Product Datasheet

SREBP1 Antibody - BSA Free
NB100-2215

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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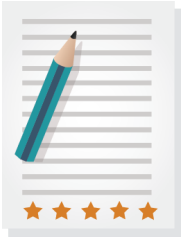
Updated 12/20/2023 v.20.1



NB100-2215

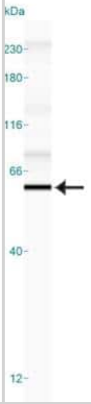
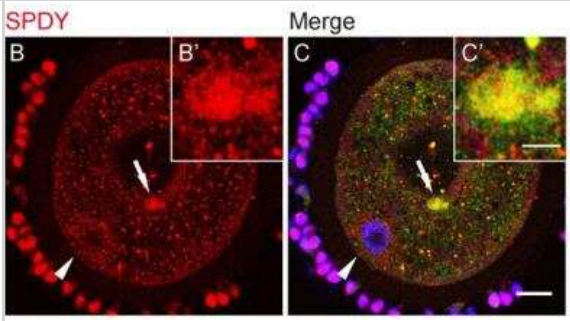
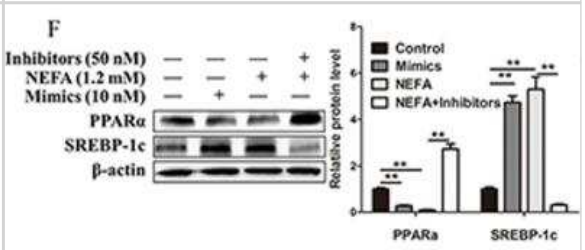
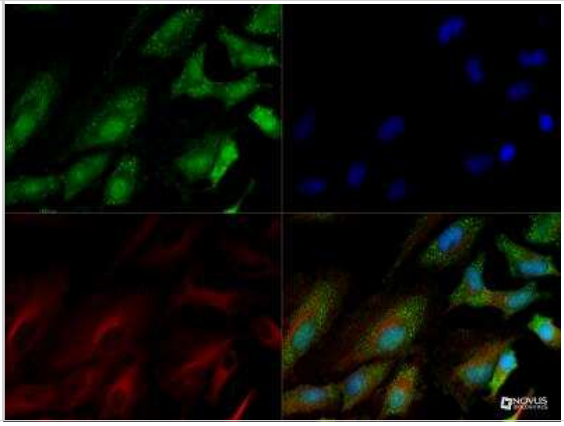
SREBP1 Antibody - BSA Free

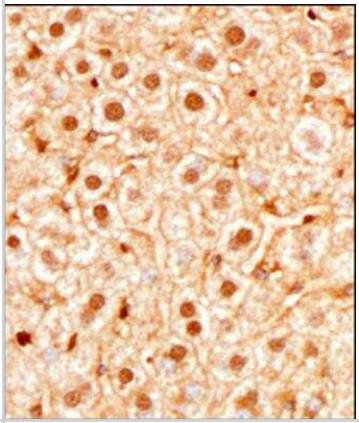
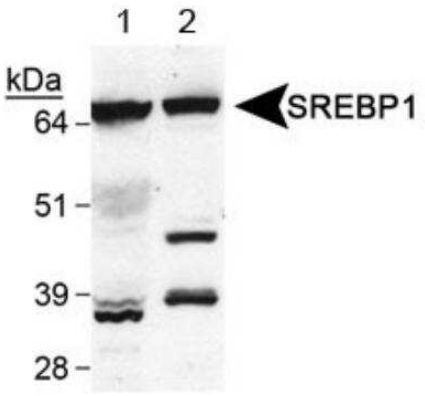
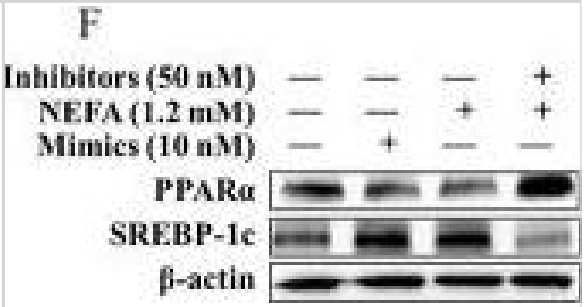
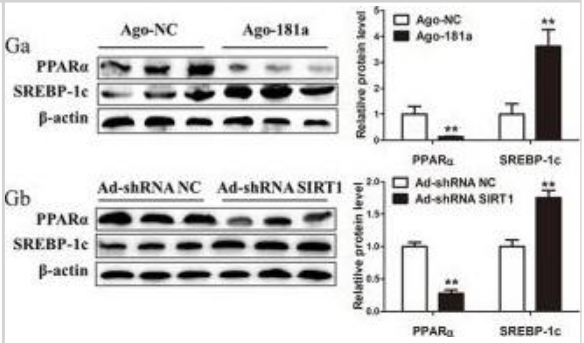
Product Information	
Unit Size	0.1 ml
Concentration	1.0 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.02% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	PBS
Target Molecular Weight	65 kDa

