abcam

ab240401

Anti-liver FABP antibody [EPR20464] - BSA and Azide free

Recombinant | RabMAb | Advanced Validation

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR20464
Purification technique	Affinity purification Protein A
Concentration	1.037 - 1.046 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

mIHC

Tested

Species	Human
Dilution info	-

Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Expected

Species	Mouse
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	-
Notes	-

Species	Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-

Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information FABP1

Function	Plays a role in lipoprotein-mediated cholesterol uptake in hepatocytes (PubMed:25732850). Binds cholesterol (PubMed:25732850). Binds free fatty acids and their coenzyme A derivatives, bilirubin, and some other small molecules in the cytoplasm. May be involved in intracellular lipid transport (By similarity).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab240401 is the carrier-free version of ab222517.Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency.

This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Liver fatty acid binding protein (liver FABP) also known as L-FABP or FABP1 is a small protein with a mass of approximately 14 kilodaltons. It functions mainly in the liver where it binds free fatty acids and other lipophilic substances facilitating their transport within cells. This protein is highly expressed in hepatocytes and also found in the small intestine and kidneys. Its role in binding fatty acids positions it as an important mediator in lipid metabolism making it of interest in a variety of metabolic studies.
Biological function summary	Liver FABP is essential for maintaining lipid homeostasis within cells. It is not part of a larger complex but acts by itself to regulate the intracellular concentration of lipids and protect cells from lipotoxicity. By sequestering fatty acids it prevents these molecules from disrupting cellular membranes or signaling pathways. Liver FABP also participates in the uptake transport and metabolic conversion of fatty acids and their metabolites influencing energy homeostasis and other vital processes.
Pathways	Liver FABP plays a significant role in the fatty acid metabolism and peroxisome proliferator-activated receptor (PPAR) signaling pathways. It acts by modulating the availability of lipid ligands necessary for PPAR activation linking it functionally to these nuclear receptors that control gene expression involved in lipid and glucose metabolism. Liver FABP's association with proteins like FABP2 and FABP4 within these pathways provides insight into its broader metabolic network highlighting its interactions in fatty acid transport and metabolism.
Associated diseases and disorders	Liver FABP shows a strong connection to metabolic conditions particularly non-alcoholic fatty liver disease (NAFLD) and type 2 diabetes. Its dysregulation is often

observed in these disorders which include altered lipid profiles and insulin resistance. Liver FABP is also linked to certain forms of cancer with aberrant expression levels found in some tumor types. The interactions of liver FABP with proteins such as FABP5 in these diseases suggest a potential role in the pathogenesis of metabolic disorders and tumor development making it a candidate for further research and therapeutic targeting.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

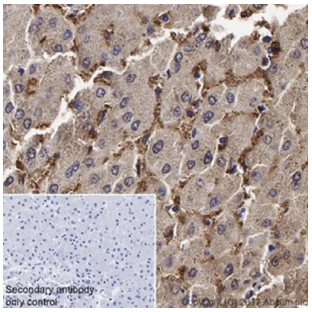
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

11 product images

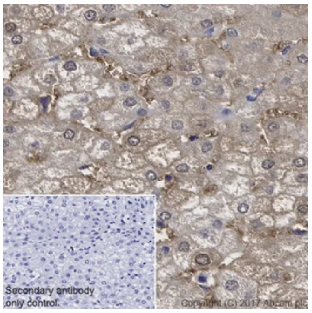


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-liver FABP antibody [EPR20464] - BSA and Azide free (ab240401)

Immunohistochemical analysis of paraffin-embedded human liver tissue labeling liver FABP with ab222517 at 1/3000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use.
Cytoplasmic staining on human hepatocytes and sinusoids (PMID: 3123629). Counter stained with Hematoxylin.
Perform heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ready to use.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab222517).

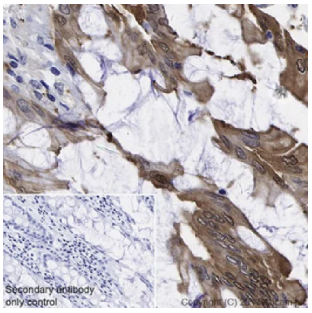


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-liver FABP antibody [EPR20464] - BSA and Azide free (ab240401)

Immunohistochemical analysis of paraffin-embedded human hepatocellular carcinoma tissue labeling liver FABP with ab222517 at 1/3000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Cytoplasmic and weak nuclear staining on human hepatocellular carcinoma. Counter stained with Hematoxylin.
Perform heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ready to use.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab222517).

