Human FABP2/I-FABP Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF3078

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human FABP2/I-FABP in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 35% cross-reactivity with recombinant rat FABP2 is observed, 5% cross-reactivity with recombinant human (rh) FABP1, -4, -5, -7, and recombinant mouse FABP9 is observed, and less than 1% cross-reactivity with rhFABP3 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant human FABP2/I-FABP Ala2-Asp132 Accession # P12104
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS.

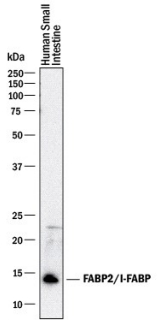
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunocytochemistry	5-15 µg/mL	See Below

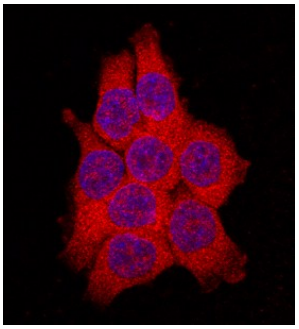
DATA

Western Blot



Detection of Human FABP2/I-FABP by Western Blot. Western blot shows lysates of human small intestine tissue. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human FABP2/I-FABP Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3078) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for FABP2/I-FABP at approximately 14 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunocytochemistry



FABP2/I-FABP in HCT-116 Human Cell Line. FABP2/I-FABP was detected in immersion fixed HCT-116 human colorectal carcinoma cell line using Goat Anti-Human FABP2/I-FABP Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3078) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956

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BACKGROUND

Fatty acid binding protein-2 (FABP2; also I- or intestinal FABP) is a member of a large superfamily of lipid binding proteins that are expressed in a tissue specific manner (1-3). FABP2 is one of nine cytoplasmic FABPs that are 14-15 kDa in size and range from 126-134 amino acids (aa) in length (2). Although all are highly conserved in their tertiary structure, there is only modest aa identity between any two members. Nevertheless, based on aa sequence, the nine FABP family members have been shown to form three subgroups, with FABP2/I-FABP linked with liver/L-FABP and heart/H-FABP (2). The designation of a tissue type, such as intestinal, does not suggest the binding protein is universally expressed in all cell types that make up the organ or tissue. Human I-FABP, the product of the FABP-2 gene, is a 132 aa cytosolic protein that shows a flattened β-barrel structure (called a β-clam) generated by a series of antiparallel β-strands and two α-helices (1, 2, 4). Preferred ligands for FABP2 include sixteen to twenty carbon long chain fatty acids (4). It is suggested that ligands first bind to the outside of the molecule, and this binding subsequently induces a conformational change in the binding protein, resulting in “internalization” of the ligand.(1) An Ala-to-Thr polymorphism at position # 54 has been reported to potentially impact FABP2 function (2). This polymorphism has been suggested to be associated with an increased risk of type II diabetes. To date, the evidence appears to be equivocal (1, 2). This polymorphism may, however, have unusual metabolic effects depending upon the type of diet involved (1, 5). Human FABP-2 is 78%, 82% and 86% aa identical to mouse, rat and canine FABP2, respectively. It also shows 33% and 24% aa identity to human H-FABP and L-FABP, respectively. FABP2 is proposed to transport fatty acids (FA) into cells, increase FA availability to enzymes, protect cell structures from FA attack, and target FA to transcription factors in the nuclear lumen (3).

References:

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bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956