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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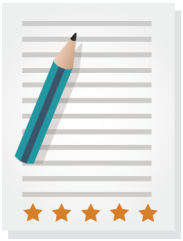
Updated 2/17/2025 v.20.1



NB600-582

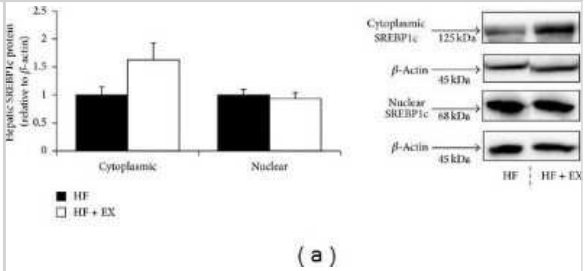
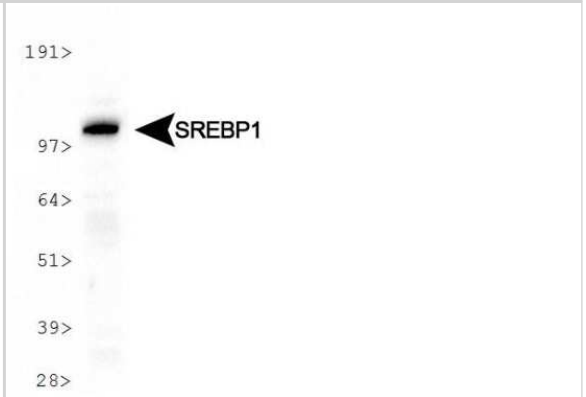
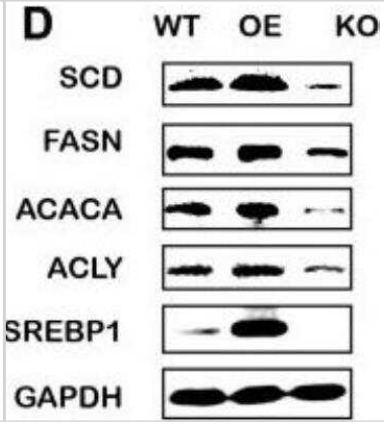
SREBP1 Antibody (2A4) - BSA Free

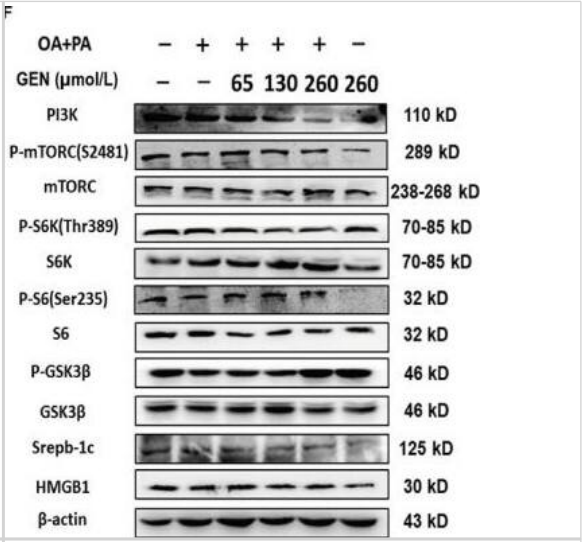
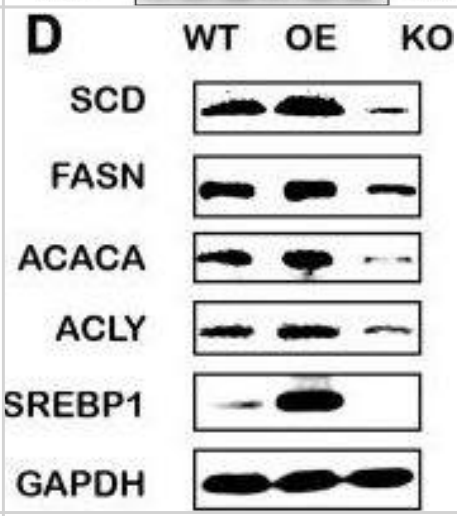
Product Information	
Unit Size	0.1 ml
Concentration	1 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	2A4
Preservative	0.05% Sodium Azide
Isotype	IgG1 Kappa
Purity	Protein G purified
Buffer	PBS

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]

