

# Product Datasheet

## SREBP1 Antibody (2A4) - BSA Free NB600-582

Unit Size: 0.1 ml

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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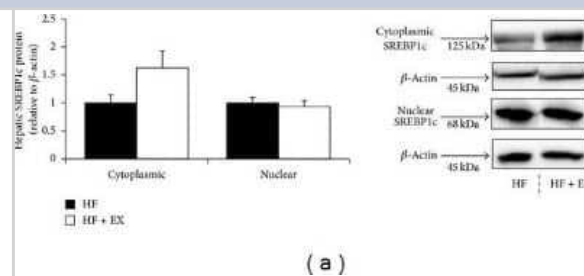
**NB600-582**

SREBP1 Antibody (2A4) - BSA Free

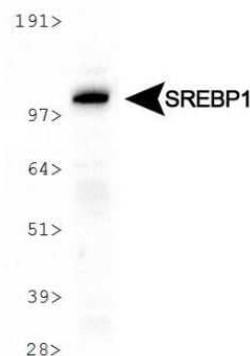
Product Information	
Unit Size	0.1 ml
Concentration	1 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	2A4
Preservative	0.05% Sodium Azide
Isotype	IgG1 Kappa
Purity	Protein G purified
Buffer	PBS
Product Description	
Host	Mouse
Gene ID	6720
Gene Symbol	SREBF1
Species	Human, Mouse, Rat, Canine, Chicken, Hamster, Monkey, Golden Syrian Hamster
Reactivity Notes	Canine reactivity reported in scientific literature (PMID: 23720350). Hamster reactivity reported in scientific literature (PMID: 24393244). Chicken reactivity reported in multiple pieces scientific literature. Monkey reactivity reported in scientific literature (PMID: 26437365).
Immunogen	6 His-tag fusion protein of human SREBP1 corresponding to amino acids 301-407. [UniProt# P36956]
Product Application Details	
Applications	Western Blot, Simple Western, Immunohistochemistry-Frozen, Knockout Validated
Recommended Dilutions	Western Blot 1-2ug/ml, Simple Western 1:12.5, Immunohistochemistry-Frozen, Knockout Validated
Application Notes	<p>This SREBP1 (clone 2A4) antibody is useful for WB where a band can be seen at 125 kDa (precursor) and additional bands may be seen at 60-70 kDa (cleaved).</p> <p>In Simple Western only 10 - 15 uL of the recommended dilution is used per data point. Separated by Size-Wes, Sally Sue/Peggy Sue. The use of this antibody in IHC paraffin embedded tissue has been questionable.</p>

## Images

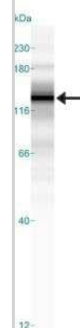
Western Blot: SREBP1 Antibody (2A4) [NB600-582] - Hepatic SREBP1c and SREBP2 protein abundance in C57BL/6 mice assigned to a high-fat (HF) or a high-fat/exercise (HF + EX) group for 8 weeks. Cytosolic and nuclear SREBP1c abundance. Image collected and cropped by CiteAb from the following publication (<https://www.hindawi.com/journals/jl/2013/908048/>), licensed under a CC-BY license.



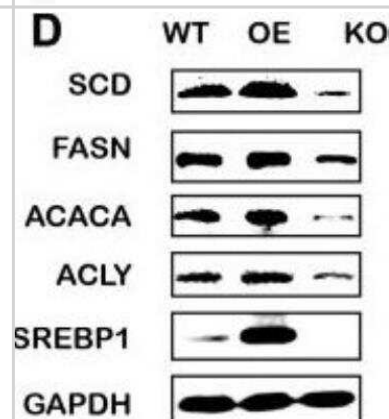
Western Blot: SREBP1 Antibody (2A4) [NB600-582] - Analysis of whole cell lysate from HeLa cells showing a single specific band for the expression of SREBP1 precursor protein (~120 kDa).



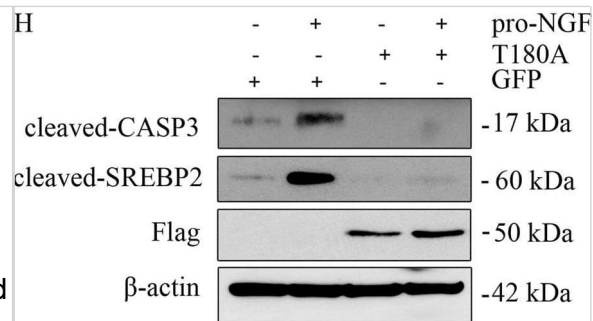
Simple Western: SREBP1 Antibody (2A4) [NB600-582] - Lane view shows a specific band for SREBP1 in 1.0 mg/ml of HeLa lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.



