FABP1 Antibody for IHC / Fatty acid-binding protein 1 [clone MSVA-501M] (V6073)

Catalog No.	Formulation	Size
V6073-100UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V6073-20UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug

Recombinant | MOUSE MONOCLONAL

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG2b, kappa
Clone Name	MSVA-501M
UniProt	P07148
Localization	Cytoplasm
Applications	Immunohistochemistry (FFPE): 1:100-1:200
Limitations	This FABP1 Antibody for IHC is available for research use only.



FABP1 Antibody for IHC Tissue Microarray (TMA). Immunohistochemistry analysis of Fatty acid-binding protein 1 FABP1, also known as Liver fatty acid binding protein, in formalin-fixed paraffin-embedded human normal and cancer tissue microarrays using mouse monoclonal antibody clone MSVA-501M. Tissue microarray (TMA) staining with HRP-DAB brown chromogen demonstrates strong cytoplasmic localization in hepatocytes of the liver, with additional staining in small intestinal enterocytes and renal proximal tubular epithelial cells, while most other tissues show minimal to absent staining. Within tumor tissue microarrays, hepatocellular carcinoma demonstrates retained cytoplasmic FABP1 expression, whereas most non-hepatic malignancies show minimal or negative staining. Evaluation across large TMA panels enables direct comparison of FABP1 expression across diverse tissue types under standardized conditions. The observed staining patterns align with reported expression profiles in the Human Protein Atlas and support its use as a marker of hepatocellular and enterocyte differentiation.

Description

FABP1 Antibody for IHC recognizes Fatty acid-binding protein 1, a small cytoplasmic lipid chaperone encoded by the FABP1 gene and commonly referred to as Liver fatty acid binding protein or L-FABP. FABP1 belongs to the fatty acid binding protein family, a group of highly conserved intracellular proteins that coordinate the uptake, transport, and metabolism of long chain fatty acids and other hydrophobic ligands. The human FABP1 gene is located on chromosome 2p11.2 and is predominantly expressed in hepatocytes, with additional expression in renal proximal tubular epithelium and small intestinal enterocytes.

Structurally, Fatty acid-binding protein 1 consists of a beta barrel domain that forms a hydrophobic binding pocket capable of accommodating long chain fatty acids, bile acids, and eicosanoids. By binding and solubilizing these ligands, FABP1 facilitates their intracellular trafficking to sites of beta oxidation, triglyceride synthesis, or signaling pathways. In the liver, FABP1 plays a central role in lipid homeostasis, energy metabolism, and protection against lipotoxic stress. Its high cytoplasmic abundance in hepatocytes reflects its importance in hepatic fatty acid handling.

In normal tissues, FABP1 expression is strongest in liver, where diffuse cytoplasmic staining in hepatocytes is expected. In kidney, cytoplasmic expression is typically observed in proximal tubular epithelial cells, consistent with a role in fatty acid reabsorption and metabolism. Intestinal epithelial cells of the small intestine also demonstrate cytoplasmic expression. Because of this characteristic distribution, FABP1 antibody is widely used in research to assess hepatocellular differentiation and to study metabolic adaptations in liver and kidney tissues.

Altered expression of Fatty acid-binding protein 1 has been associated with metabolic disorders, nonalcoholic fatty liver disease, and hepatocellular carcinoma. Changes in FABP1 levels may reflect shifts in lipid flux, oxidative stress, and cellular metabolic state. A mouse monoclonal antibody such as clone MSVA-501M provides a consistent tool for detecting FABP1 in formalin-fixed, paraffin-embedded tissues. FABP1 Antibody for IHC is suitable for detecting FABP1 expression in research settings focused on hepatic biology, renal tubular function, and lipid metabolism.

This antibody is part of a broader collection of IHC antibodies validated by tissue microarray analysis, supporting consistent staining across normal and cancer tissues.

Researchers interested in a broadly validated FABP1 antibody for lipid metabolism and fatty acid transport studies may also benefit from our HuProt-validated FABP1 antibody clone FABP1/3487, supported by western blot, immunohistochemistry, and protein microarray specificity data.

Application Notes

1. Optimal dilution of the FABP1 / Fatty acid-binding protein 1 antibody should be determined by the researcher.

2. This FABP1 / Fatty acid-binding protein 1 antibody is recombinantly produced by expression in human HEK293 cells.

3. Manual Protocol: Freshly cut sections should be used (less than 10 days between cutting and staining). Heat-induced antigen retrieval for 5 minutes in an autoclave at 121oC in pH 7.8 Target Retrieval Solution buffer. Apply the antibody at a dilution of 1:150 at 37oC for 60 minutes. Visualization of bound antibody by the EnVision Kit (Dako, Agilent) according to the manufacturer's directions.

Immunogen

Human recombinant FABP1 protein fragment (around amino acids 1-127) (exact sequence is proprietary) was used as the immunogen for the FABP1 / Fatty acid-binding protein 1 antibody for IHC.

Storage

FABP1/Fatty acid-binding protein 1 antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.

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