Product Description	
Host	Rabbit
Gene ID	6720
Gene Symbol	SREBF1
Species	Human, Mouse, Rat, Porcine, Bovine, Hamster, Plant
Reactivity Notes	Use in Human reported in scientific literature (PMID:33842305).
Immunogen	A synthetic peptide made to a portion of the human SREBP1 protein sequence (between residues 300-400). [Uniprot: P36956]

Product Application Details	
Applications	Western Blot, Simple Western, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin, Microarray
Recommended Dilutions	Western Blot 1:500, Simple Western 1:25, Immunohistochemistry 1:200 - 1:500, Immunocytochemistry/ Immunofluorescence 1:200, Immunohistochemistry-Paraffin 1:200 - 1:500, Microarray reported in scientific literature (PMID 33278777)
Application Notes	Unprocessed SREBP1 is an ~122 kDa integral membrane protein that moves from ER to golgi for processing. The first cleavage is performed by S2P at residue 490, and the resulting active portion is then translocated out of the golgi. This is the ~65 kDa mature form that is detected by NB100-2215. The second cleavage is performed by S1P at residue 530, and the resulting C-term portion (from residues 530-1147) remains in the golgi where it is detected as a ~65 kDa protein by NB100-60545. In Western blot, this SREBP1 antibody detects the processed form of sterol regulatory element-binding protein 1 (aa 1-490) which runs at approx. 65kDa position. In Simple Western only 10 - 15 uL of the recommended dilution is used per data point. Separated by Size-Wes, Sally Sue/Peggy Sue.

Images

Simple Western: SREBP1 Antibody [NB100-2215] - Image shows a specific band for SREBP1 in 1 mg/mL of HeLa cell lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.	
Immunocytochemistry/Immunofluorescence: SREBP1 Antibody [NB100-2215] - CDC2 associates with SPDY at ERES. (A-C) 0 h GV stage oocyte labeled for CDC2 (A, green), DNA (A, blue), and SPDY (B, red). Both CDC2 and SPDY localize to the same cortical domain (C). Note that the center of this oocyte is dented (the area that contains the arrow) causing the structure to appear in the middle of the oocyte, whereas it is located in the cortex. Images are Z-projections of 2 (A-C); scale bars represent 20 um in C and 5 um in C'. Arrows indicate the region of the oocyte that is shown enlarged in the insets (B'-C'). Arrowheads denote the position of the GV. Image collected and cropped by CiteAb from the following publication (https://bmcdevbiol.biomedcentral.com/articles/10.1186/1471-213X-9-8) licensed under a CC-BY license.	
Western Blot: SREBP1 Antibody [NB100-2215] - MiR-181a overexpression impairs and miR-181a inhibition improves glucose and lipid homeostasis in HepG2 cellsHepG2 cells were divided into 4 groups as follows: a control group, mimics group (HepG2 cells transfected with 10 nM mimics), NEFA group (treated with 1. 2 mM NEFA), and miR-181a + NEFA group (transfected with 50 nM miR-181a inhibitors and then treated with 1. 2 mM NEFA). It was followed with or without 100 nM insulin. Immunoblot analysis (left) and quantification (right) of SREBP-1c and PPARI+- in HepG2 cells. Image collected and cropped by Citeab from the following publication (Upregulation of miR-181a impairs hepatic glucose and lipid homeostasis. Oncotarget (2017)) licensed under a CC-BY license.	
Immunocytochemistry/Immunofluorescence: SREBP1 Antibody [NB100-2215] - SREBP1 antibody was tested in HeLa cells with DyLight488 (green). Nuclei and alpha-tubulin were counterstained with DAPI (blue) and DyLight 550 (red). Nuclear and punctate vesicle staining was observed.	

