OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for TA336642

Fatty Acid Synthase (FASN) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	ICC/IF, IHC, IP, WB
Recommended Dilution:	Knockdown Validated, Immunohistochemistry: 1:500, Immunocytochemistry/ Immunofluorescence: 1:2000, Immunoprecipitation: 1:100, Western Blot: 1:1000, Immunohistochemistry-Paraffin: 1:500immunoprecipitation 1:100
Reactivity:	Human, Mouse, Rat, Chicken, Hamster, Porcine, Primate
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	A synthetic peptide, conjugated to KLH, made near the N-terminus of mouse FAS. [Swiss-Prot# P19096]
Formulation:	Tris-citrate/phosphate, pH 7, 0.1% Sodium azide. Store at 4C. Do not freeze.
Concentration:	lot specific
Purification:	Whole antisera
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Predicted Protein Size:	272 kDa
Gene Name:	fatty acid synthase
Database Link:	NP_004095 Entrez Gene 14104 MouseEntrez Gene 50671 RatEntrez Gene 2194 Human P49327

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Background: Fatty acid synthetase (FASN) is a key player of fatty acid biosynthetic pathway and it catalyzes formation of long-chain fatty acids from acetyl-CoA, malonyl-CoA and NADPH (de novo lipid synthesis). Localized in cytoplasm and melanosomes, FASN is expressed at low level in normal adult tissues; however, it is significantly upregulated in cancer cells. The FASN expression is regulated by growth factors/growth factor receptors (EGFR and HER2) and steroid hormone /steroid hormone receptors (ER, AR and progesterone receptor). Downstream of the receptors, PI3K-AKT and MAPK signaling mediate FASN expression through SREBP-1c. FASN expression is also controlled by p53 family proteins and SPOT14, lipogenesis-related nuclear protein generally overexpressed in breast cancer. Extracellular stresses including hypoxia and low pH also induce the FASN expression in cancer cells and USP2a stabilises FASN alongwith promotion of its mTOR-dependent selective translational induction. FASN activation provides rapidly proliferating tumor cells sufficient amount of lipids for membrane biogenesis and confers growth/survival advantage possibly acting as a metabolic oncogene. Because FASN-inhibitors are selectively toxic to tumor cells, it has emerged as an attractive target for cancer.

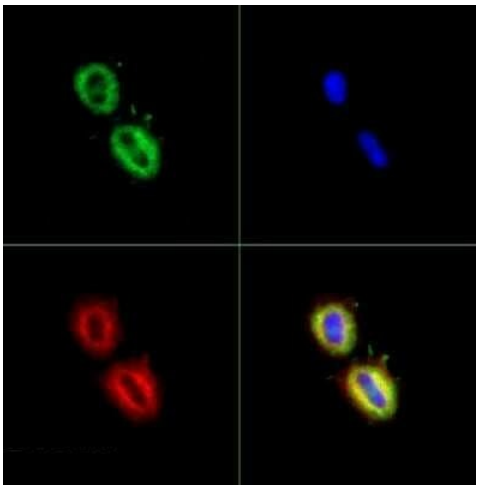
Synonyms: FAS; OA-519; SDR27X1

Note: 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.

Protein Families: Druggable Genome

Protein Pathways: Fatty acid biosynthesis, Insulin signaling pathway, Metabolic pathways

Product images:



Immunocytochemistry/Immunofluorescence: Fatty Acid Synthase/FASN Antibody TA336642 - 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.

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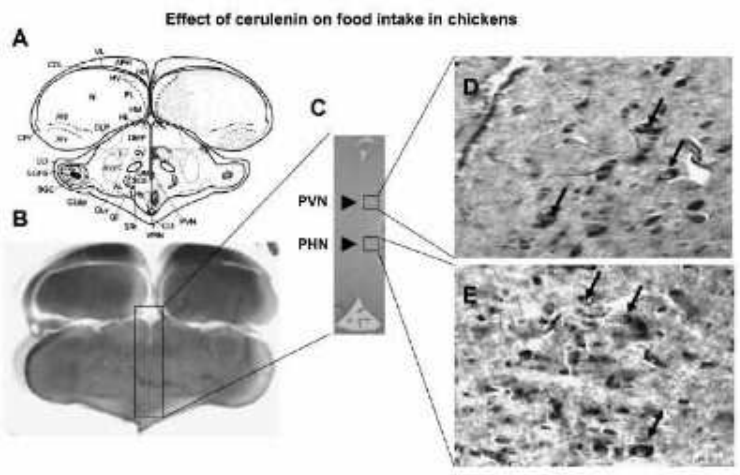
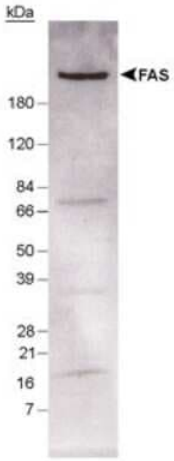
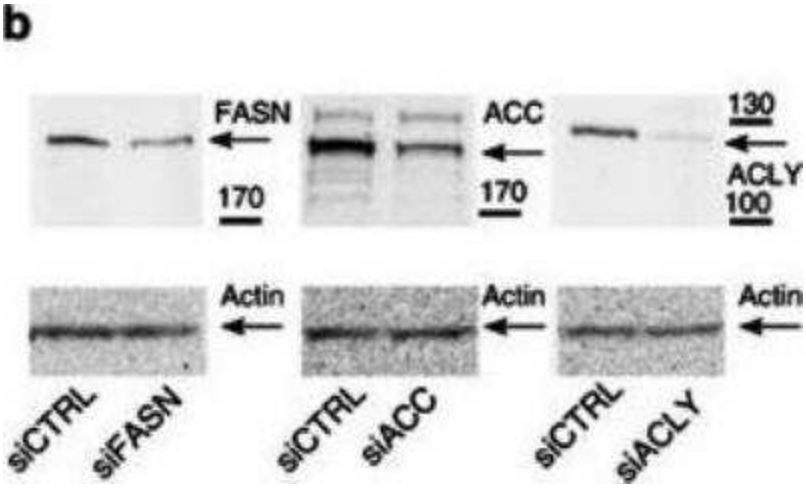


Immunohistochemistry-Paraffin: Fatty Acid Synthase/FASN Antibody TA336642 - Immunohistochemical localization of FAS in chicken hypothalmus. Paraffin sections were obtained from 3-wk-old broiler chickens.



Western Blot: Fatty Acid Synthase/FASN Antibody TA336642 - Analysis of Fatty Acid Synthase, using TA336642. Samples: 50 ug of total mouse liver lysate.



Knockdown Validated: Fatty Acid Synthase/FASN Antibody TA336642 - 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).

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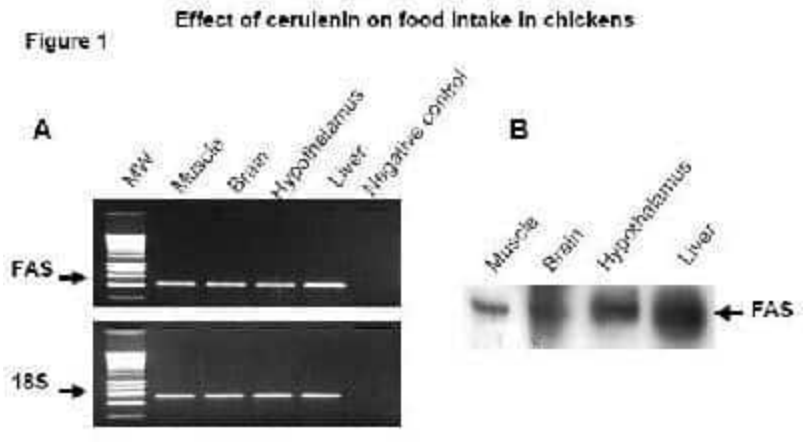

Western Blot: Fatty Acid Synthase/FASN Antibody TA336642 - Expression of Fatty Acid Synthase in chicken hypothalamus. A: total RNA (1 ug) isolated from different tissues (brain, hypothalamus, liver and muscle) was subjected to RT-PCR using specific primers for chicken Fatty Acid Synthase (GenBank accession JO4485) or ribosomal 18S as a control (GenBank accession AF173612) B: tissue lysates (brain, hypothalmus, 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.

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