Knockout Validated: SREBP1 Antibody (2A4) [NB600-582] - KO and OE of SREBP1 influenced lipid metabolism in Bel-7402 cells. The protein level of lipid-associated genes in SREBP1-KO, SREBP1-OE, and WT Bel-7402 cells. Data were expressed as mean  $\pm$  standard error of the mean. \* $P < 0.05$ , \*\* $P < 0.01$ , and \*\*\* $P < 0.001$  vs. WT group, respectively.



Truncated PPM1D impairs DNA damage response in mouse thymus. Expression of PPM1D mRNA was analyzed by RT-qPCR in the thymi of Ppm1d<sup>+/+</sup>, Ppm1dT<sup>+/+</sup> and Ppm1dT<sup>T/T</sup> mice and was normalized to GAPDH (n = 3) (A). Thymi from mice of indicated genotypes were lysed and proteins were separated by SDS-PAGE. Samples were probed with antibody against PPM1D and importin- $\beta$  as a loading control. The empty and full arrowheads indicate the position of the full-length and the C-terminally truncated PPM1D, respectively. (B). Cells from thymi from Ppm1d<sup>+/+</sup> and Ppm1dT<sup>+/+</sup> mice were analyzed by flow cytometry. Plotted are the counts of the indicated populations as follows: double-negative T-cells (DN and DN1, DN2, DN3, DN4), double-positive T-cells (DP), CD8-positive T-cells (CD8<sup>+</sup>) and CD4-positive T-cells (CD4<sup>+</sup>) (n = 3) (C). The median size of the thymus was determined in Ppm1d<sup>+/+</sup> (n = 11) and Ppm1dT<sup>+/+</sup> (n = 12) mice (D). A scheme of the experimental setup in F-I. Mice were exposed or not to a low dose of IR (3 Gy), sacrificed after 6 h and thymi and lymph nodes were collected (E). Proteins isolated from thymi from mice of indicated genotypes exposed to mock or to IR were probed with the indicated antibodies by immunoblotting (F). Proteins isolated from inguinal lymph nodes from mice of indicated genotypes exposed to mock or to IR were probed with the indicated antibodies by immunoblotting (G). RNA isolated from thymi from mice in E was analyzed by RT-qPCR. The expression of CDKN1A<sup>p21</sup> mRNA was normalized to GAPDH. Statistical significance was evaluated by two-tailed t-test, error bars indicate SD, n = 5 (H). RNA isolated from thymi from mice in D was analyzed by RT-qPCR. The expression of PUMA mRNA was normalized to GAPDH. Statistical significance was evaluated by two-tailed t-test, error bars indicate SD, n = 5. \* p < 0.05; \*\*\* p < 0.0005; \*\*\*\* p < 0.0001 (I). Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/32927737>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



## Publications

Yang M, Mariano J, Su R et al. SARS-CoV-2 papain-like protease (PLpro) plays multiple roles in regulating cellular proteins in the endoplasmic reticulum *The Journal of biological chemistry* 2023-10-12 [PMID: 37838170] (WB, Human)

Liu M, Liu L, Guo H et al. Dominant-negative HNF1 $\alpha$  mutant promotes liver steatosis and inflammation by regulating hepatic complement factor D *iScience* 2023-09-01 [PMID: 37841581] (WB, Mouse)

Low JY, Brennen WN, Meeker AK et al. Stromal CAVIN1 Controls Prostate Cancer Microenvironment and Metastasis by Modulating Lipid Distribution and Inflammatory Signaling *Molecular Cancer Research* 2020-09-01 [PMID: 32493699]

Chiu CH, Chang CC, Lin JJ et al. Styrylpyrones from *Phellinus linteus* Mycelia Alleviate Non-Alcoholic Fatty Liver by Modulating Lipid and Glucose Metabolic Homeostasis in High-Fat and High-Fructose Diet-Fed Mice *Antioxidants (Basel)* 2022-04-30 [PMID: 35624762]

Qiao P, Jia Y, Ma A et al. Dapagliflozin protects against nonalcoholic steatohepatitis in db/db mice *Frontiers in Pharmacology* 2022-08-19 [PMID: 36059948]

Zhu Y, Lei L, Wang X et al. Low abundance of insulin-induced gene 1 contributes to SREBP-1c processing and hepatic steatosis in dairy cows with severe fatty liver *Journal of dairy science* 2023-06-06 [PMID: 37291038] (WB, Bovine)

