

SREBP-2 (H-164): sc-5603

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.

REFERENCES

1. Brown, M.S., et al. 1986. A receptor-mediated pathway for cholesterol homeostasis. *Science* 232: 34-47.
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3. Goldstein, J.L., et al. 1990. Regulation of the mevalonate pathway. *Nature* 343: 425-430.
4. Briggs, M.R., et al. 1993. Nuclear protein that binds sterol regulatory element of LDL receptor promoter. I. Identification of the protein and delineation of its target nucleotide sequence. *J. Biol. Chem.* 268: 14490-14496.
5. Wang, X., et al. 1993. Nuclear protein that binds sterol regulatory element of LDL receptor promoter. II. Purification and characterization. *J. Biol. Chem.* 268: 14497-14504.
6. Hua, X., et al. 1993. SREBP-2, a second basic-helix-loop-helix-leucine zipper protein that stimulates transcription by binding to a sterol regulatory element. *Proc. Natl. Acad. Sci. USA* 90: 11603-11607.

CHROMOSOMAL LOCATION

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

SOURCE

SREBP-2 (H-164) is a rabbit polyclonal antibody raised against amino acids 812-975 of SREBP-2 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.

STORAGE

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

RESEARCH USE

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

APPLICATIONS

SREBP-2 (H-164) is recommended for detection 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)], 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).

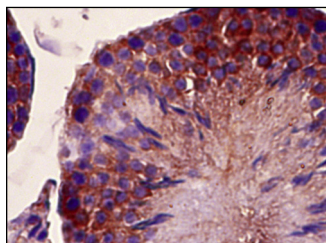
Suitable for use as control antibody for SREBP-2 siRNA (h): sc-36559, SREBP-2 siRNA (m): sc-36560, SREBP-2 shRNA Plasmid (h): sc-36559-SH, SREBP-2 shRNA Plasmid (m): sc-36560-SH, SREBP-2 shRNA (h) Lentiviral Particles: sc-36559-V and SREBP-2 shRNA (m) Lentiviral Particles: sc-36560-V.

Molecular Weight of SREBP-2 precursor: 125 kDa.

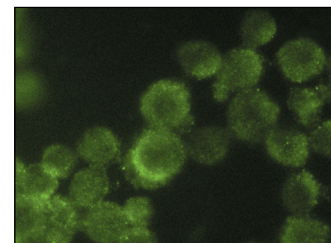
Molecular Weight of mature SREBP-2: 68 kDa.

Positive Controls: U-937 nuclear extract: sc-2156, PC-3 cell lysate: sc-2220 or KNRK nuclear extract: sc-2141.

DATA



SREBP-2 (H-164): sc-5603. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse testis tissue showing membrane and cytoplasmic localization.



SREBP-2 (H-164): sc-5603. Immunofluorescence staining of methanol-fixed U-937 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Weinhofer, I., et al. 2005. Liver X receptor α interferes with SREBP-1c-mediated ABCD2 expression. Novel cross-talk in gene regulation. *J. Biol. Chem.* 280: 41243-41251.
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3. Yu, H., et al. 2005. Partial rescue of neonatal lethality of Dhcr7 null mice by a nestin promoter-driven DHCR7 transgene expression. *Brain Res. Dev. Brain Res.* 156: 46-60.
4. Botolin, D., et al. 2006. Docosahexaenoic acid (22:6,n-3) regulates rat hepatocyte SREBP-1 nuclear abundance by ERK- and 26S Proteasome-dependent pathways. *J. Lipid Res.* 47: 181-192.
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6. Carrasco, M.P., et al. 2010. Disruption of cellular cholesterol transport and homeostasis as a novel mechanism of action of membrane-targeted alkylphospholipid analogues. *Br. J. Pharmacol.* 160: 355-366.