SANTA CRUZ BIOTECHNOLOGY, INC.

SREBP-2 (1C6): sc-13552

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 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 (1C6) is a mouse monoclonal antibody raised against amino acids 833-1141 of SREBP-2 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-13552 X, 200 µg/0.1 ml.

SREBP-2 (1C6) is available conjugated to agarose (sc-13552 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-13552 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-13552 PE), fluorescein (sc-13552 FITC), Alexa Fluor® 488 (sc-13552 AF488), Alexa Fluor® 546 (sc-13552 AF546), Alexa Fluor® 594 (sc-13552 AF594) or Alexa Fluor® 647 (sc-13552 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-13552 AF680) or Alexa Fluor® 790 (sc-13552 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

SREBP-2 (1C6) is recommended for detection of amino acids 833-1141 of SREBP-2 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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.

SREBP-2 (1C6) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

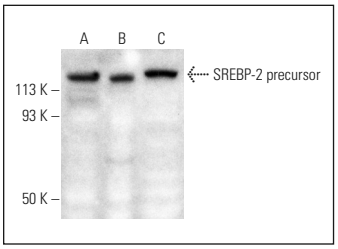
Molecular Weight of SREBP-2: 68/125 kDa.

Positive Controls: KNRK nuclear extract: sc-2141, LNCaP cell lysate: sc-2231 or PC-3 cell lysate: sc-2220.

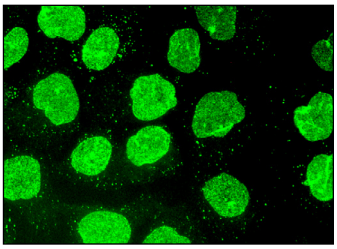
STORAGE

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

DATA



SREBP-2 (IC6): sc-13552. Western blot analysis of SREBP-2 expression in LNCaP (**A**) and PC-3 (**B**) whole cell lysates and KNRK nuclear extract (**C**).



SREBP-2 (1C6): sc-13552. Immunofluorescence staining of formalin-fixed A-431 cells showing nuclear and cytoplasmic vesicles localization.

SELECT PRODUCT CITATIONS

1. Kuhn, D.J., et al. 2004. Direct inhibition of the ubiquitin-proteasome pathway by ester bond-containing green tea polyphenols is associated with increased expression of sterol regulatory element-binding protein 2 and LDL receptor. Biochim. Biophys. Acta 1682: 1-10.
2. Fukushima, M., et al. 2011. Gonadotropin-regulated testicular RNA helicase (GRTH/DDX25), a negative regulator of LH/hCG-induced steroidogenesis in Leydig cells: a central role of steroidogenic acute regulatory protein (StAR). J. Biol. Chem. 286: 29932-29940.
3. Wong, T.Y., et al. 2015. The flavone luteolin suppresses SREBP-2 expression and post-translational activation in hepatic cells. PLoS ONE 10: e0135637.
4. Shao, W., et al. 2016. Fatostatin blocks ER exit of SCAP but inhibits cell growth in a SCAP-independent manner. J. Lipid Res. 57: 1564-73.
5. Tan, Y.Q., et al. 2016. Dietary flavones counteract phorbol 12-myristate 13-acetate-induced SREBP-2 processing in hepatic cells. Mol. Cell. Biochem. 424: 163-172.
6. Shimizu-Albergine, M., et al. 2016. SCAP/SREBP pathway is required for the full steroidogenic response to cyclic AMP. Proc. Natl. Acad. Sci. USA 113: E5685-E5693.
7. Kuan, Y.C., et al. 2017. Heat shock protein 90 modulates lipid homeostasis by regulating the stability and function of sterol regulatory element-binding protein (SREBP) and SREBP cleavage-activating protein. J. Biol. Chem. 292: 3016-3028.
8. Wang, Z., et al. 2017. Quinolinate phosphoribosyltransferase is an antiviral host factor against hepatitis C virus infection. Sci. Rep. 7: 5876.

RESEARCH USE

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