SANTA CRUZ BIOTECHNOLOGY, INC.

L-FABP (F-9): sc-271591

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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). Liver-specific FABP (L-FABP) expression is modulated by developmental, hormonal, dietary and pharmacological factors and is required for cholesterol synthesis and metabolism.

REFERENCES

1. Kaikaus, R.M., et al. 1993. Mechanisms of regulation of liver fatty acid-binding protein. Mol. Cell. Biochem. 123: 93-100.
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.

CHROMOSOMAL LOCATION

Genetic locus: FABP1 (human) mapping to 2p11.2.

SOURCE

L-FABP (F-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 4-37 near the N-terminus of L-FABP of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

L-FABP (F-9) is available conjugated to agarose (sc-271591 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-271591 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271591 PE), fluorescein (sc-271591 FITC), Alexa Fluor® 488 (sc-271591 AF488), Alexa Fluor® 546 (sc-271591 AF546), Alexa Fluor® 594 (sc-271591 AF594) or Alexa Fluor® 647 (sc-271591 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271591 AF680) or Alexa Fluor® 790 (sc-271591 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271591 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

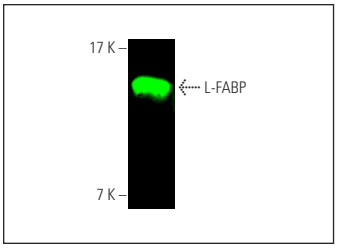
L-FABP (F-9) is recommended for detection of L-FABP of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (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 L-FABP siRNA (h): sc-41243, L-FABP shRNA Plasmid (h): sc-41243-SH and L-FABP shRNA (h) Lentiviral Particles: sc-41243-V.

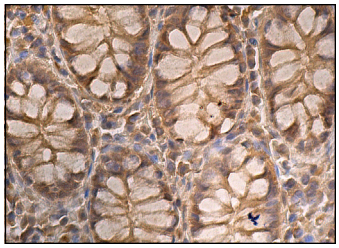
Molecular Weight of L-FABP: 14 kDa.

Positive Controls: human kidney extract: sc-363764 or Hep G2 cell lysate: sc-2227.

DATA



L-FABP (F-9): sc-271591. Near-infrared western blot analysis of L-FABP expression in human kidney tissue extract. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.



L-FABP (F-9): sc-271591. Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Li, X.F., et al. 2015. Changes in FABP1 and gastrin receptor expression in the testes of rats that have undergone electrical injury. Exp. Ther. Med. 9: 2155-2158.
2. Li, P., et al. 2021. Gut inflammation exacerbates high-fat diet induced steatosis by suppressing VLDL-TG secretion through HNF4α pathway. Free Radic. Biol. Med. 172: 459-469.
3. Nadolny, C., et al. 2021. Dysregulation and activities of ubiquitin specific peptidase 2b in the pathogenesis of hepatocellular carcinoma. Am. J. Cancer Res. 11: 4746-4767.
4. Park, S.R., et al. 2021. Holistic characterization of single-hepatocyte transcriptome responses to high-fat diet. Am. J. Physiol. Endocrinol. Metab. 320: E244-E258.
5. Hamada, K., et al. 2022. Withaferin A alleviates ethanol-induced liver injury by inhibiting hepatic lipogenesis. Food Chem. Toxicol. 160: 112807.

STORAGE

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