

I-FABP (C-20): sc-16063

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), epithelium (E-FABP, psoriasis-associated FABP, PA-FABP), striated muscle and heart (H-FABP, 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

1. Baier, L.J., et al. 1995. An amino acid substitution in the human intestinal fatty acid binding protein is associated with increased fatty acid binding, increased fat oxidation, and Insulin resistance. *J. Clin. Invest.* 95: 1281-1287.
2. Veerkamp, J.H. and Maatman, R.G. 1995. Cytoplasmic fatty acid-binding proteins: their structure and genes. *Prog. Lipid Res.* 34: 17-52.
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. 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/>

CHROMOSOMAL LOCATION

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

SOURCE

I-FABP (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of I-FABP of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-16063 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

I-FABP (C-20) is recommended for detection of I-FABP of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, 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).

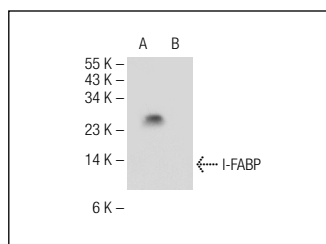
I-FABP (C-20) is also recommended for detection of I-FABP in additional species, including canine and porcine.

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.

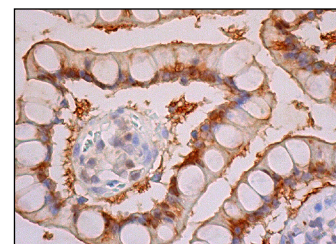
Molecular Weight of I-FABP: 15 kDa.

Positive Controls: I-FABP (m): 293T Lysate: sc-120931 or COLO 320DM cell lysate: sc-2226.

DATA



I-FABP (C-20): sc-16063. Western blot analysis of I-FABP expression in non-transfected: sc-117752 (A) and mouse I-FABP transfected: sc-120931 (B) 293T whole cell lysates.



I-FABP (C-20): sc-16063. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Coeffier, M., et al. 2013. Enteral delivery of proteins stimulates protein synthesis in human duodenal mucosa in the fed state through a mammalian target of rapamycin-independent pathway. *Am. J. Clin. Nutr.* 97: 286-294.

STORAGE

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

MONOS
Satisfaction
Guaranteed

Try **I-FABP (E-9): sc-374482** or **I-FABP (G-5): sc-376070**, our highly recommended monoclonal alternatives to I-FABP (C-20).