi cell lysate: sc-2415, Neuro-2A whole cell lysate: sc-364185 or Ramos cell lysate: sc-2216.

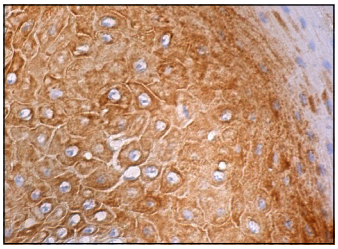
STORAGE

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

DATA



SREBP-2 (A-12): sc-271616. Western blot analysis of SREBP-2 expression in Ramos (**A**), Daudi (**B**), Neuro-2A (**C**), F9 (**D**), IMR-32 (**E**) and THP-1 (**F**) whole cell lysates.



SREBP-2 (A-12): sc-271616. Immunoperoxidase staining of formalin fixed, paraffin-embedded human oral mucosa tissue showing cytoplasmic staining of squamous epithelial cells.

SELECT PRODUCT CITATIONS

1. Serviddio, G., et al. 2016. Effects of dietary fatty acids and cholesterol excess on liver injury: a lipidomic approach. Redox Biol. 9: 296-305.
2. Sitaula, S., et al. 2017. Rev-erb regulation of cholesterologenesis. Biochem. Pharmacol. 131: 68-77.
3. Yu, Q., et al. 2018. Short-term use of atorvastatin affects glucose homeostasis and suppresses the expression of LDL receptors in the pancreas of mice. Mol. Med. Rep. 18: 2780-2788.
4. Hu, S., et al. 2019. Caffeine programs hepatic SIRT1-related cholesterol synthesis and hypercholesterolemia via A2AR/cAMP/PKA pathway in adult male offspring rats. Toxicology 418: 11-21.
5. Hong, C.S., et al. 2020. Increased small extracellular vesicle secretion after chemotherapy via upregulation of cholesterol metabolism in acute myeloid leukaemia. J. Extracell. Vesicles 9: 1800979.
6. Esobi, I.C., et al. 2021. MOVAS cells: a versatile cell line for studying vascular smooth muscle cell cholesterol metabolism. Lipids 56: 413-422.
7. Rebollo-Hernanz, M., et al. 2022. Selected soybean varieties regulate hepatic LDL-cholesterol homeostasis depending on their glycinin: β-conglycinin ratio. Antioxidants 12: 20.
8. Kaysudu, I., et al. 2023. Cholesterol biogenesis is a PTEN-dependent actionable node for the treatment of endocrine therapy-refractory cancers. Cancer Sci. 114: 4365-4375.
9. Zhang, Y., et al. 2024. Exserolide J ameliorates lipid accumulation *in vitro* by regulating liver X receptor α and peroxisome proliferator-activated receptor α proteins. Heliyon 10: e31861.

RESEARCH USE

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