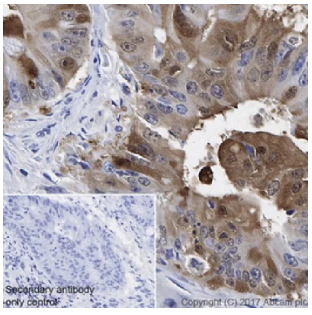


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-liver FABP antibody [EPR20464] - BSA and Azide free (ab240401)

Immunohistochemical analysis of paraffin-embedded human colon tissue labeling liver FABP with ab222517 at 1/3000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Cytoplasmic and weak nuclear staining on human colon (PMID: 15138477). Counter stained with Hematoxylin.
Perform heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ready to use.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab222517).

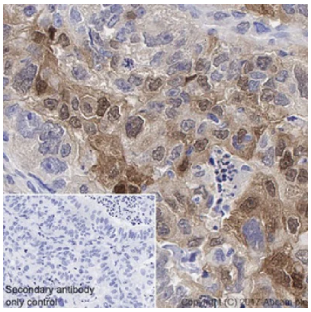


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-liver FABP antibody [EPR20464] - BSA and Azide free (ab240401)

Immunohistochemical analysis of paraffin-embedded human colon cancer tissue labeling liver FABP with ab222517 at 1/3000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Cytoplasmic and nuclear staining on human colon cancer (PMID: 15138477). Counter stained with Hematoxylin.
Perform heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ready to use.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab222517).

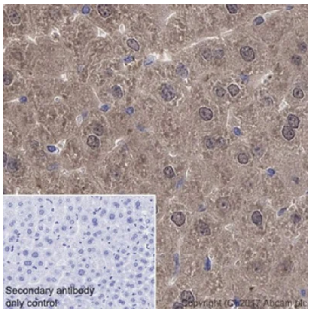


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-liver FABP antibody [EPR20464] - BSA and Azide free (ab240401)

Immunohistochemical analysis of paraffin-embedded human gastric cancer tissue labeling liver FABP with ab222517 at 1/3000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Nuclear and cytoplasmic staining on human gastric cancer (PMID: 15051923). Counter stained with Hematoxylin.
Perform heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ready to use.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab222517).

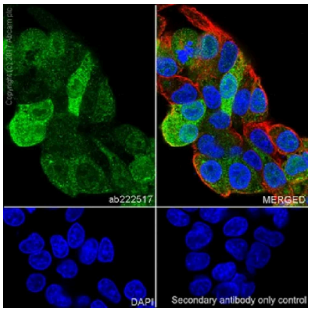


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-liver FABP antibody [EPR20464] - BSA and Azide free (ab240401)

Immunohistochemical analysis of paraffin-embedded rat liver tissue labeling liver FABP with ab222517 at 1/3000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Nuclear and cytoplasmic staining on rat liver is observed. Counter stained with Hematoxylin.
Perform heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ready to use.

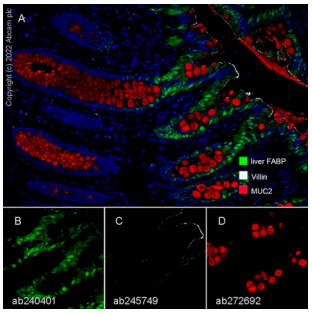
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab222517).



Immunocytochemistry/ Immunofluorescence - Anti-liver FABP antibody [EPR20464] - BSA and Azide free (ab240401)

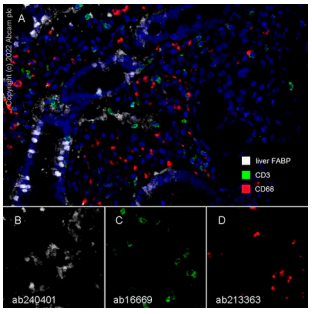
Immunofluorescent analysis of 4% paraformaldehyde fixed, 0.1% tritonX-100 permeabilized HepG2 (human hepatocellular carcinoma epithelial cell) cells labeling liver FABP with ab222517 at 1/100 dilution, followed by AlexaFluor® 488 Goat anti-Rabbit secondary (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing nuclear and cytoplasmic staining on HepG2 cell line. Nuclear counterstain DAPI (blue). Counterstain Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) at 1/200 dilution (red).
The negative control was secondary antibody only.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab222517).



Multiplex immunohistochemistry - Anti-liver FABP antibody [EPR20464] - BSA and Azide free (ab240401)

Fluorescence multiplex immunohistochemical analysis of the human colon (Formalin/PFA-fixed paraffin-embedded sections). Panel A: merged staining of anti-Villin (ab245749, gray; Opal™690), anti-liver FABP (ab240401, green; Opal™520) and anti-MUC2 (ab272692, red; Opal™570) on human colon. Panel B: anti-liver FABP stained on enterocytes. Panel C: anti-Villin stained on apical border. Panel D: anti-MUC2 stained on goblet cells. Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as a secondary antibody. The immunostaining was performed on a Leica Biosystems BOND® RX instrument with an Opal™ 4-color kit. The section was incubated in three rounds of staining: in the order of ab245749 (1/1000 dilution), ab240401 (1/8000 dilution), and ab272692 (1/5000 dilution) for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins. DAPI (blue) was used as a nuclear counter stain. Image acquisition was performed with Leica SP8 confocal microscope. This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab222517).