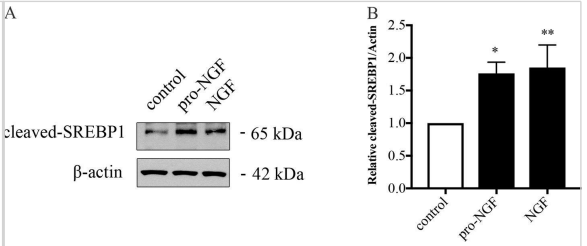
Product Application Details	
Applications	Western Blot, Simple Western, Immunohistochemistry-Frozen, Knockout Validated
Recommended Dilutions	Western Blot 1-2ug/ml, Simple Western 1:12.5, Immunohistochemistry-Frozen, Knockout Validated
Application Notes	This SREBP1 (clone 2A4) antibody is useful for WB where a band can be seen at 125 kDa (precursor) and additional bands may be seen at 60-70 kDa (cleaved). In Simple Western only 10 - 15 uL of the recommended dilution is used per data point. See Simple Western Antibody Database for Simple Western validation: Tested in HeLa lysate 1.0 mg/mL, separated by Size, antibody dilution of 1:12.5, apparent MW was 156 kDa. Separated by Size-Wes, Sally Sue/Peggy Sue. The use of this antibody in IHC paraffin embedded tissue has been questionable.

Images

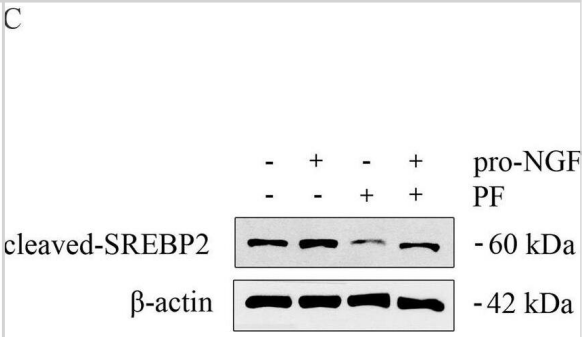
Western Blot: SREBP1 Antibody (2A4) [NB600-582] - Hepatic SREBP1c and SREBP2 protein abundance in C57BL/6 mice assigned to a high-fat (HF) or a high-fat/exercise (HF + EX) group for 8 weeks. Cytosolic and nuclear SREBP1c abundance. Image collected and cropped by CiteAb from the following publication (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.	
Western Blot: 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 -/+ standard error of the mean. *P < 0.05, **P < 0.01, and ***P < 0.001 vs. WT group, respectively.	

Western Blot: SREBP1 Antibody (2A4) - BSA Free [NB600-582] - Effect of GEN on the expression of Nrf2□related signalling proteins in OA (660 μmol/L) & PA (330 μmol/L)□induced HepG2 cells. GEN was added into HepG2 cells prior 1 h to stimulation of OA & PA for 18 h. A□C, Protein expression of Nrf2, PPARα, PPARγ in nucleus & HO□1 in cytoplasm was detected by Western blot. (D & E) Protein expression of P□ACC, ACC, P□AKT, AKT, P□AMPKα, AMPKα, P□AMPKβ & AMPKβ was detected by Western blot. F□H, Protein expression of PI3K, P□mTORC, mTORC, P□S6K, S6K, P□S6, S6, SREBP□1c & HMGB1 was detected by Western blot. The similar results were collected from three dependent experiments. All data were expressed by mean ± SEM (n = 5 in each group). ##P < .01 vs Control Group; *P < .05 & **P < .01 vs OA & PA Group Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/32293113), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	
Western Blot: SREBP1 Antibody (2A4) - BSA Free [NB600-582] - KO & OE of SREBP1 influenced lipid metabolism in Bel-7402 cells. (A) Total cellular TG content of SREBP1-KO, SREBP1-OE, & WT Bel-7402 cells. (B) HPLC-MS determination of the SFAs to MUFAs ratios (palmitic acid to palmitoleic acid, 16:0 to 16:1) (stearic acid to oleic acid, 18:0 to 18:1) as well as the content of 16:0, 16:1, 18:0, & 18:1 in SREBP1-KO, SREBP1-OE, & WT Bel-7402 cells. (C) The transcript level of lipid-associated genes in SREBP1-KO, SREBP1-OE, & WT Bel-7402 cells. (D & E) The protein level of lipid-associated genes in SREBP1-KO, SREBP1-OE, & WT Bel-7402 cells. Data were expressed as mean ± standard error of the mean. *P < 0.05, **P < 0.01, & ***P < 0.001 vs. WT group, respectively. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/31297058), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	
Western Blot: SREBP1 Antibody (2A4) - BSA Free [NB600-582] - Construction of knockout (KO) & overexpression (OE) cell lines. (A) The sequencing results of KO positive clone cells; (B) The messenger RNA (mRNA) level of SREBP1 in wild type (WT) & OE Bel-7402 cells. Data were expressed as mean ± standard error of the mean. ***P < 0.001 vs. WT group; (C & D) The protein level of SREBP1 in WT, OE, & KO Bel-7402 cells. Data were expressed as mean ± standard error of the mean. ***P < 0.001 vs. WT group. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/31297058), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	