Saito K, Sekiya M, Kainoh K et al. Obesity-induced metabolic imbalance allosterically modulates CtBP2 to inhibit PPAR- $\alpha$  transcriptional activity *The Journal of biological chemistry* 2023-06-05 [PMID: 37286039] (WB, Human)

Srinivasan MP, Bhopale KK, Caracheo AA et al. Dysregulated pancreatic lipid phenotype, inflammation and cellular injury in a chronic ethanol feeding model of hepatic alcohol dehydrogenase-deficient deer mice *Life sciences* 2023-06-01 [PMID: 37030615] (WB, Mouse)

Tajima O, Fujita Y, Ohmi Y et al. Ganglioside GM3 prevents high fat diet-induced hepatosteatosis via attenuated insulin signaling pathway *PloS one* 2023-02-24 [PMID: 36827398] (WB, Mouse)

Fukuda M, Ogasawara Y, Hayashi H et al. Resveratrol Inhibits Proliferation and Induces Autophagy by Blocking SREBP1 Expression in Oral Cancer Cells *Molecules (Basel, Switzerland)* 2022-11-26 [PMID: 36500345] (WB, Human)

Huang CY, Chen HW, Lo CW et al. Luteolin ameliorates palmitate-induced lipotoxicity in hepatocytes by mediating endoplasmic reticulum stress and autophagy *Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association* 2023-01-01 [PMID: 36509263]

Sawamoto A, Doi K, Amakura Y et al. N-Caffeoyltryptophan enhances adipogenic differentiation in preadipocytes and improves glucose tolerance in mice *Biochimica et Biophysica Acta (BBA) - General Subjects* 2022-11-01 [PMID: 36460233] (WB, Mouse)

Details:

1:1000 dilution WB

More publications at <http://www.novusbio.com/NB600-582>

## Procedures

### Western Blot Protocol Specific for NB600-582: SREBP1 Antibody (2A4)

#### Western Blot Protocol

1. Perform SDS-PAGE on samples to be analyzed, loading 20 ug of total protein per lane.
2. Transfer proteins to membrane according to the instructions provided by the manufacturer of the membrane and transfer apparatus.
3. Stain according to standard Ponceau S procedure (or similar product) to assess transfer success, and mark molecular weight standards where appropriate.
4. Rinse the blot.
5. Block the membrane using standard blocking buffer for at least 1 hour.
6. Wash the membrane in wash buffer three times for 10 minutes each.
7. Dilute primary antibody in blocking buffer and incubate overnight at 4C.
8. Wash the membrane in wash buffer three times for 10 minutes each.
9. Apply the diluted HRP conjugated secondary antibody in blocking buffer (as per manufacturers instructions) and incubate 1 hour at room temperature.
10. Wash the blot in wash buffer three times for 10 minutes each (this step can be repeated as required to reduce background).
11. Apply the detection reagent of choice in accordance with the manufacturers instructions.

**\*\*Note:** Tween-20 can be added to the blocking or antibody dilution buffer at a final concentration of 0.05-0.2%.

**\*The above information is only intended as a guide. The researcher should determine what protocol best meets their needs. Please follow safe laboratory procedures.**





### **Novus Biologicals USA**

10730 E. Briarwood Avenue  
Centennial, CO 80112  
USA  
Phone: 303.730.1950  
Toll Free: 1.888.506.6887  
Fax: 303.730.1966  
nb-customerservice@bio-techne.com

### **Bio-Techne Canada**

21 Canmotor Ave  
Toronto, ON M8Z 4E6  
Canada  
Phone: 905.827.6400  
Toll Free: 855.668.8722  
Fax: 905.827.6402  
canada.inquires@bio-techne.com

### **Bio-Techne Ltd**

19 Barton Lane  
Abingdon Science Park  
Abingdon, OX14 3NB, United Kingdom  
Phone: (44) (0) 1235 529449  
Free Phone: 0800 37 34 15  
Fax: (44) (0) 1235 533420  
info.EMEA@bio-techne.com

### **General Contact Information**

www.novusbio.com  
Technical Support: nb-technical@bio-techne.com  
Orders: nb-customerservice@bio-techne.com  
General: novus@novusbio.com

### **Products Related to NB600-582**

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NB800-PC9	HeLa Nuclear Cell Lysate
HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB720-B	Rabbit anti-Mouse IgG (H+L) Secondary Antibody [Biotin]
NBP1-43319-0.5mg	Mouse IgG1 Kappa Isotype Control (P3.6.2.8.1)

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### **Limitations**

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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