

#3180 Store at -20°C

Fatty Acid Synthase (C20G5) Rabbit mAb

✓ 100 µl
(10 western blots)



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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP, IHC-P, IHC-F, IF-IC Endogenous	H, M, R, (B)	273 kDa	Rabbit IgG**

Background: Fatty acid synthase (FAS) catalyzes the synthesis of long-chain fatty acids from acetyl-CoA and malonyl-CoA. FAS 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, FAS is minimally expressed since they rely on circulating fatty acids for new structural lipid synthesis (1).

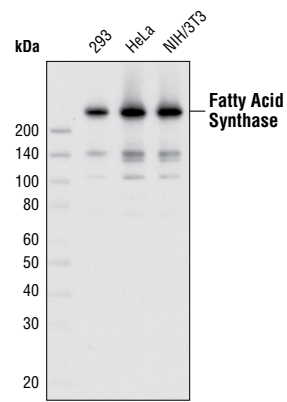
More recently, increased expression of FAS has emerged as a phenotype common to most human carcinomas. In breast cancer, immunohistochemical staining showed that the levels of FAS are directly related to the size of breast tumors (2). Studies also showed that FAS is highly expressed in lung and prostate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

Specificity/Sensitivity: Fatty Acid Synthase (C20G5) Rabbit mAb detects endogenous levels of total fatty acid synthase protein.

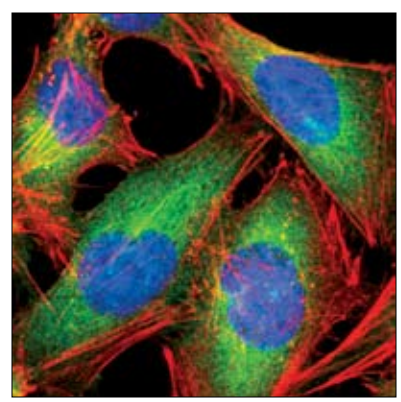
Source/Purification: Fatty Acid Synthase (C20G5) Rabbit mAb is produced by immunizing rabbits with a synthetic peptide around Gly46 corresponding to the sequence of human fatty acid synthase.

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.



Western blot analysis of extracts from various cell types using Fatty Acid Synthase (C20G5) Rabbit mAb.



Confocal immunofluorescent analysis of HeLa cells using Fatty Acid Synthase (C20G5) Rabbit mAb (green). Actin filaments have been labeled with DY-554 phalloidin (red). Blue pseudo-color = DRAQ5® #4084 (fluorescent DNA dye).

Entrez-Gene ID #2194
Swiss-Prot Acc. #P49327

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

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:50
Immunohistochemistry (Paraffin)	1:50†
Unmasking buffer:	Citrate
Antibody diluent:	SignalStain® Antibody Diluent #8112
Detection reagent:	SignalStain® Boost (HRP, Rabbit) #8114
† Optimal IHC dilutions determined using SignalStain® Boost IHC Detection Reagent.	
Immunohistochemistry (Frozen)	1:50
Fixative:	3% Formaldehyde/Metnanol
Immunofluorescence (IF-IC)	1:50

For application specific protocols please see the web page for this product at www.cellsignaling.com.

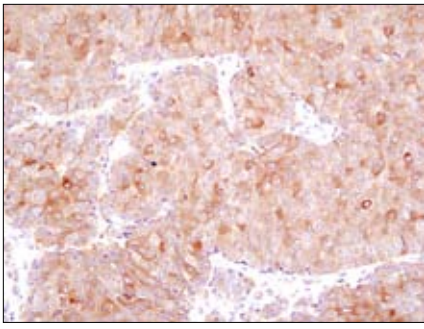
Please visit www.cellsignaling.com for a complete listing of recommended companion products.

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

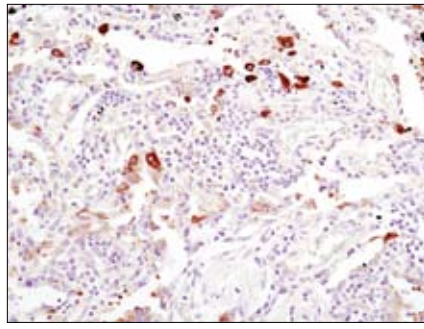
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Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.

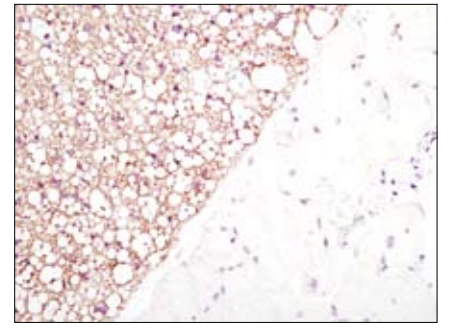
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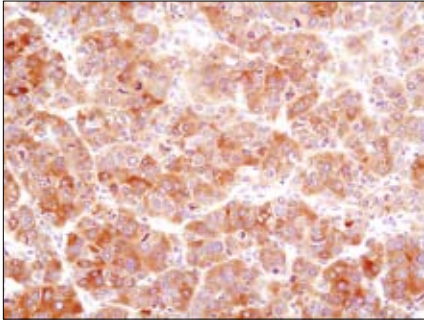
Immunohistochemical analysis of paraffin-embedded breast carcinoma using Fatty Acid Synthase (C20G5) Rabbit mAb.



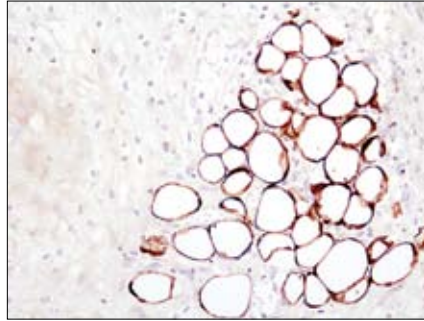
Immunohistochemical analysis of paraffin-embedded lung carcinoma using Fatty Acid Synthase (C20G5) Rabbit mAb.



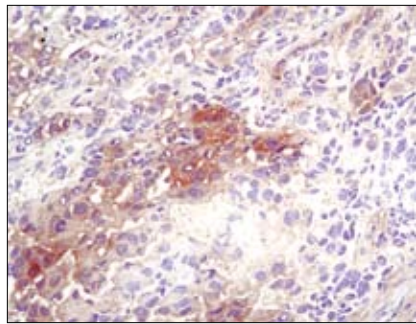
Immunohistochemical analysis of paraffin-embedded mouse brown fat using Fatty Acid Synthase (C20G5) Rabbit mAb.



Immunohistochemical analysis of paraffin-embedded hepatocellular carcinoma using Fatty Acid Synthase (C20G5) Rabbit mAb.



Immunohistochemical analysis of paraffin-embedded lymphoma, showing staining of adipocytes, using Fatty Acid Synthase (C20G5) Rabbit mAb.



Immunohistochemical analysis of frozen SKOV-3 xenograft using Fatty Acid Synthase (C20G5) Rabbit mAb.