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 NH2-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 11B2.

SOURCE

SREBP-1 (2A4) is a mouse monoclonal antibody raised against amino acids 301-407 of SREBP-1a 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-13551X, 200 µg/0.1 ml.

SREBP-1 (2A4) is available conjugated to agarose (sc-13551AC), 500 µg/0.25 ml agarose in 1 ml, for IP.

APPLICATIONS

SREBP-1 (2A4) is recommended for detection of SREBP-1 of mouse, rat, human and hamster 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) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for SREBP-1 siRNA (h): sc-36557, SREBP-1 siRNA (m): sc-36558, 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 (2A4) 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.

RESEARCH USE

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

STORAGE

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

DATA


See SREBP-1 (A-4): sc-365513 for SREBP-1 antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.