abcam

ab82157

Anti-liver FABP antibody [2G4]

Anti-liver FABP antibody [2G4] (ab82157) is a mouse monoclonal antibody detecting liver FABP in **Western Blot, Flow Cytometry, ICC/IF**. Suitable for **Human,**.

- Trusted since 2009

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 10% Glycerol (glycerin, glycerine)
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Full Length Protein corresponding to Human FABP1. Database link P07148
Clone number	2G4
Purification technique	Affinity purification Protein A
Light chain type	kappa
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human

Dilution info	-
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Not recommended

Species	Recombinant full length protein - Human
Dilution info	-
Notes	-

WB

Tested

Species	Recombinant full length protein - Human, Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Recombinant full length protein - Human
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 duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot

Notes

What is this antibody validated in?
Anti-liver FABP antibody [2G4] (ab82157) is a mouse monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Flow Cyt), Immunocytochemistry/immunofluorescence (ICC/IF) in Human, samples.

What is the molecular weight of liver FABP?
Anti-liver FABP [2G4] (ab82157) specifically detects a band for liver FABP (UniProt: P07148) at a molecular weight of 14kDa.

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

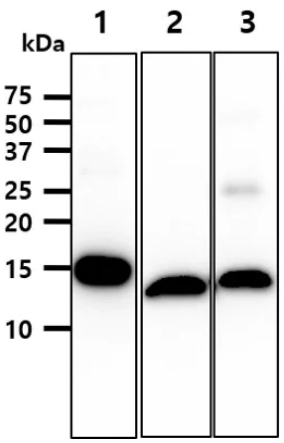
We do not recommend this combination. It is not covered by our product promise.

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.

6 product images



Western blot - Anti-liver FABP antibody [2G4] (ab82157)

All lanes:
Western blot - Anti-liver FABP antibody [2G4] (ab82157) at 1/1000 dilution

Lane 1:
FABP1 Recombinant protein

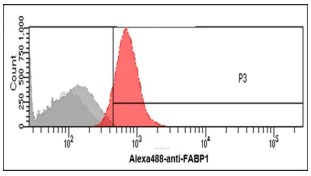
Lane 2:
HepG2 cell lysate at 40 µg

Lane 3:
Liver tissues lysate at 40 µg

Secondary

All lanes:
goat anti-mouse secondary antibody conjugated to HRP

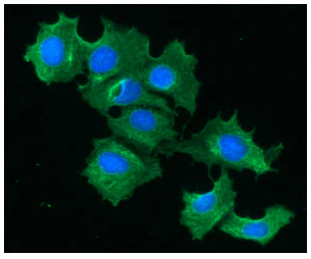
Predicted band size: 14 kDa



Flow Cytometry - Anti-liver FABP antibody [2G4] (ab82157)

Liver FABP Flow Cytometry staining using mouse Anti-liver FABP antibody

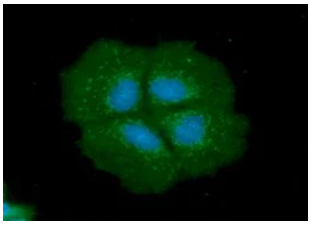
Flow cytometry analysis of FABP1 in Hep3B cells. The cell was stained with ab82157 at 2-5µg for 1x10^6 cells (red). A Goat anti mouse IgG (Alexa fluor 488) was used as the secondary antibody. Mouse monoclonal IgG was used as the isotype control (blue), cells without incubation with primary and secondary antibody was used as the negative control (black).



Immunocytochemistry/ Immunofluorescence - Anti-liver FABP antibody [2G4] (ab82157)

Liver FABP Immunocytochemistry/ Immunofluorescence staining using mouse Anti-liver FABP antibody

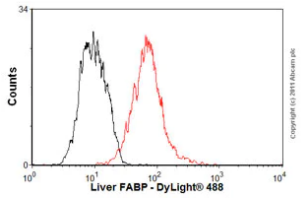
ab82157 staining liver FABP in Hep3B cells by ICC/IF (Immunocytochemistry/Immunofluorescence). Samples were incubated with primary antibody at 1:100 dilution. An Alexa Fluor® 488 goat anti-mouse IgG was used as the secondary antibody. DAPI was used as a nuclear counterstain.
This image was produced using the ascites version of this antibody.



Immunocytochemistry/ Immunofluorescence - Anti-liver FABP antibody [2G4] (ab82157)

Liver FABP Immunocytochemistry/ Immunofluorescence staining using mouse Anti-liver FABP antibody

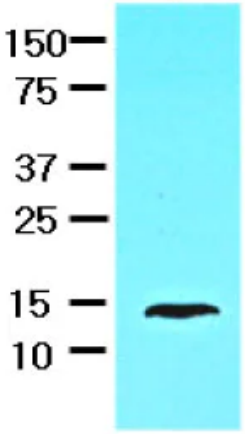
Immunocytochemistry/ Immunofluorescence analysis of FABP1 in Hep3B cells. The cell was stained with ab82157 (1:100). The secondary antibody (green) was used Alexa Fluor 488. DAPI was stained the cell nucleus (blue).



Flow Cytometry - Anti-liver FABP antibody [2G4] (ab82157)

Liver FABP Flow Cytometry staining using mouse Anti-liver FABP antibody

Overlay histogram showing HepG2 cells stained with ab82157 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab82157, 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed.
This image was produced using the ascites version of this antibody.



Western blot - Anti-liver FABP antibody [2G4] (ab82157)

This image was produced using the ascites version of this antibody.
All lanes:
Western blot - Anti-liver FABP antibody [2G4] (ab82157) at 1/1000 dilution

All lanes:
HepG2 cell lysate at 30 µg

Secondary

All lanes:
goat anti-mouse HRP

Developed using the ECL technique.

Predicted band size: 14 kDa

Observed band size: 14 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.