Product Datasheet

Fatty Acid Synthase/FASN Antibody
NB400-114

Unit Size: 0.1 ml

Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.

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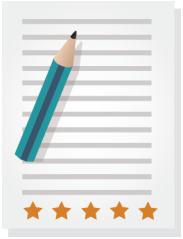
Updated 10/23/2024 v.20.1



NB400-114

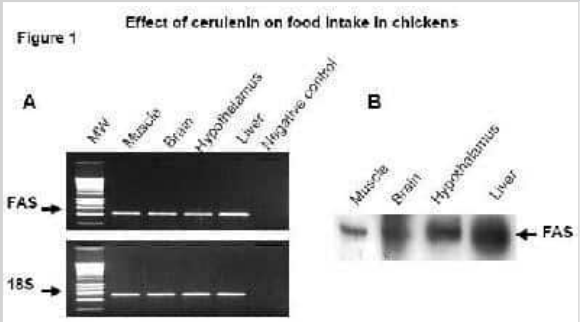
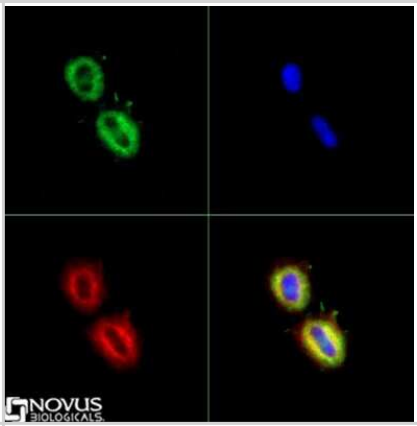
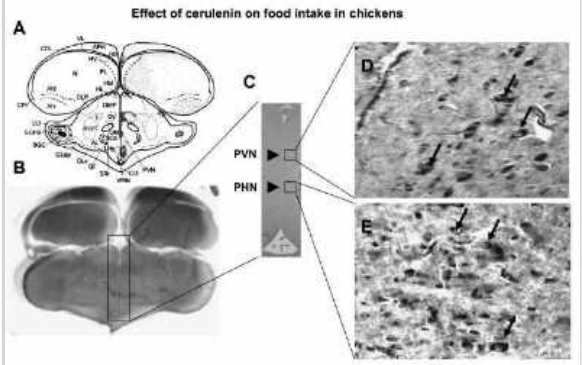
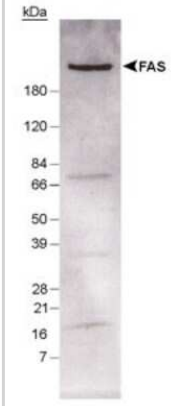
Fatty Acid Synthase/FASN Antibody

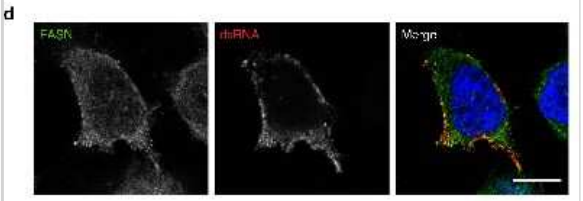
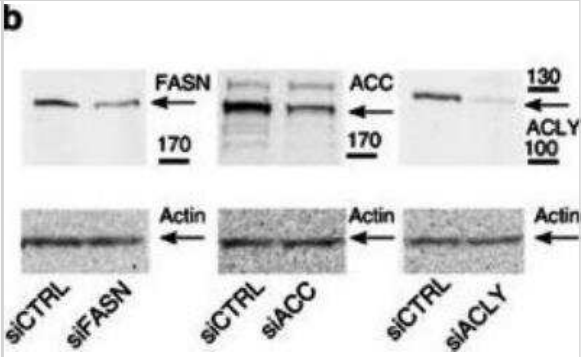
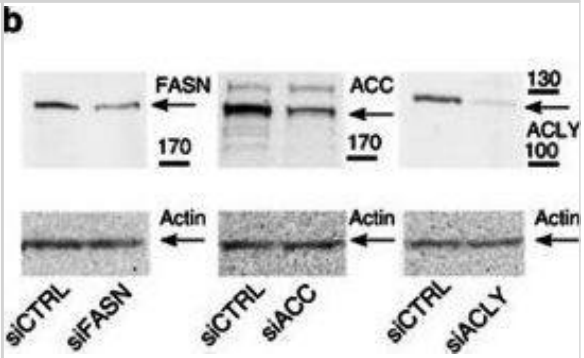
Product Information	
Unit Size	0.1 ml
Concentration	This product is unpurified. The exact concentration of antibody is not quantifiable.
Storage	Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.05% Sodium Azide
Isotype	IgG
Purity	Unpurified
Buffer	Whole antisera
Target Molecular Weight	272 kDa

Product Description	
Host	Rabbit
Gene ID	2194
Gene Symbol	FASN
Species	Human, Mouse, Rat, Porcine, Chicken, Feline, Hamster, Plant, Primate
Reactivity Notes	Plant reactivity reported in scientific literature (PMID: 24649190). Feline reactivity reported in scientific literature (PMID: 28871635).
Immunogen	A synthetic peptide, conjugated to KLH, made near the N-terminus of mouse FAS. [Swiss-Prot# P19096]

Product Application Details	
Applications	Western Blot, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin, Immunoprecipitation, Knockdown Validated
Recommended Dilutions	Western Blot 1:1000, Immunohistochemistry 1:500, Immunocytochemistry/ Immunofluorescence 1:2000, Immunoprecipitation 1:100, Immunohistochemistry-Paraffin 1:500immunoprecipitation 1:100, Knockdown Validated
Application Notes	This Fatty Acid Synthase antibody is useful for Immunocytochemistry/Immunofluorescence, Immunohistochemistry-Paraffin, Immunoprecipitation and Western Blot where a band at ~272 kDa is observed. May see 1 or 2 minor cross-reacting lower MW bands in liver tissue. In ICC/IF cytoplasmic staining can be seen in MCF7 cells. The observed molecular weight of the protein may vary from the listed predicted molecular weight due to post translational modifications, post translation cleavages, relative charges, and other experimental factors.

Images

Western Blot: Fatty Acid Synthase/FASN Antibody [NB400-114] - Expression of Fatty Acid Synthase in chicken hypothalamus. A: total RNA (1 ug) isolated from different tissues (brain, hypothalamus, liver and muscle) was subjected to RT-PCR using specific primers for chicken Fatty Acid Synthase (GenBank accession JO4485) or ribosomal 18S as a control (GenBank accession AF173612) B: tissue lysates (brain, hypothalamus, liver and muscle) were subjected to Western blot as described in MATERIALS AND METHODS. Blots were incubated with anti-Fatty Acid Synthase antibody and revealed by enhanced chemiluminescence. Picture compliments of Dridi S. et al, Am J Physiol Regul Integr Comp Physiol. 2006 Jul;291(1):R138-47. Epub 2006 Feb 2.	
Immunocytochemistry/Immunofluorescence: Fatty Acid Synthase/FASN Antibody [NB400-114] - The Fas antibody was tested in MCF-7 cells at a 1:2000 dilution against Dylight 488 (Green). Alpha tubulin and nuclei were counterstained against Dylight 550 (Red) and DAPI (Blue), respectively.	
Immunohistochemistry-Paraffin: Fatty Acid Synthase/FASN Antibody [NB400-114] - Immunohistochemical localization of FAS in chicken hypothalmus. Paraffin sections were obtained from 3-wk-old broiler chickens.	
Western Blot: Fatty Acid Synthase/FASN Antibody [NB400-114] - Analysis of Fatty Acid Synthase, using NB400-114. Samples: 50 ug of total mouse liver lysate.	

Immunocytochemistry/Immunofluorescence: Fatty Acid Synthase/FASN Antibody [NB400-114] - Fatty acid synthesis requirement for CHIKV life cycle. Confocal section of CHIKV replicon-infected HeLa cells labelled for FASN, dsRNA and 4,6-diamidino-2-phenylindole (DAPI; blue). Scale bar, 10 um. Image collected and cropped by CiteAb from the following publication (https://www.nature.com/doifinder/10.1038/ncomms11320), licensed under a CC-BY license.	
Knockdown Validated: Fatty Acid Synthase/FASN Antibody [NB400-114] - Fatty acid synthesis requirement for CHIKV life cycle. Western blot showing silencing efficiency of FASN-, ACC- and ACLY-specific siRNAs on CHIKV replication (n=10 for each data set).	
Western Blot: Fatty Acid Synthase/FASN Antibody [NB400-114] - Fatty acid synthesis requirement for CHIKV life cycle.(a) Impact of FASN or ACLY knockdown on CHIKV replication. Closed & open symbols indicate replicates from the primary screen & during validation, respectively. (b) Western blot showing silencing efficiency of siRNAs used in c. (c) Impact of FASN-, ACC- & ACLY-specific siRNAs on CHIKV replication (n=10 for each data set). (d) Confocal section of CHIKV replicon-infected HeLa cells labelled for FASN, dsRNA & 4,6-diamidino-2-phenylindole (DAPI; blue). Scale bar, 10 µm. (e) Co-localization analysis of cells labelled as in d & in Supplementary Fig. 3b, plotted as Pearson's coefficient per cell. Each symbol corresponds to a cell stack from three independent experiments (n=29 cells for FASN, 30 cells for ACC & 31 cells for ACLY); median values shown in red. (f) Effect of FASN (cerulenin, n=12 for each data set), ACC (TOFA, n=11 for each data set) & ACLY (BMS-303141 n=11 for each data set) inhibitors on CHIKV replication. (g) Real-time cell toxicity assay performed on HeLa cells (n=3 for each point). Excepted for b & d where representative images are shown & for g where the mean ±s.d. is shown for each point of a representative experiment, all data represent the means±s.e.m. of three independent experiments analysed using one-way analysis of variance with Tukey's post test (*P<0.05; **P<0.01; ***P<0.001; NSP≥0.05). NS, not significant. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/27177310), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	

Publications

Liebscher G, Vujic N, Schreiber R et al. The lysosomal LAMTOR / Ragulator complex is essential for nutrient homeostasis in brown adipose tissue Molecular metabolism 2023-03-11 [PMID: 36907508]

Nima K. Emami, Reagan N. Cauble, Ahmed E. Dhamad, Elizabeth S. Greene, Cynthia S. Coy, Sandra G. Velleman, Sara Orlowski, Nicholas Anthony, Mike Bedford, Sami Dridi Hypoxia further exacerbates woody breast myopathy in broilers via alteration of satellite cell fate Poultry Science 2021-03-27 [PMID: 34091348]

Liang Y, Li X, Zhang Y et al. Induced Pluripotent Stem Cells-Derived Mesenchymal Stem Cells Attenuate Cigarette Smoke-Induced Cardiac Remodeling and Dysfunction Front Pharmacol 2017-08-14 [PMID: 28804458]

Gupta K, Mukherjee S, Sen S, Sonawane M Coordinated activities of Myosin Vb isoforms and mTOR signaling regulate epithelial cell morphology during development Development (Cambridge, England) 2022-03-15 [PMID: 35299238]

Han Y, Lee Y, Jang Y et Al. Aspirin Improves Nonalcoholic Fatty Liver Disease and Atherosclerosis through Regulation of the PPARdelta-AMPK-PGC-1 alpha Pathway in Dyslipidemic Conditions BioMed Research International 2020-03-19 [PMID: 32258142] (WB, Mouse, Human)

Iizuka Y, Chiba K, Kim H et al. Impact of discontinuation of fish oil after pioglitazone-fish oil combination therapy in diabetic KK mice J. Nutr. Biochem. 2019-11-07 [PMID: 31760227] (WB, Mouse)

Gang, X;Xuan, L;Zhao, X;Lv, Y;Li, F;Wang, Y;Wang, G; Speckle-type POZ protein suppresses lipid accumulation and prostate cancer growth by stabilizing fatty acid synthase Prostate 2019-04-07 [PMID: 30955223] (WB, Human)

Li MD, Vera NB, Yang Y et al. Adipocyte OGT governs diet-induced hyperphagia and obesity Nat Commun 2018-11-30 [PMID: 30504766] (WB, Mouse)

Zhang Wencheng, Wang Qilong, Song Ping, Zou Ming-Hui. Liver kinase b1 is required for white adipose tissue growth and differentiation. Diabetes 2013-01-01 [PMID: 23396401] (WB, Mouse)

Walz JZ, Saha J, Arora A et al. Fatty acid synthase as a potential therapeutic target in feline oral squamous cell carcinoma Vet Comp Oncol 2017-09-04 [PMID: 28871635] (WB, Feline)

Park SH, Sung YY, Jang S et al. The Korean herbal medicine, Do In Seung Gi-Tang, attenuates atherosclerosis via AMPK in high-fat diet-induced ApoE(-/-) mice. BMC Complement Altern Med. 2016-09-08 [PMID: 27608856] (IF/IHC, Mouse)

Gang X, Yang Y, Zhong J et al. P300 acetyltransferase regulates fatty acid synthase expression, lipid metabolism and prostate cancer growth. Oncotarget 2016-03-22 [PMID: 26934656] (WB)

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Procedures

WB protocol specific for Fatty Acid Synthase Antibody (NB400-114)

1. Run ~50 ug of total protein on a 4-15% SDS polyacrylamide gel.
2. Transfer protein to a nitrocellulose membrane.
3. Block membrane with 1XPBS/5% non-fat milk/0.1% Tween-20 for 1 hour at room temperature (~23-27C).
4. Incubate membrane with 1:1000 dilution of NB400-114, diluted in 1XPBS/1% BSA, for 1 hour at room temperature.
5. Wash membrane once for 15 minutes, then four times for 5 minutes each, with PBST.
6. Incubate membrane with anti-rabbit IgG-HRP, diluted in 1XPBS/1% BSA, for 30 minutes-1 hour at room temperature.
7. Wash membrane once for 15 minutes, then four times for 5 minutes each, with PBST.
8. Detect cross-reacting proteins using a Chemiluminescence Reagent kit: expose ~1 minute.

NOTE: mouse liver lysates were used as a positive control for this antibody.

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 NB400-114

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

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