SANTA CRUZ BIOTECHNOLOGY, INC.

SREBP-1 (H-160): sc-8984

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 ten 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 (also designated ADD1, for adipocyte determination and differentiation factor) is synthesized as a precursor that is attached to the nuclear envelope and endoplasmic reticulum. In sterol-depleted cells, the membrane-bound precursor is cleaved to generate a soluble NH_2-terminal fragment that translocates to the nucleus to activate transcription. Sterols inhibit the cleavage of SREBP-1.

CHROMOSOMAL LOCATION

Genetic locus: SREBF1 (human) mapping to 17p11.2; Srebf1 (mouse) mapping to 11 B2.

SOURCE

SREBP-1 (H-160) is a rabbit polyclonal antibody raised against amino acids 41-200 of SREBP-1 of human origin.

PRODUCT

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

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-8984 X, 200 µg/0.1 ml.

APPLICATIONS

SREBP-1 (H-160) is recommended for detection of SREBP-1 p125 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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-1 siRNA (h): sc-36557, SREBP-1 siRNA (m): sc-36558, SREBP-1 shRNA Plasmid (h): sc-36557-SH, SREBP-1 shRNA Plasmid (m): sc-36558-SH, SREBP-1 shRNA (h) Lentiviral Particles: sc-36557-V and SREBP-1 shRNA (m) Lentiviral Particles: sc-36558-V.

SREBP-1 (H-160) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of SREBP-1 p125 precursor: 125 kDa.

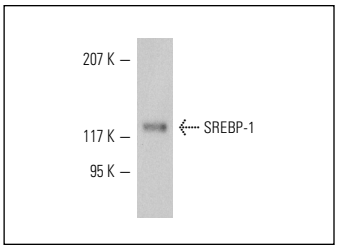
Molecular Weight of mature SREBP-1 p68: 68 kDa.

Positive Controls: Mouse liver extract: sc-2256, HeLa nuclear extract: sc-2120 or NIH/3T3 nuclear extract: sc-2138.

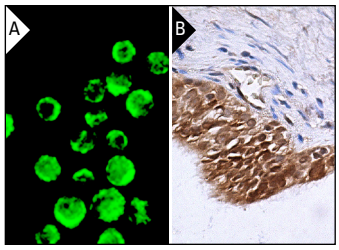
STORAGE

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

DATA



SREBP-1 (H-160): sc-8984. Western blot analysis of SREBP-1 expression in mouse liver tissue extract.



SREBP-1 (H-160): sc-8984. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear and cytoplasmic staining of cells in seminiferous ducts (**B**).

SELECT PRODUCT CITATIONS

1. Travers, M.T., et al. 2001. Promoter I of the ovine acetyl-CoA carboxylase-α gene: an E-box motif at -114 in the proximal promoter binds upstream stimulatory factor (USF)-1 and USF-2 and acts as an Insulin-response sequence in differentiating adipocytes. Biochem. J. 359: 273-284.
2. Fernández-Alvarez, A., et al. 2011. Human SREBP1c expression in liver is directly regulated by peroxisome proliferator-activated receptor α (PPARα). J. Biol. Chem. 286: 21466-21477.
3. Dubuquoy, C., et al. 2011. Distinct regulation of adiponutrin/PNPLA3 gene expression by the transcription factors ChREBP and SREBP1c in mouse and human hepatocytes. J. Hepatol. 55: 145-153.
4. Damiano, F., et al. 2011. Streptozotocin-induced diabetes affects in rat liver citrate carrier gene expression by transcriptional and posttranscriptional mechanisms. Int. J. Biochem. Cell Biol. 43: 1621-1629.
5. Karasawa, T., et al. 2011. Sterol regulatory element-binding protein-1 determines plasma remnant lipoproteins and accelerates atherosclerosis in low-density lipoprotein receptor-deficient mice. Arterioscler. Thromb. Vasc. Biol. 31: 1788-1795.
6. Bertrand, A.T., et al. 2012. DelK32-lamin A/C has abnormal location and induces incomplete tissue maturation and severe metabolic defects leading to premature death. Hum. Mol. Genet. 21: 1037-1048.

RESEARCH USE

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