SANTA CRUZ BIOTECHNOLOGY, INC.

SREBP-1 (K-10): sc-367

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 (K-10) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region 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.

Blocking peptide available for competition studies, sc-367 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-367 X, 200 µg/0.1 ml.

APPLICATIONS

SREBP-1 (K-10) is recommended for detection of SREBP-1 p125 and p68 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 (K-10) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

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

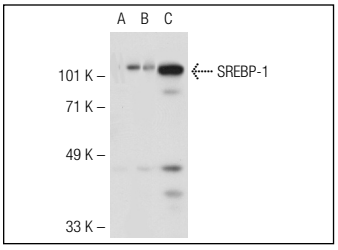
Molecular Weight of mature SREBP-1/p68: 68 kDa.

Positive Controls: SREBP-1 (h): 293T Lysate: sc-116164.

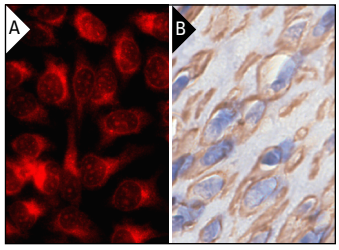
STORAGE

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

DATA



SREBP-1 (K-10): sc-367. Western blot analysis of SREBP-1 expression in non-transfected: sc-117752 (**A**) and human SREBP-1 transfected: sc-116164 (**B**) 293T whole cell lysates and HeLa nuclear extract (**C**).



SREBP-1 (K-10): sc-367. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human ovary showing membrane staining (**B**).

SELECT PRODUCT CITATIONS

1. Boizard, M., et al. 1998. Obesity-related overexpression of fatty-acid synthase gene in adipose tissue involves sterol regulatory element-binding protein transcription factors. J. Biol. Chem. 273: 29164-29171.
2. Béréziat, V., et al. 2011. LMNA mutations induce a non-inflammatory fibrosis and a brown fat-like dystrophy of enlarged cervical adipose tissue. Am. J. Pathol. 179: 2443-2453.
3. 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.
4. Liu, I.M., et al. 2012. Regulation of obesity and lipid disorders by extracts from *Angelica acutiloba* root in high-fat diet-induced obese rats. Phytother. Res. 26: 223-230.
5. Tzeng, T.F., et al. 2012. Vinegar-Baked radix bupleuri regulates lipid disorders via a pathway dependent on peroxisome-proliferator-activated receptor-α in high-fat-diet-induced obese rats. Evid. Based Complement. Alternat. Med. 2012: 827278.
6. Barbieri, M., et al. 2012. Effects of PPARs agonists on cardiac metabolism in littermate and cardiomyocyte-specific PPAR-γ-knockout (CM-PGKO) mice. PLoS ONE 7: e35999.

RESEARCH USE

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

MONOS Satisfaction Guaranteed

Try **SREBP-1 (A-4): sc-365513** or **SREBP-1 (F-10): sc-365514**, our highly recommended monoclonal alternatives to SREBP-1 (K-10). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **SREBP-1 (A-4): sc-365513**.