

I-FABP (G-1): sc-514641

BACKGROUND

Fatty acid-binding proteins, designated FABPs, are a family of homologous cytoplasmic proteins that are expressed in a highly tissue-specific manner and play an integral role in the balance between lipid and carbohydrate metabolism. FABPs mediate fatty acid (FA) and/or hydrophobic ligand uptake, transport and targeting within their respective tissues. The mechanisms underlying these actions can give rise to both passive diffusional uptake and protein-mediated transmembrane transport of FAs. FABPs are expressed in adipocytes (A-FABP), brain (B-FABP), epidermis (E-FABP, also designated psoriasis-associated FABP or PA-FABP), muscle and heart (H-FABP, also designated mammary-derived growth inhibitor or MDGI), intestine (I-FABP), liver (L-FABP), myelin (M-FABP) and testis (T-FABP). Intestinal FABP (I-FABP) is an abundant cytosolic protein abundant in small intestine epithelial cells. The human gene maps to chromosome 4q26 and has a polymorphism at codon 54, which confers an alanine-encoding allele and a threonine-encoding allele. Threonine at position 54 is associated with increased fat oxidation and Insulin resistance.

REFERENCES

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3. Hotamisligil, G.S., et al. 1996. Uncoupling of obesity from Insulin resistance through a targeted mutation in aP2, the adipocyte fatty acid binding protein. *Science* 274: 1377-1379.
4. Storch, J. and Thumser, A.E. 2000. The fatty acid transport function of fatty acid-binding proteins. *Biochim. Biophys. Acta* 1486: 28-44.
5. Glatz, J.F. and Storch, J. 2001. Unravelling the significance of cellular fatty acid-binding proteins. *Curr. Opin. Lipidol.* 12: 267-274.
6. Veerkamp, J.H. and Zimmerman, A.W. 2001. Fatty acid-binding proteins of nervous tissue. *J. Mol. Neurosci.* 16: 133-142.
7. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 134640. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
8. LocusLink Report (LocusID: 2167). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: FABP2 (human) mapping to 4q26; Fabp2 (mouse) mapping to 3 G1.

SOURCE

I-FABP (G-1) is a mouse monoclonal antibody raised against amino acids 1-132 representing full length I-FABP of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

I-FABP (G-1) is recommended for detection of I-FABP of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for I-FABP siRNA (h): sc-41239, I-FABP siRNA (m): sc-41240, I-FABP shRNA Plasmid (h): sc-41239-SH, I-FABP shRNA Plasmid (m): sc-41240-SH, I-FABP shRNA (h) Lentiviral Particles: sc-41239-V and I-FABP shRNA (m) Lentiviral Particles: sc-41240-V.

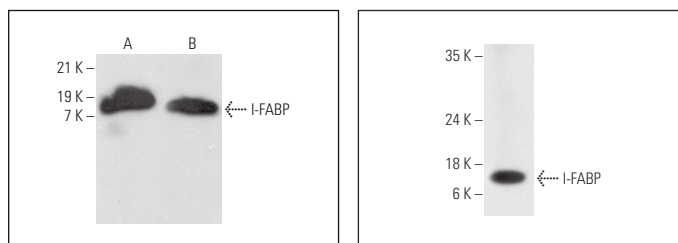
Molecular Weight of I-FABP: 15 kDa.

Positive Controls: COLO 320DM cell lysate: sc-2226, human small intestine extract: sc-364225 or rat small intestine extract: sc-364811.

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



I-FABP (G-1): sc-514641. Western blot analysis of I-FABP expression in human small intestine (A) and rat small intestine (B) tissue extracts.

I-FABP (G-1): sc-514641. Western blot analysis of I-FABP expression in COLO 320DM whole cell lysate.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

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

PROTOCOLS

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