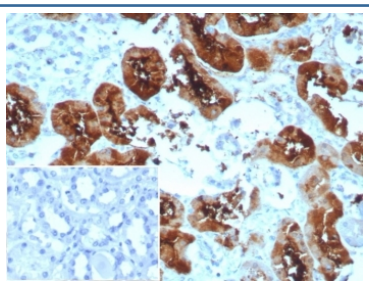
FABP1 Antibody Recombinant Mouse MAb / Fatty Acid Binding Protein 1 [clone rFABP1/8520] (V4873)

Catalog No.	Formulation	Size
V4873-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4873-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4873SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

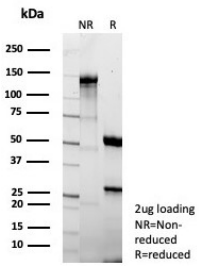
Recombinant | MOUSE MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG1, kappa
Clone Name	rFABP1/8520
Purity	Protein A/G affinity
UniProt	P07148
Localization	Cytoplasm, Nucleus
Applications	Western Blot : 2-4ug/ml Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This FABP1 antibody is available for research use only.



Immunohistochemistry of FABP1 Antibody - Recombinant Mouse MAb rFABP1/8520 in human kidney. FFPE human kidney tissue was stained with FABP1 antibody recombinant mouse mAb rFABP1/8520. Strong cytoplasmic HRP-DAB brown staining is observed in renal tubular epithelial cells, consistent with known Liver fatty acid binding protein expression in proximal tubules, while glomeruli show minimal to absent staining. The inset image shows the PBS negative control without primary antibody, demonstrating absence of specific staining. Heat induced epitope retrieval was performed by boiling tissue sections in pH 9 Tris-EDTA buffer for 20 minutes followed by cooling prior to antibody incubation.



SDS-PAGE analysis of purified, BSA-free recombinant FABP1 antibody (clone rFABP1/8520) as confirmation of integrity and purity.

Description

FABP1 Antibody - Recombinant Mouse MAb rFABP1/8520 recognizes Liver fatty acid binding protein, also known as FABP1 or L-FABP, a cytoplasmic lipid binding protein encoded by the FABP1 gene on chromosome 2p11.2. Liver fatty acid binding protein is abundantly expressed in hepatocytes and functions as an intracellular lipid chaperone that regulates the uptake, trafficking, and metabolism of long chain fatty acids. FABP1 is a member of the fatty acid binding protein family, a group of small cytoplasmic proteins that coordinate lipid homeostasis and lipid mediated signaling pathways.

Structurally, FABP1 contains a conserved beta barrel motif that forms a hydrophobic ligand binding pocket. This configuration enables binding of long chain fatty acids, bile acids, eicosanoids, and other hydrophobic ligands, facilitating their solubilization and intracellular transport. In hepatocytes, FABP1 contributes to fatty acid uptake, beta oxidation, triglyceride synthesis, and protection against lipotoxic stress. Through these functions, Liver fatty acid binding protein plays an essential role in hepatic energy metabolism and regulation of lipid balance.

In normal tissues, FABP1 expression is strongest in liver, where it localizes to the cytoplasm of hepatocytes. Lower levels of expression are observed in kidney proximal tubule epithelium and small intestinal enterocytes. Because of its abundant and relatively tissue restricted distribution, FABP1 antibody is widely used in research to study hepatocellular differentiation, metabolic regulation, and liver associated disease models. Cytoplasmic staining in hepatocytes represents the expected localization pattern.

Altered FABP1 expression has been associated with fatty liver disease, metabolic syndrome, and hepatocellular carcinoma. Changes in Liver fatty acid binding protein levels have been investigated in the context of lipid accumulation, oxidative stress, and liver injury. FABP1 Antibody - Recombinant Mouse MAb rFABP1/8520 is suitable for detecting FABP1 expression in relevant research applications focused on hepatic biology and lipid metabolism.

Application Notes

Optimal dilution of the FABP1 antibody should be determined by the researcher.

Immunogen

A recombinant partial protein sequence (within amino acids 1-127) from the human protein was used as the immunogen for the FABP1 antibody recombinant mouse mAb rFABP1/8520.

Storage

Aliquot the FABP1 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.