

I-FABP (G-5): sc-376070

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.

CHROMOSOMAL LOCATION

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

SOURCE

I-FABP (G-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 101-129 at the C-terminus of I-FABP of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-376070 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

I-FABP (G-5) 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), immunohistochemistry (including paraffin-embedded sections) (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.

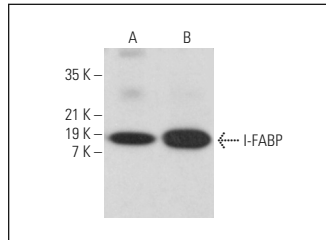
Molecular Weight of I-FABP: 15 kDa.

Positive Controls: COLO 320DM cell lysate: sc-2226, mouse small intestine extract: sc-364252 or rat colon tissue extract.

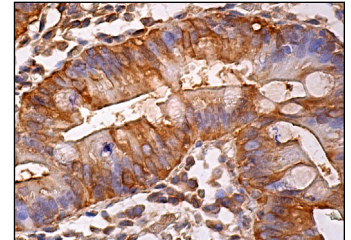
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



I-FABP (G-5): sc-376070. Western blot analysis of I-FABP expression in mouse small intestine (A) and rat colon (B) tissue extracts.



I-FABP (G-5): sc-376070. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

- Kelly, J., et al. 2022. Alterations of mucosa-attached microbiome and epithelial cell numbers in the cystic fibrosis small intestine with implications for intestinal disease. *Sci. Rep.* 12: 6593.
- Suzuki, T., et al. 2022. Comparative effects of allulose, fructose, and glucose on the small intestine. *Nutrients* 14: 3230.

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.