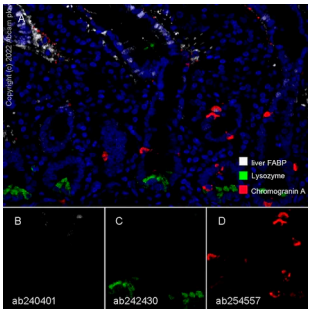


Multiplex immunohistochemistry - Anti-liver FABP antibody [EPR20464] - BSA and Azide free (ab240401)

Liver FABP Multiplex immunohistochemistry staining of Human duodenum tissue using rabbit Anti-liver FABP antibody

Fluorescence multiplex immunohistochemical analysis of the human duodenum (Formalin/PFA-fixed paraffin-embedded sections). Panel A: merged staining of anti-liver FABP (ab240401 gray; Opal™690), anti-CD3 epsilon (ab16669 green; Opal™520) and anti-CD68 (ab213363 red; Opal™570) on human duodenum. Panel B: anti-liver FABP stained on enterocytes. Panel C: anti-CD3 epsilon stained on T cells. Panel D: anti-CD68 stained on macrophages. Opal Polymer HRP Ms + Rb was used as a secondary antibody. The immunostaining was performed on a Leica Biosystems BOND® RX instrument with an Opal™ 4-color kit. The section was incubated in three rounds of staining: in the order of ab240401 (1/8000 dilution), ab16669 (1/150 dilution) and ab213363 (1/500 dilution) for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0 epitope retrieval solution2) for 20 mins. DAPI (blue) was used as a nuclear counter stain. Image acquisition was performed with Leica SP8 confocal microscope.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab222517).

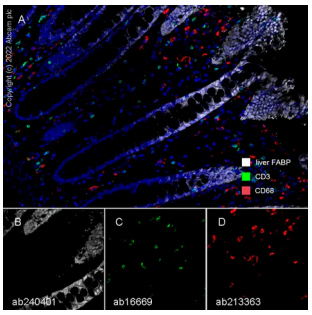


Multiplex immunohistochemistry - Anti-liver FABP antibody [EPR20464] - BSA and Azide free (ab240401)

Fluorescence multiplex immunohistochemical analysis of the human duodenum (Formalin/PFA-fixed paraffin-embedded sections). Panel A: merged staining of anti-liver FABP (ab240401, gray; Opal™690), anti-Lysozyme (ab242430, green; Opal™520) and anti-Chromogranin A (ab254557, red; Opal™570) on human duodenum. Panel B: anti-liver FABP stained on enterocytes. Panel C: anti-Lysozyme stained on Paneth cells. Panel D: anti-Chromogranin A stained on neuroendocrine cells. Opal Polymer HRP Ms + Rb was used as a secondary antibody. The immunostaining was performed on a Leica Biosystems BOND® RX instrument with an Opal™ 4-color kit. The section was incubated in three rounds of staining: in the order of ab240401 (1/8000 dilution), ab242430 (1:250 dilution), and ab254557 (1/5000 dilution) for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system. Heat mediated antigen retrieval with

Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins. DAPI (blue) was used as a nuclear counter stain. Image acquisition was performed with Leica SP8 confocal microscope.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab222517).



Multiplex immunohistochemistry - Anti-liver FABP antibody [EPR20464] - BSA and Azide free (ab240401)

Liver FABP Multiplex immunohistochemistry staining of Human colon tissue using rabbit Anti-liver FABP antibody

Fluorescence multiplex immunohistochemical analysis of the human colon (Formalin/PFA-fixed paraffin-embedded sections). Panel A: merged staining of anti-liver FABP (ab240401 gray; Opal™690), anti-CD3 epsilon (ab16669 green; Opal™520) and anti-CD68 (ab213363 red; Opal™570) on human colon. Panel B: anti-liver FABP stained on enterocytes. Panel C: anti-CD3 epsilon stained on T cells. Panel D: anti-CD68 stained on macrophages. Opal Polymer HRP Ms + Rb was used as a secondary antibody. The immunostaining was performed on a Leica Biosystems BOND® RX instrument with an Opal™ 4-color kit. The section was incubated in three rounds of staining: in the order of ab240401 (1/8000 dilution), ab16669 (1/150 dilution) and ab213363 (1/500 dilution) for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0 epitope retrieval solution2) for 20 mins. DAPI (blue) was used as a nuclear counter stain. Image acquisition was performed with Leica SP8 confocal microscope.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab222517).