

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human FABP2/I-FABP in direct ELISAs and Western blots. In direct ELISAs, approximately 50% cross-reactivity with recombinant rat FABP2 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human FABP2/I-FABP Ala2-Asp132 Accession # P12104
Conjugate	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunocytochemistry	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

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). FABP2 has been found to be localized in both the cytoplasm and the nuclei (6,7). 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).

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