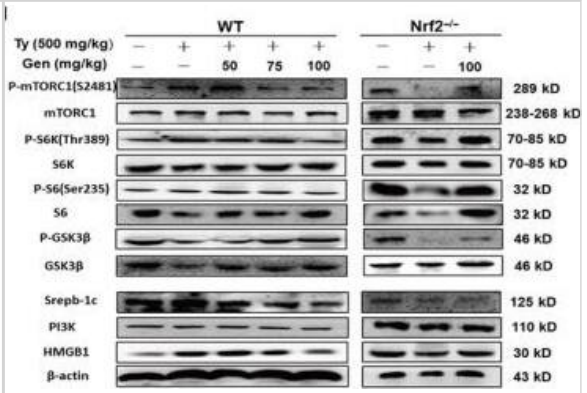
Western Blot: SREBP1 Antibody (2A4) - BSA Free [NB600-582] - p75NTR stimulation activated SREBP1 & SREBP2 in Huh7 hepatocyte cells.Human Huh7 cells were stimulated with 10 ng/ml pro-NGF or 50 ng/ml NGF for 16 h followed by immunoblotting using antibodies to detect the presence of cleaved/activated SREBP1 & SREBP2. a SREBP1, immunoblots & b quantification. Values are mean ± SD, n = 3. **P < 0.01 & *p < 0.05 for treated vs. control cells. c, d SREBP2. Cells were treated with 10 ng/ml pro-NGF in the absence or presence of 0.5 μM PF429242 (PF), which is a selective inhibitor of the Site 1 protease (S1P). c Immunoblots & d quantification. PF decreased the amount of processed SREBP2 in these cells; however, addition of pro-NGF increased the relative level of cleaved SREBP2. Values are mean ± SD, n = 3. *p < 0.05 for treated vs. the corresponding control Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/31296846), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Western Blot: SREBP1 Antibody (2A4) - BSA Free [NB600-582] - p75NTR stimulation activated SREBP1 & SREBP2 in Huh7 hepatocyte cells.Human Huh7 cells were stimulated with 10 ng/ml pro-NGF or 50 ng/ml NGF for 16 h followed by immunoblotting using antibodies to detect the presence of cleaved/activated SREBP1 & SREBP2. a SREBP1, immunoblots & b quantification. Values are mean ± SD, n = 3. **P < 0.01 & *p < 0.05 for treated vs. control cells. c, d SREBP2. Cells were treated with 10 ng/ml pro-NGF in the absence or presence of 0.5 μM PF429242 (PF), which is a selective inhibitor of the Site 1 protease (S1P). c Immunoblots & d quantification. PF decreased the amount of processed SREBP2 in these cells; however, addition of pro-NGF increased the relative level of cleaved SREBP2. Values are mean ± SD, n = 3. *p < 0.05 for treated vs. the corresponding control Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/31296846), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Western Blot: SREBP1 Antibody (2A4) - BSA Free [NB600-582] - Effect of GEN on the protein expression of Nrf2, ACC & mTORC signalling pathways in tyloxapol□induced mice. GEN (50, 75, 100 mg/kg) was administered to WT or Nrf2−/− mice prior 1 h to stimulation of tyloxapol (500 mg/kg) for 18 h. A□C, Protein expression of Nrf2, PPARα, PPARγ in nucleus & HO□1 in cytoplasm of WT mice was detected by Western blot. (D & E) Protein expression of Nrf2, PPARα & PPARγ in Nrf2−/− mice was detected by Western blot. F□H, Protein expression of P□ACC, ACC, P□AKT, AKT, P□AMPKα, AMPKα, P□AMPKβ, AMPKβ in WT & Nrf2−/− mice was detected by Western blot. I□M, Protein expression of PI3K, P□mTORC, mTORC, P□S6K, S6K, P□S6, S6, SREBP□1c & HMGB1 WT & Nrf2−/− mice was detected by Western blot. The similar results were collected from three dependent experiments. All data were expressed by mean ± SEM (n = 5 in each group). ##P < .01 vs Control group; *P < .05 & **P < .01 vs Tyloxapol group Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/32293113), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

