

# PRODUCT INFORMATION



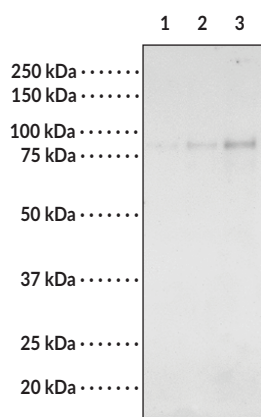
## SREBP-2 Polyclonal Antibody - Biotinylated

Item No. 22728

### Overview and Properties

|                            |  |
|----------------------------|--|
| <b>Contents:</b>           | This vial contains 50 µg of biotinylated IgG.  |
| <b>Synonyms:</b>           | SREBF2, Sterol Regulatory Element-binding Protein-2, Sterol Regulatory Element-binding Transcription Factor 2  |
| <b>Immunogen:</b>          | Synthetic peptide from an internal region of human SREBP-2 protein   |
| <b>Species Reactivity:</b> | (+) Human, mouse, and rat SREBP-2  |
| <b>Uniprot No.:</b>        | Q12772   |
| <b>Form:</b>               | Liquid   |
| <b>Storage:</b>            | -20°C (as supplied)  |
| <b>Stability:</b>          | ≥1 year  |
| <b>Storage Buffer:</b>     | PBS, pH 7.2, with 50% glycerol, and 0.02% sodium azide   |
| <b>Host:</b>               | Rabbit   |
| <b>Applications:</b>       | Immunoprecipitation (IP) and Western blot (WB); the recommended starting dilution is 1:250-500. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically. |

### Image



Lane 1: rGST-SREBP-2 (5 µl)  
Lane 2: rGST-SREBP-2 (10 µl)  
Lane 3: rGST-SREBP-2 (20 µl)

WB detection of recombinant GST-SREBP-2 by SREBP-2 Polyclonal Antibody - Biotinylated (0.5 µg/ml)

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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## Description

Cayman's SREBP-2 Polyclonal Antibody - Biotinylated 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.<sup>1</sup>

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.<sup>2</sup> SREBP-2 regulates cholesterol synthesis by activating the transcription of genes for HMG-CoA reductase and other enzymes of the cholesterol synthetic pathway.<sup>3</sup> SREBP-2 is ubiquitously detected in various tissues.<sup>4</sup> 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.<sup>5</sup>

## References

1. 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. *Journal of Biological Chemistry* **270**(49), 29422-29427 (1995).
2. 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).
3. 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. *Journal of Biological Chemistry* **273**(10), 5785-5793 (1998).
4. Iizuka, K., Bruick, R.K., Liang, G. *et al.* Deficiency of carbohydrate response element-binding protein (ChREBP) reduces lipogenesis as well as glycolysis. *Proceedings of the National Academy of Sciences of the United States of America* **101**(19), 7281-7286 (2004).
5. 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. *Journal of Lipid Research* **46**, 862-871 (2005).

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