Immunohistochemistry-Paraffin: SREBP1 Antibody [NB100-2215] - nalysis of FFPE tissue section of mouse liver with SREBP1 antibody at 1:200. The antibody generated an expected cytoplasmic-nuclear immunostaining of SREBP1 protein in the hepatocytes.	
Western Blot: SREBP1 Antibody [NB100-2215] - Detection of SREBP1. Lane 1: human liver. Lane 2: mouse liver.	
EPS15 depletion affects late endosomal maturation.(A) Co-depletion of SPOPL an EPS15 has an additive effect on influenza A virus infection. (B) EPS15 depletion stabilizes ESCRT components HRS, STAM and TSG101. (C) EPS15 depletion affects LDL uptake in cells resulting in an accumulation of LDL in enlarged vacuoles (upper panel). Late endosomes, visualized by life-cell microscopy of GFP-RAB7, are enlarged in cells depleted of EPS15 (lower panel).DOI:https://dx.doi.org/10.7554/eLife.13841.016 Image collected and cropped by CiteAb from the following open publication (https://elifesciences.org/articles/13841), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	
α-SMA, LOX, and COL1A1 immunostaining in human thyroid cancers. Representative thyroid tumors serial sections from two different patients stained by IHC for α-SMA, COL1A1, and LOX protein expression and localization. In the top panel, the tumor edge/invasive front is specifically shown (scale bar 500 μm), while lower panel has higher magnification (scale bar 200 μm). * clusters of tumor invading cells detaching from the principal tumor mass (T). Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/31906302), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	

DLK1 cleavage is dependent on HIFs and ADAM 17 activity.a, b Representative images and densitometric analysis of western blots showing HIF-1α, HIF-2α, and DLK1 expression and cleavage in U3082MG cells after siRNA targeting of HIF1A and HIF2A in hypoxia. c, d Representative images and densitometric analysis of western blots showing the effects of ADAM inhibition by pre-treatment with 20 μM TAPI-2 on DLK1 cleavage in U3082MG cells grown at 21% or 1% O2 for 48 h. SDHA was used as loading control. e, f Representative images and densitometric analysis of western blots showing the effects of ADAM17 inhibition by pre-treatment with 0.5 μM TMI-1 on DLK1 cleavage in U3082MG cells grown at 21% or 1% O2 for 48 h. SDHA was used as loading control. Statistical analysis: b has 3 independent experiments while d and f have four independent experiments, all data are expressed as mean ± SEM. Statistical significance was determined by one-way ANOVA, followed by Bonferroni post hoc test. In the whole figure significance is represented as *p < 0.05, **p < 0.01, and ***p < 0.001 vs. respective 21% O2 controls or as indicated by straight lines. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/32205867), licensed under a CC-BY license. Not internally tested by Novus Biologicals.

Publications

Shiota T, Li Z, Chen GY et al. Hepatoviruses promote very-long-chain fatty acid and sphingolipid synthesis for viral RNA replication and quasi-enveloped virus release Science advances 2023-10-20 [PMID: 37862421] (WB, Human)

Details:
1:1000 WB dilution

Lu W, Yang J, Hu M et al. Effects of choline deficiency and supplementation on lipid droplet accumulation in bovine primary liver cells in vitro Journal of dairy science 2023-09-05 [PMID: 37678795] (WB, Bovine)

Senatus L, Ega□a-Gorro□o L, L□pez-D□ez R et al. DIAPH1 mediates progression of atherosclerosis and regulates hepatic lipid metabolism in mice Communications Biology 2023-03-17 [PMID: 36932214]

Zhang B, Yang W, Wang S et al. Lipid Accumulation and Injury in Primary Calf Hepatocytes Challenged With Different Long-Chain Fatty Acids Frontiers in Veterinary Science 2020-10-15 [PMID: 33195520] (WB)

Yang W, Wang S, Zhao Y et al. Regulation of cholesterol metabolism during high fatty acid-induced lipid deposition in calf hepatocytes Journal of dairy science 2023-08-01 [PMID: 37419743] (WB)

Lu YU, Miyamoto T, Takeuchi H et al. PPAR? activator irbesartan suppresses the proliferation of endometrial carcinoma cells via SREBP1 and ARID1A Oncology research 2023-05-24 [PMID: 37305395] (ICC/IF, IHC-P, Human)

