FABP-2/IFABP Antibody

Cat. No. CP10095

Applications:	**WB, ICC, FACS**
Detected MW:	**15 kDa**
Species & Reactivity:	**Human, Mouse, Rat**
Isotype:	**Mouse IgG1**

BACKGROUND

Fatty acid-binding proteins (FABPs) are members of the superfamily of lipid-binding proteins (LBP). So far 9 different FABPs, with tissue-specific distribution, have been identified: L (liver), I (intestinal), H (muscle and heart), A (adipocyte), E (epidermal), Il (ileal), B (brain),M(myelin) and T (testis). The primary role of all the FABP family members is regulation of fatty acid uptake and intracellular transport. The structure of all FABPs is similar – the basic motif characterizing these proteins is beta-barrel, and a single ligand (e.g. a fatty acid, cholesterol, or retinoid) is bound in its internal water-filled cavity. Despite the wide variance in the protein sequence, the gene structure is identical. The FABP genes consist of 4 exons and 3 introns and a few of them are located in the same chromosomal region. For example, A-FABP, E-FABP and M-FABP create a gene cluster.[1] Physiological roles of these proteins are not only involved in FA transport, but also in regulation of cell growth and differentiation, cellular signalling, gene transcription and cytoprotection.[2] Because of their physiological properties some FABP genes were tested in order to identify mutations altering lipid metabolism and relating with other diseases.

Long-chain free fatty acids, a major hydrolysis product of dietary triglycerides, are absorbed from the lumen into polarized enterocytes that line the small intestine. Following apical absorption into the enterocytes, free fatty acids are reincorporated into triglycerides, which are secreted basolaterally as chylomicrons. The intestinal fatty acid binding protein (IFABP, or FABP-2) is a small (15 kDa), highly abundant protein expressed solely in enterocytes of the proximal small intestine. IFABP has been shown to bind both saturated and unsaturated long-chain fatty acids *in vitro*. Several functions for IFABP have been proposed, which have included the facilitation of cellular uptake and/or transport of long-chain fatty acids within enterocytes. It was shown that the IFABP/FABP2 A54T missense mutation may contribute to the triglyceride enrichment of HDL in the postprandial state that, in turn, may alter the risk of atherosclerotic vascular disease.[3]

References:

1. Chmurzyñska, A. et al: J. Appl. Genet. 47:39–48, 2006
2. Zimmerman, A.W. & Veerkamp, J.H.:Cell. Mol. Life Sci. 59:1096-1116, 2002
3. Berthier, M.T. et al: Besity Res. 9:668–75, 2001

TECHNICAL INFORMATION

Source:
FABP-2/IFABP Antibody is a mouse monoclonal antibody raised against purified recombinant human FABP-2 fragments expressed in *E. coli*.

Specificity and Sensitivity:
This antibody detects endogenous FABP-2 proteins without cross-reactivity with other family members.

Storage Buffer: PBS and 30% glycerol

Storage:
Store at -20°C for at least one year. Store at 4°C for frequent use. Avoid repeated freeze-thaw cycles.

APPLICATIONS

Application:	*Dilution:
WB	1:1000
IP	n/d
IHC	n/d
ICC	1:200
FACS	1:200

**Optimal dilutions must be determined by end user.*

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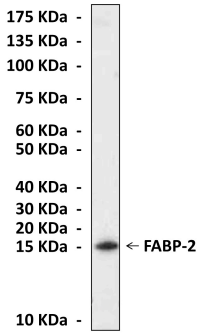
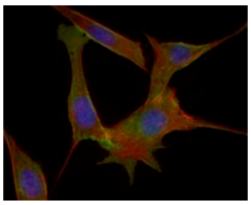
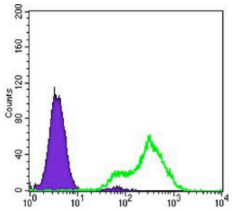
QUALITY CONTROL DATA







Top: Western Blot detection of FABP-2 proteins in LOVO cell lysate using FABP-2/IFABP Antibody. **Middle:** This antibody stains 3T3-L1 cells in confocal immunofluorescent analysis (FABP-2 antibody: Green; Actin filaments: Red; and DRAQ5 DNA dye: Blue). **Bottom:** It also specifically reacts with FABP-2 protein in LOVO cells (Green) vs. normal mouse IgG control (Blue) in FACS testing (Bottom).