Revision 5

#3180 Store at -20C

Fatty Acid Synthase (C20G5) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP, IHC-P, IF-IC	H M R	Endogenous	273	Rabbit IgG	#P49327	2194

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50
Immunohistochemistry (Paraffin)	1:50 - 1:200
Immunofluorescence (Immunocytochemistry)	1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

Specificity / Sensitivity

Fatty Acid Synthase (C20G5) Rabbit mAb detects endogenous levels of total fatty acid synthase protein. Reactivity by immunofluorescence is human only.

Species predicted to react based on 100% sequence homology:

Bovine

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

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

WB: Western Blotting **IP:** Immunoprecipitation **IHC-P:** Immunohistochemistry (Paraffin)
IF-IC: Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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