Zhao C, Wu B, Li J et al. AdipoRon alleviates fatty acid-induced lipid accumulation and mitochondrial dysfunction in bovine hepatocytes by promoting autophagy Journal of dairy science 2023-05-31 [PMID: 37268562] (WB, Bovine)

Palma GBH, Kaur M miRNA-128 and miRNA-223 regulate cholesterol-mediated drug resistance in breast cancer IUBMB life 2023-04-18 [PMID: 37070323] (WB, Human)

Wang C, Hucik B, Sarr O et al. Delta-6 desaturase (Fads2) deficiency alters triacylglycerol / fatty acid cycling in murine white adipose tissue Journal of lipid research 2023-04-19 [PMID: 37085033] (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)

Yang W, Yang M, Tian Y et al. Effect of Myricetin on Lipid Metabolism in Primary Calf Hepatocytes Challenged with Long-Chain Fatty Acids Metabolites 2022-11-05 [PMID: 36355155] (WB, Bovine)

McKernan CM, Khatri A, Hannigan M et al. ABL kinases regulate translation in HER2+ cells through Y-box-binding protein 1 to facilitate colonization of the brain Cell reports 2022-08-30 [PMID: 36044842] (WB)

More publications at http://www.novusbio.com/NB100-2215

Procedures

Western Blot protocol for SREBP1 Antibody (NB100-2215)

Western Blot Protocol

1. Perform SDS-PAGE (4-12%) on samples to be analyzed, loading 35 ug of total protein per lane.

2. Transfer proteins to Nitrocellulose according to the instructions provided by the manufacturer of the transfer apparatus.

3. Rinse membrane with dH2O and then stain the blot using ponceau S for 1-2 minutes to access the transfer of proteins onto the nitrocellulose membrane. Rinse the blot in water to remove excess stain and mark the lane locations and locations of molecular weight markers using a pencil.

4. Rinse the blot in TBS for approximately 5 minutes.

5. Block the membrane using 5% non-fat dry milk + 1% BSA in TBS for 1 hour at room temperature (RT).

6. Rinse the membrane in dH2O and then wash the membrane in wash buffer [TBS + 0.1% Tween] 3 times for 10 minutes each.

7. Dilute the rabbit anti-SREBP1 primary antibody (NB 100-2215) in blocking buffer and incubate 1 hour at RT.

8. Rinse the membrane in dH2O and then wash the membrane in wash buffer [TBS + 0.1% Tween] 3 times for 10 minutes each.

9. Apply the diluted rabbit-IgG HRP-conjugated secondary antibody in blocking buffer (as per manufacturer's instructions) and incubate 1 hour at room temperature.

10. Wash the blot in wash buffer [TBS + 0.1% Tween] 3 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 manufacturer's instructions (we used BioFX Super Plus ECL).

Note: Tween-20 can be added to the blocking or antibody dilution buffer at a final concentration of 0.05-0.2%, provided it does not interfere with antibody-antigen binding.

Immunocytochemistry/Immunofluorescence protocol for SREBP1 Antibody (NB100-2215)

Immunocytochemistry Protocol

Culture cells to appropriate density in 35 mm culture dishes or 6-well plates.

1. Remove culture medium and add 10% formalin to the dish. Fix at room temperature for 30 minutes.
2. Remove the formalin and add ice cold methanol. Incubate for 5-10 minutes.
3. Remove methanol and add washing solution (i.e. PBS). Be sure to not let the specimen dry out. Wash three times for 10 minutes.
4. To block nonspecific antibody binding incubate in 10% normal goat serum from 1 hour to overnight at room temperature.
5. Add primary antibody at appropriate dilution and incubate at room temperature from 2 hours to overnight at room temperature.
6. Remove primary antibody and replace with washing solution. Wash three times for 10 minutes.
7. Add secondary antibody at appropriate dilution. Incubate for 1 hour at room temperature.
8. Remove antibody and replace with wash solution, then wash for 10 minutes. Add Hoechst 33258 to wash solution at 1:25,0000 and incubate for 10 minutes. Wash a third time for 10 minutes.
9. Cells can be viewed directly after washing. The plates can also be stored in PBS containing Azide covered in Parafilm (TM). Cells can also be cover-slipped using Fluoromount, with appropriate sealing.

*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 NB100-2215

NB820-59662	Mouse Liver Whole Tissue Lysate (Adult Whole Normal)
NB100-2215PEP	SREBP1 Antibody Blocking Peptide
HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control

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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