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#3189

Fatty Acid Synthase Antibody

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W	Reactivity: H M	Sensitivity: Endogenous	MW (kDa): 273	Source/Isotype: Rabbit	UniProt ID: #P19096	Entrez-Gene Id: 14104
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Product Usage Information

Application

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Fatty Acid Synthase Antibody detects endogenous levels of total fatty acid synthase protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide around Ala1160 corresponding to a sequence of mouse fatty acid synthase. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Fatty acid synthase (FASN) catalyzes the synthesis of long-chain fatty acids from acetyl-CoA and malonyl-CoA. FASN is active as a homodimer with seven different catalytic activities and produces lipids in the liver for export to metabolically active tissues or storage in adipose tissue. In most other human tissues, FASN is minimally expressed since they rely on circulating fatty acids for new structural lipid synthesis (1).

According to the research literature, increased expression of FASN has emerged as a phenotype common to most human carcinomas. For example in breast cancer, immunohistochemical staining showed that the levels of FASN are directly related to the size of breast tumors (2). Research studies also showed that FASN is highly expressed in lung and prostate cancers and that FASN expression is an indicator of poor prognosis in breast and prostate cancer (3-5). Furthermore, inhibition of FASN is selectively cytotoxic to human cancer cells (5). Thus, increased interest has focused on FASN as a potential target for the diagnosis and treatment of cancer as well as metabolic syndrome (6,7).

Background References

1. Katsurada, A. et al. (1990) *Eur J Biochem* 190, 427-33.
2. Wells, W.A. et al. (2006) *Breast Cancer Res Treat* 98, 231-40.
3. Kawamura, T. et al. (2005) *Pathobiology* 72, 233-240.
4. Shah, U.S. et al. (2006) *Hum Pathol* 37, 401-409.
5. Kuhajda, F.P. (2000) *Nutrition* 16, 202-8.
6. Tian, W.X. (2006) *Curr Med Chem* 13, 967-977.
7. Kusunoki, J. et al. (2006) *Endocrine* 29, 91-100.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse

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