

Fatty Acid Synthase (h): 293T Lysate: sc-158502

BACKGROUND

Fatty acid biosynthesis is mediated by seven catalytic enzymes and an acyl carrier protein (ACP), to which various acyl intermediates are covalently attached. Fatty Acid Synthase (FAS) is the anabolic enzyme that contains the seven unique catalytic sites and mediates the conversion of acetyl-CoA and malonyl-CoA, in the presence of the cofactor NADPH, into long-chain saturated fatty acids, such as palmitate. Human FAS cDNA encodes a 2,504 amino acid protein. Catalytically active FAS is a homodimer. Human FAS mRNA is variably expressed with abundant levels present in brain, lung and liver. Fatty acid synthetic metabolism is abnormally elevated in tumor cells and may support cell growth or survival of malignant cancers.

REFERENCES

1. Smith, S. 1994. The animal Fatty Acid Synthase: one gene, one polypeptide, seven enzymes. *FASEB J.* 8: 1248-1259.
2. Jayakumar, A., et al. 1994. Isolation and chromosomal mapping of genomic clones encoding the human Fatty Acid Synthase gene. *Genomics* 23: 420-424.
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4. Chirala, S.S., et al. 2001. Human Fatty Acid Synthase: Role of interdomain in the formation of catalytically active synthase dimer. *Proc. Natl. Acad. Sci. USA* 98: 3104-3108.
5. Pizer, E.S., et al. 2001. Increased Fatty Acid Synthase as a therapeutic target in androgen-independent prostate cancer progression. *Prostate* 47: 102-110.
6. Li, J.N., et al. 2001. Pharmacological inhibition of Fatty Acid Synthase activity produces both cytostatic and cytotoxic effects modulated by p53. *Cancer Res.* 61: 1493-1499.
7. Gabrielson, E.W., et al. 2001. Increased Fatty Acid Synthase is a therapeutic target in mesothelioma. *Clin. Cancer Res.* 7: 153-157.
8. Myers, R.B., et al. 2001. Fatty Acid Synthase: an early molecular marker of progression of prostatic adenocarcinoma to androgen independence. *J. Urol.* 165: 1027-1032.

CHROMOSOMAL LOCATION

Genetic locus: FASN (human) mapping to 17q25.3.

PRODUCT

Fatty Acid Synthase (h): 293T Lysate represents a lysate of human Fatty Acid Synthase transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

Fatty Acid Synthase (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive Fatty Acid Synthase antibodies. Recommended use: 10-20 µl per lane.

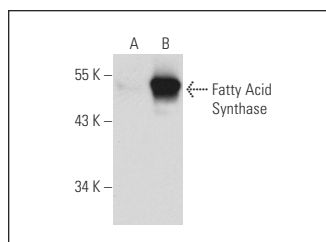
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Fatty Acid Synthase (G-11): sc-48357 is recommended as a positive control antibody for Western Blot analysis of enhanced human Fatty Acid Synthase expression in Fatty Acid Synthase transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

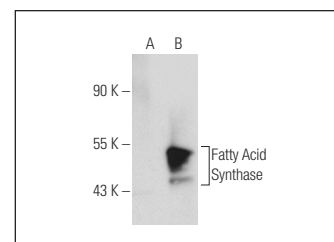
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



Fatty Acid Synthase (G-11): sc-48357. Western blot analysis of Fatty Acid Synthase expression in non-transfected: sc-117752 (A) and human Fatty Acid Synthase transfected: sc-158502 (B) 293T whole cell lysates.



Fatty Acid Synthase (A-5): sc-55580. Western blot analysis of Fatty Acid Synthase expression in non-transfected: sc-117752 (A) and human Fatty Acid Synthase transfected: sc-158502 (B) 293T whole cell lysates.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.