

PRODUCT INFORMATION



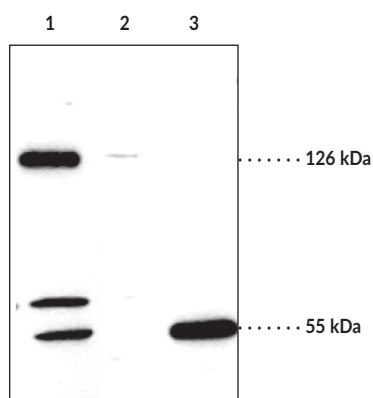
SREBP-2 Polyclonal Antibody

Item No. 10007663

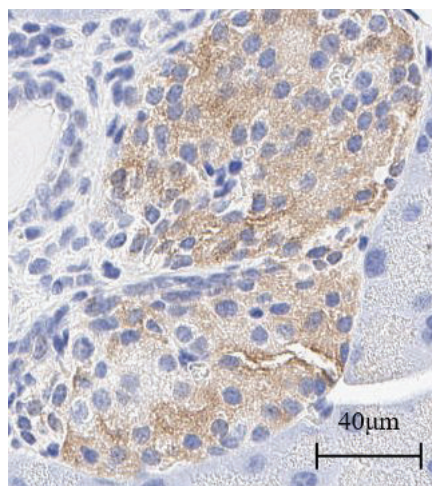
Overview and Properties

Contents: This vial contains 500 µl of peptide-affinity purified antibody.
Synonyms: SREBF2, Sterol Regulatory Element binding Protein-2, Sterol Regulatory Element-binding Transcription Factor 2
Immunogen: Synthetic peptide from an internal region of human SREBP-2
Species Reactivity: (+) Human, mouse, and rat; other species not tested
Uniprot No.: Q12772
Form: Liquid
Storage: -20°C (as supplied)
Stability: ≥1 year
Storage Buffer: PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide
Host: Rabbit
Applications: Immunocytochemistry (ICC), Immunohistochemistry (IHC), and Western blot (WB); the recommended starting dilution is 1:150, 1:40, and 1:200, respectively. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



Lane 1: Human fibroblast cell lysate (60 µg)
Lane 2: Rat brown fat homogenate (60 µg)
Lane 3: Rat testis supernatant (60 µg)



Immunohistochemistry (IHC) analysis of formalin-fixed, paraffin-embedded (FFPE) mouse small intestine tissue after heat induced antigen retrieval in pH 6.0 citrate buffer. After incubation with SREBP-2 Polyclonal Antibody (Item No. 10007663) at a 1:40 dilution, slides were incubated with biotinylated secondary antibody, followed by alkaline phosphatase-streptavidin and chromogen (DAB).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

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Description

SREBPs, including SREBP-1a, SREBP-1c, and SREBP-2, constitute a family of basic helix-loop-helix (bHLH) transcription factors that play a critical role in lipid homeostasis by regulating genes involved in cholesterol and fatty acid metabolism.¹ SREBP-2 regulates cholesterol synthesis by activating the transcription of genes for HMG-CoA reductase and other enzymes of the cholesterol synthetic pathway.² SREBP-2 is ubiquitously detected in various tissues.³ Upon cholesterol depletion, the protein is cleaved to its active forms (about 50-68 kDa) and translocated into the nucleus to stimulate transcription of genes involved in the uptake and synthesis of cholesterol.⁴ Cayman's SREBP-2 polyclonal antibody detects both precursor and active forms of the protein in tissues and cells such as liver, brown fat, testis, HepG2 cells, and human fibroblast. The apparent molecular weight on SDS-PAGE may be higher than the calculated molecular weight (about 126 kDa) due to glycosylation of the protein.⁵

References

1. Brown, M.S. and Goldstein, J.L. The SREBP pathway: Regulation of cholesterol metabolism by proteolysis of a membrane-bound transcription factor. *Cell* **89**, 331-340 (1997).
2. Sakai, J., Nohturfft, A., Goldstein, J.L., *et al.* Cleavage of sterol regulatory element-binding proteins (SREBPs) at site-1 requires interaction with SREBP cleavage-activating protein. Evidence from *in vivo* competition studies. *J. Biol. Chem.* **273(10)**, 5785-5793 (1998).
3. Iizuka, K., Bruick, R.K., Liang, G., *et al.* Deficiency of carbohydrate response element-binding protein (ChREBP) reduces lipogenesis as well as glycolysis. *Proc. Natl. Acad. Sci. USA* **101(19)**, 7281-7286 (2004).
4. Smith, L.H., Petrie, M.S., Morrow, J.D., *et al.* The sterol response element binding protein regulates cyclooxygenase-2 gene expression in endothelial cells. *J. Lipid Res.* **46**, 862-871 (2005).
5. Hua, X., Sakai, J., Ho, Y.K., *et al.* Hairpin orientation of sterol regulatory element-binding protein-2 in cell membranes as determined by protease protection. *J. Biol. Chem.* **270(49)**, 29422-29427 (1995).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM