10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

FASN Antibody (Center)
Mouse Monoclonal Antibody (Mab)
Catalog # AM2067B

Specification

FASN Antibody (Center) - Product Information

Application	**WB, IF,E**
Primary Accession	P49327
Other Accession	NP_004095.4
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG1,κ**
Antigen Region	**942-973**

FASN Antibody (Center) - Additional Information

Gene ID 2194

Other Names
Fatty acid synthase, [Acyl-carrier-protein] S-acetyltransferase, [Acyl-carrier-protein] S-malonyltransferase, 3-oxoacyl-[acyl-carrier-protein] synthase, 3-oxoacyl-[acyl-carrier-protein] reductase, 3-hydroxyacyl-[acyl-carrier-protein] dehydratase, Enoyl-[acyl-carrier-protein] reductase, Oleoyl-[acyl-carrier-protein] hydrolase, FASN, FAS

Target/Specificity
This FASN antibody is generated from mice immunized with a KLH conjugated synthetic peptide between 942-973 amino acids from the Central region of human FASN.

Dilution
WB~~1:1000
IF~~1:25

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
FASN Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

FASN Antibody (Center) - Protein Information

Name FASN

Synonyms FAS

Function Fatty acid synthetase is a multifunctional enzyme that catalyzes the de novo biosynthesis of long-chain saturated fatty acids starting from acetyl-CoA and malonyl-CoA in the presence of NADPH. This multifunctional protein contains 7 catalytic activities and a site for the binding of the prosthetic group 4'-phosphopantetheine of the acyl carrier protein ([ACP]) domain.

Cellular Location
Cytoplasm. Melanosome. Note=Identified by mass spectrometry in melanosome fractions from stage I to stage IV

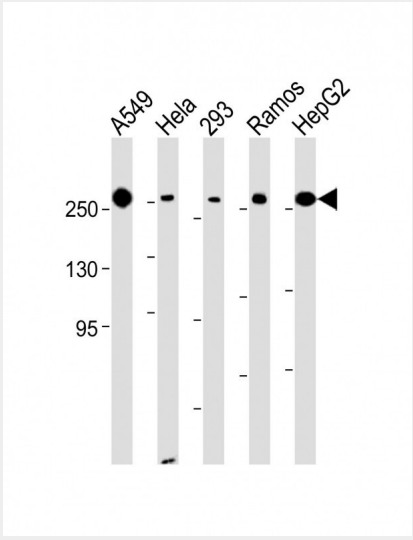
Tissue Location
Ubiquitous. Prominent expression in brain, lung, liver and mammary gland.

FASN Antibody (Center) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

FASN Antibody (Center) - Images



All lanes : Anti-FASN Antibody (Center) at 1:500-1:2000 dilution Lane 1: A549 whole cell lysate Lane 2: Hela whole cell lysate Lane 3: 293 whole cell lysate Lane 4: Ramos whole cell lysate Lane 5: HepG2 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 273 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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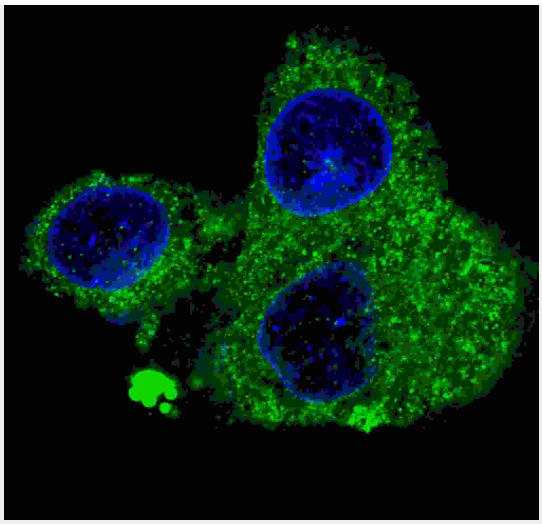
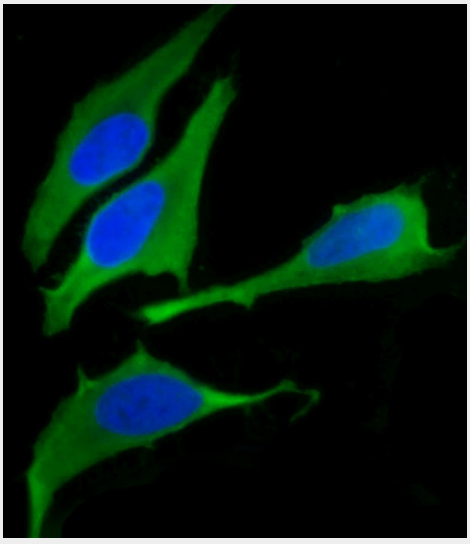


Fluorescent confocal image of HepG2 cells stained with FASN (Center) antibody. HepG2 cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.2%, 30 min). Cells were then incubated with AM2067b FASN primary antibody (1:200, 2 h at room temperature). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-mouse antibody (green) was used (1:1000, 1h). Nuclei were counterstained with Hoechst 33342 (blue) (10 µg/ml, 5 min). Note the highly specific localization of the FASN immunosignal to the cytoplasm, supported by Human Protein Atlas Data (http://www.proteinatlas.org/ENSG00000169710).



Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0. 1% Triton X-100 permeabilized U-2 OS ((human cervical epithelial adenocarcinoma cell line) cells labeling FASN with AM2067b at 1/25 dilution, followed by Dylight® 488-conjugated goat anti-mouse IgG (35503) secondary antibody at 1/200 dilution (green). Immunofluorescence image showing cytoplasm Hela cell line. The nuclear counter stain is DAPI (blue).

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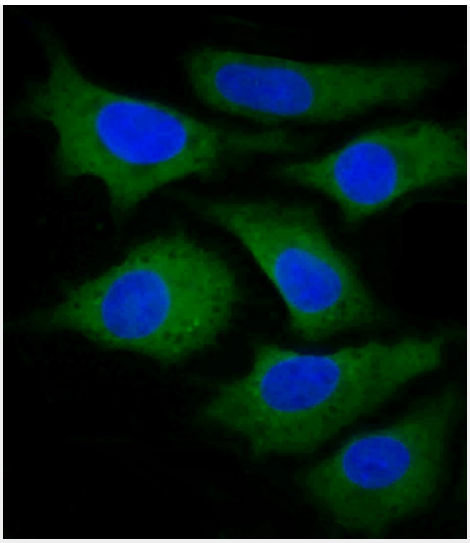
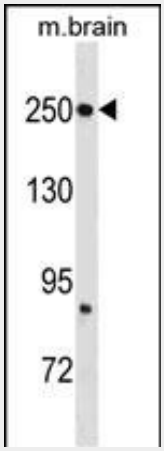


Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0. 1% Triton X-100 permeabilized HepG2 (human liver hepatocellular carcinoma cell line) cells labeling FASN with AM2067b at 1/25 dilution, followed by Dylight® 488-conjugated goat anti-mouse IgG (35503) secondary antibody at 1/200 dilution (green). Immunofluorescence image showing cytoplasm HepG2 cell line. The nuclear counter stain is DAPI (blue).



FASN Antibody (Center) (Cat. #AM2067b) western blot analysis in mouse brain tissue lysates (35µg/lane).This demonstrates the FASN (Center) antibody detected the FASN (Center) protein (arrow).

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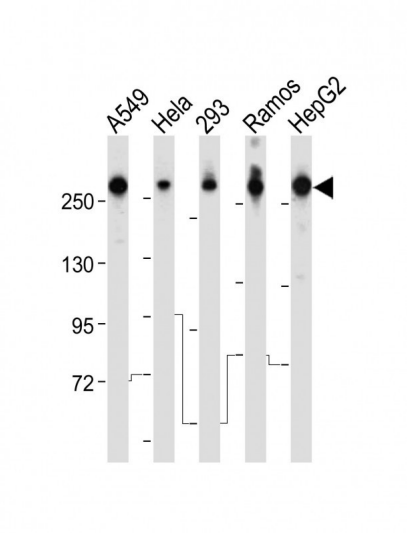
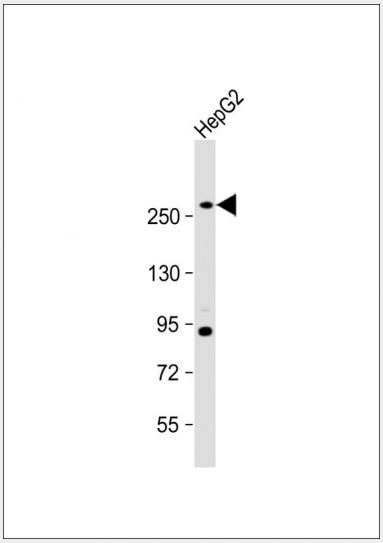


All lanes : Anti-FASN Antibody (Center) at 1:8000 dilution Lane 1: A549 whole cell lysate Lane 2: Hela whole cell lysate Lane 3: 293 whole cell lysate Lane 4: Ramos whole cell lysate Lane 5: HepG2 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 273 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Anti- at 1:1000 dilution + HepG2 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 273 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

FASN Antibody (Center) - Background

The enzyme encoded by this gene is a multifunctional protein. Its main function is to catalyze the synthesis of palmitate from acetyl-CoA and malonyl-CoA, in the presence of NADPH, into long-chain saturated fatty acids. In some cancer cell lines, this protein has been found to be fused with estrogen receptor-alpha (ER-alpha), in which the N-terminus of FAS is fused in-frame with the C-terminus of ER-alpha.

FASN Antibody (Center) - References

References for protein:
1.Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)
2.Nguyen, P.L., et al. J. Clin. Oncol. 28(25):3958-3964(2010)
3.Ruano, G., et al. Pharmacogenomics 11(7):959-971(2010)
4.Tischler, V., et al. Histopathology 56(6):811-815(2010)
5.Dorn, C., et al. Int J Clin Exp Pathol 3(5):505-514(2010)
References for HepG2 cell line:
1. Knowles BB, et al. (1980). Human hepatocellular carcinoma cell lines secrete the major plasma proteins and hepatitis B surface antigen. Science 209: 497-499.[PubMed: 6248960].
2. Darlington GJ, et al. (1987). Growth and hepatospecific gene expression of human hepatoma cells in a defined medium. In Vitro Cell. Dev. Biol. 23: 349-354.[PubMed: 3034851].
3. Ihrke, G; Neufeld, EB; Meads, T; Shanks, MR; Cassio, D; Laurent, M; Schroer, TA; Pagano, RE et al. (1993). "WIF-B cells: an in vitro model for studies of hepatocyte polarity". Journal of Cell Biology 123 (6): 1761–1775. [PubMed:7506266].
4. Mersch-Sundermann, V.; Knasmüller, S.; Wu, X. J.; Darroudi, F.; Kassie, F. (2004). "Use of a human-derived liver cell line for the detection of cytoprotective, antigenotoxic and cogenotoxic agents". Toxicology 198 (1–3): 329–340. [PubMed:15138059].