

Product Information

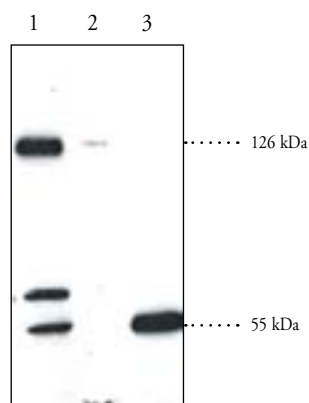


SREBP-2 Polyclonal Antibody

Item No. 10007663 • Lot. No. XXXXXX

- Synonyms:** SREBF2, Sterol Regulatory Element binding Protein-2, Sterol Regulatory Element-binding Transcription Factor 2
- Supplied as:** This vial contains *lot specific* µg of peptide affinity-purified IgG in *lot specific* µl TBS, pH 7.4, containing 50% glycerol, 0.1% BSA, and 0.02% sodium azide
- Host:** Rabbit
- Antigen:** Synthetic peptide from human SREBP-2 amino acids 455-469 (SPLDDAKVKDEPDS). The sequence is identical for SREBP-2 from mouse, rat, pig, and Chinese hamster.
- Cross-reactivity:** (+) Human, mouse, and rat SREBP-2; other species not tested.
- Stability:** ≥1 year at -20°C
- Applications:** The recommended starting dilution for western blot is *lot specific:lot specific* (*lot specific* µg/ml) and 4 µg/ml for immunocytochemistry. Other applications were not attempted and therefore optimal working dilutions should be determined empirically.

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 Each SREBP consists of three domains, including an amino-terminal transcription factor domain of ~480 amino acids, a middle hydrophobic region of ~80 amino acids containing two hydrophobic transmembrane segments, and a carboxy-terminal regulatory domain of ~590 amino acids.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 Under basal conditions SREBP is bound to ER membranes as a glycosylated precursor protein. 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



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

Laboratory Procedures

Immunofluorescent staining of cultured cells

1. Grow cells in 12 or 24 well plates until confluent.
2. Wash briefly with TBS, pH 7.4.
3. Fix the cells with 1% formaldehyde in TBS, pH 7.4, for 10 minutes.
4. Wash the cells 3 times with TBS containing 0.1% Triton-X 100 (TBSTX), 10 minutes each.
5. Incubate the cells with 10% normal serum (from the same species in which the secondary antibody is raised) in TBSTX for 30 minutes.
6. Incubate the cells with the SREBP polyclonal antibody (recommended starting concentration of 4 µg/ml. The optimal working condition should be determined by titration) for 1 hour.
7. Wash the cells 3 times with TBSTX, 10 minutes each.
8. Incubate the cells in the dark for 1 hour with a fluorochrome-conjugated anti-rabbit secondary antibody at a concentration recommended by the provider.
9. Wash the cells 3 times with TBSTX, 10 minutes each.
10. Examine the fluorescent staining under a microscope equipped with the appropriate filter. Store the plate at 4°C in the dark for later analysis.

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman warrants only to the original customer that the material will meet our specifications at the time of delivery.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have any obligation or liability, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees. Buyer's exclusive remedy and Cayman's sole liability hereunder shall be limited to a refund of the purchase price, or at Cayman's option, the replacement, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

For further details, please refer to our Warranty and Limitation of Remedy located on our website and in our catalog.

Copyright Cayman Chemical Company, 12/08/2011

Cayman Chemical

Mailing address
1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone
(800) 364-9897
(734) 971-3335

Fax
(734) 971-3640

E-Mail
custserv@caymanchem.com

Web
www.caymanchem.com

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).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/10007663

Cayman Chemical

Mailing address

1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone

(800) 364-9897
(734) 971-3335

Fax

(734) 971-3640

E-Mail

custserv@caymanchem.com

Web

www.caymanchem.com