L Opazo-Ríos, M Soto-Catal, I Lázaro, A Sala-Vila, L Jiménez-Ca, M Orejudo, JA Moreno, J Egido, S Mas-Fontao Meta-Inflammation and De Novo Lipogenesis Markers Are Involved in Metabolic Associated Fatty Liver Disease Progression in BTBR ob/ob Mice International Journal of Molecular Sciences, 2022-04-02;23(7):. 2022-04-02 [PMID: 35409324]

Thottakkattumana Parameswaran, V;Hild, C;Eichner, G;Ishaque, B;Rickert, M;Steinmeyer, J; Interleukin-1 Induces the Release of Lubricating Phospholipids from Human Osteoarthritic Fibroblast-like Synoviocytes International journal of molecular sciences [PMID: 35269552]

Balboni N, Babini G, Poeta E et Al. Transcriptional and metabolic effects of aspartate-glutamate carrier isoform 1 (AGC1) downregulation in mouse oligodendrocyte precursor cells (OPCs) Cell Mol Biol Lett 2024-03-29 [PMID: 38553684]

NL Cianciola, S Chung, D Manor, CR Carlin Adenovirus modulates Toll-like receptor 4 signaling by reprogramming ORP1L-VAP protein contacts for cholesterol transport from endosomes to the endoplasmic reticulum J. Virol, 2017-02-28;0(0):. 2017-02-28 [PMID: 28077646]

Cassim Bawa FN, Hu S, Gopoju R et Al. Adipocyte retinoic acid receptor ? prevents obesity and steatohepatitis by regulating energy expenditure and lipogenesis Obesity (Silver Spring) 2024-01-03 [PMID: 37873741]

Hu S, Cassim Bawa FN, Zhu Y et al. Loss of adipose ATF3 promotes adipose tissue lipolysis and the development of MASH Communications Biology 2024-10-10 [PMID: 39390075]

Rui Liu, Gabriella H Pugh, Erin Tevonian, Katherine Thompson, Douglas A Lauffenburger, Philip A Kern, Barbara S Nikolajczyk Regulatory T Cells Control Effector T Cell Inflammation in Human Prediabetes. Diabetes 2022-02-23 [PMID: 34737186]

Rudalska R, Harbig J, Snaebjornsson M et al. LXR alpha activation and Raf inhibition trigger lethal lipotoxicity in liver cancer Nature Cancer 2021-02-01 [PMID: 35122079]

Chi-Yu Kuo, Yuan-Ching Chang, Ming-Nan Chien, Jie-Yang Jhuang, Yi-Chiung Hsu, Shih-Yuan Huang, Shih-Ping Cheng SREBP1 promotes invasive phenotypes by upregulating CYR61/CTGF via the Hippo-YAP pathway. Endocrine-related cancer 2022-04-14 [PMID: 34821220]

Matthew Grove, Hyukmin Kim, Shuhuan Pang, Jose Paz Amaya, Guoqing Hu, Jiliang Zhou, Michel Lemay, Young-Jin Son, Klaus-Armin Nave, Timothy E Behrens TEAD1 is crucial for developmental myelination, Remak bundles, and functional regeneration of peripheral nerves eLife 2024-03-08 [PMID: 38456457]

Srinivasan MP, Bhopale KK, Amer SM et al. Linking Dysregulated AMPK Signaling and ER Stress in Ethanol-Induced Liver Injury in Hepatic Alcohol Dehydrogenase Deficient Deer Mice Biomolecules 2019-10-02 [PMID: 31581705]

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)

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.

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Products Related to NB600-582

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)

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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