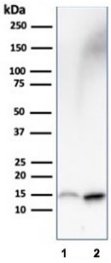
FABP1 Antibody / Lipid Metabolism Marker Antibody [clone FABP1/3487] (V8541)

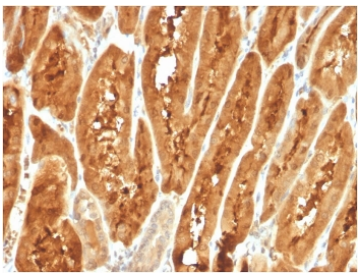
Catalog No.	Formulation	Size
V8541-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V8541-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V8541SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

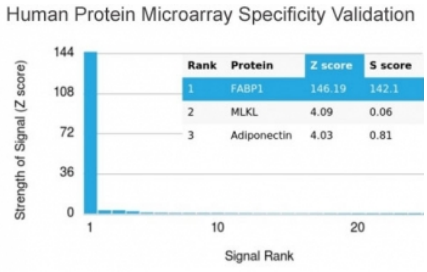
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	FABP1/3487
Purity	Protein G affinity chromatography
UniProt	P07148
Localization	Cytoplasmic and Nuclear
Applications	Western blot: 1-2ug/ml Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT
Limitations	This FABP1 Antibody / Lipid Metabolism Marker Antibody is available for research use only.



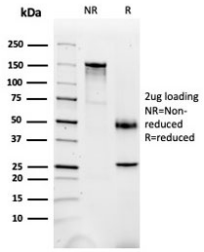
FABP1 Antibody HepG2 and Kidney WB. Western blot analysis of human 1) HepG2 and 2) kidney lysates using FABP1 antibody. A band is detected at approximately 14 kDa, consistent with the predicted molecular weight of Fatty acid-binding protein 1 / FABP1. Enhanced signal in HepG2 cells is consistent with the known enrichment of this intracellular fatty acid-binding and lipid transport protein in hepatocyte-derived cells.



FABP1 Antibody Liver Carcinoma IHC. Immunohistochemistry analysis of FFPE human liver carcinoma tissue stained with microarray-validated FABP1 antibody clone FABP1/3487. Following HIER in pH 9 Tris-EDTA buffer, strong HRP-DAB brown cytoplasmic staining is observed in tumor epithelial cells, consistent with the known hepatocellular expression pattern of FABP1, a fatty acid transport and lipid metabolism-associated protein.



FABP1 Antibody Protein Microarray Validation. Human protein microarray specificity analysis of FABP1 antibody clone FABP1/3487 was performed using the HuProt(TM) array containing more than 19,000 full-length human proteins. Clone FABP1/3487 shows strongest reactivity with FABP1, producing a Z-score of 146.19 and an S-score of 142.1, with clear separation from lower-ranking proteins including MLKL and Adiponectin. These findings support the high specificity of this fatty acid transport and lipid metabolism-associated protein antibody for Liver fatty acid-binding protein / FABP1.



SDS-PAGE analysis of purified, BSA-free FABP1 antibody as confirmation of integrity and purity.

Description

Fatty acid-binding protein 1 (FABP1) is a small cytoplasmic lipid-binding protein encoded by the FABP1 gene and highly expressed in hepatocytes and intestinal epithelial cells where it supports intracellular fatty acid trafficking and metabolic regulation. FABP1 Antibody / Lipid Metabolism Marker Antibody is useful for studying lipid absorption, fatty acid transport, metabolic adaptation, and epithelial cell biology in normal and diseased tissues. FABP1 belongs to the fatty acid-binding protein family, a group of structurally related proteins that bind long-chain fatty acids and other hydrophobic ligands within the cytoplasm.

FABP1 antibody, also known as Liver fatty acid-binding protein antibody or L-FABP antibody in the literature, recognizes a protein that plays an important role in lipid homeostasis, triglyceride metabolism, beta-oxidation pathways, and cellular responses to metabolic stress. FABP1 is primarily localized to the cytoplasm where it facilitates intracellular movement of fatty acids to organelles involved in oxidation, storage, and membrane synthesis. The protein is especially abundant in liver and intestine, reflecting the central role of these tissues in dietary lipid processing and systemic metabolic regulation.

FABP1 expression is commonly associated with differentiated absorptive epithelial cells of the intestine and metabolically active hepatocytes. In immunohistochemistry studies, FABP1 staining is frequently observed as strong cytoplasmic labeling in intestinal enterocytes and liver parenchymal cells, making the protein a useful marker for gastrointestinal and hepatic tissue characterization. Altered FABP1 expression has also been investigated in colorectal carcinoma, hepatocellular carcinoma, gastric cancer, and other epithelial malignancies where changes in lipid metabolism contribute to tumor progression and metabolic remodeling.

FABP1 participates in multiple metabolic signaling pathways linked to lipid uptake, peroxisome proliferator-activated receptor (PPAR) activity, oxidative stress responses, and energy homeostasis. The protein can bind a broad spectrum of hydrophobic molecules including saturated and unsaturated fatty acids, eicosanoids, and bile acid-related metabolites. Through these interactions, FABP1 contributes to cellular protection against lipotoxicity and oxidative injury while supporting efficient fatty acid utilization in tissues with high metabolic demand.

FABP1 is encoded on human chromosome 2p11 and produces a highly conserved protein structure characterized by a beta-barrel lipid-binding domain typical of the FABP family. The compact cytoplasmic protein architecture enables rapid ligand exchange and intracellular trafficking functions important for nutrient absorption and metabolic adaptation. Due to its strong enrichment in liver and intestinal epithelium, FABP1 is frequently used as a marker of enterocyte differentiation, hepatocellular identity, and epithelial metabolic function.

Clone FABP1/3487 has been evaluated using western blotting, immunohistochemistry, and HuProt microarray specificity validation methods to support selective FABP1 detection in research applications. Western blot analysis commonly identifies FABP1 near its predicted molecular weight in intestinal and hepatic tissue lysates, while immunohistochemistry demonstrates strong cytoplasmic staining patterns consistent with the known biology of this fatty acid transport protein. Protein microarray validation further supports specificity for FABP1 among thousands of human proteins represented on the array.

For additional antibodies targeting metabolic signaling, lipid transport, nutrient sensing, and energy homeostasis pathways, explore our broader Metabolism Antibodies products featuring markers involved in hepatic, intestinal, adipocyte, and mitochondrial biology.

Application Notes

Optimal dilution of the FABP1 Antibody / Lipid Metabolism Marker Antibody should be determined by the researcher.

Immunogen

A portion of amino acids 1-127 from the human protein was used as the immunogen for the FABP1 antibody.

Storage

Store the FABP1 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

Fatty acid-binding protein 1 antibody, Liver fatty acid-binding protein antibody, L-FABP antibody, FABP1 lipid metabolism antibody, FABP1 liver marker antibody

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