abcam

ab169552

Anti-alpha 1 Fetoprotein antibody [EPR9309]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR9309
Purification technique	Affinity purification Protein A
Concentration	0.59 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/50 - 1/100
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

IP

Tested

Species	Human
Dilution info	1/10 - 1/100
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100 - 1/250
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/50
Notes	ab172730-Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Target data

See full target information AFP

Function	Binds copper, nickel, and fatty acids as well as, and bilirubin less well than, serum albumin. Only a small percentage (less than 2%) of the human AFP shows

estrogen-binding properties.

Storage

Shipped at conditions	Conditional Ambient
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

Species reactivity
Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
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.

Supplementary info

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

Activity summary	Alpha-fetoprotein also known as alpha 1-fetoprotein or AFP is a glycoprotein composed of a single polypeptide chain with a molecular mass of approximately 69 kDa. AFP is primarily expressed in the fetal liver yolk sac and gastrointestinal tract during embryonic development. In adults the expression of AFP is limited and occurs mainly in the liver. The protein belongs to the albuminoid gene family and shares structural similarity with serum albumin contributing to its role in fetal serum transport.

Biological function summary	Alpha-fetoprotein functions as a fetal plasma protein with roles similar to serum albumin including the binding and transport of ligands such as bilirubin and fatty acids. It does not form part of any larger protein complex but is significant in modulating fetal immune tolerance. In the fetal environment AFP helps protect cells from maternal immune attacks by binding to estrogens and other growth-modulating factors. Its function during pregnancy is critical for maintaining homeostasis and ensuring the fetus's viability.
Pathways	Alpha 1-fetoprotein plays a role in several important biological pathways related to cellular growth and immune response modulation. One such pathway involves regulation of cell proliferation and differentiation in the developing liver. AFP interacts with cellular receptors that influence these processes. Additionally it plays a part in immune pathways interacting with elements that control immune overlooking to fetal antigens hence being linked to both hepatic and immune system proteins like albumin and estrogen receptors.
Associated diseases and disorders	High levels of alpha-fetoprotein are linked to hepatocellular carcinoma and germ cell tumors such as yolk sac tumor. AFP serves as a tumor marker in these conditions aiding in both diagnosis and monitoring treatment response. In liver cancer AFP levels often correlate with tumor burden while in germ cell tumors it connects to proteins like beta-human chorionic gonadotropin (beta-hCG). Both markers are used together in clinical settings to provide insights into tumor progression and therapeutic efficacy.

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

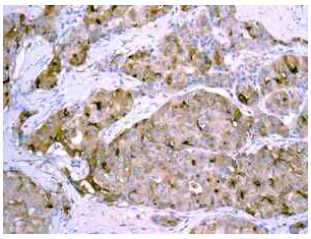
We do not recommend this combination. It is not covered by our product promise.

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.

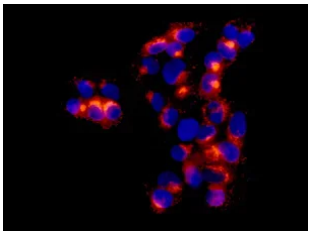
6 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-alpha 1 Fetoprotein antibody [EPR9309] (ab169552)

Alpha 1 Fetoprotein Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-alpha 1 Fetoprotein antibody

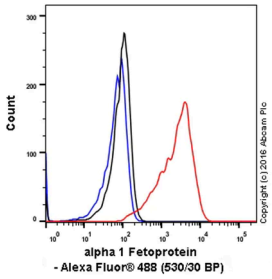
Immunohistochemical analysis of paraffin embedded human moderately differentiated hepatocellular carcinoma tissue labeling alpha 1 Fetoprotein with ab169552 antibody at 1/50. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-alpha 1 Fetoprotein antibody [EPR9309] (ab169552)

Alpha 1 Fetoprotein Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-alpha 1 Fetoprotein antibody

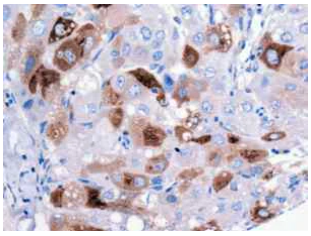
Immunofluorescent analysis of HepG2 cells labeling alpha 1 Fetoprotein with ab169552 at 1/100.



Flow Cytometry (Intracellular) - Anti-alpha 1 Fetoprotein antibody [EPR9309] (ab169552)

Alpha 1 Fetoprotein Flow Cytometry (Intracellular) staining using rabbit Anti-alpha 1 Fetoprotein antibody

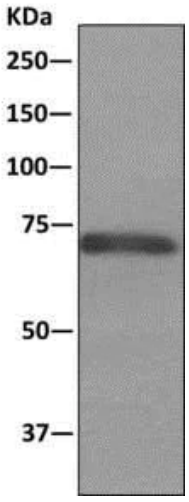
Intracellular Flow Cytometry analysis of HepG2 (human hepatocellular carcinoma) cells labeling alpha 1 Fetoprotein with purified ab169552 at 1/50 dilution (red). The secondary antibody was Goat anti rabbit IgG (Alexa Fluor® 488) at 1/2000 dilution. A Rabbit monoclonal IgG (Black) was used as the isotype control and cells without incubation with primary antibody and secondary antibody (Blue) were used as unlabeled control.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-alpha 1 Fetoprotein antibody [EPR9309] (ab169552)

Alpha 1 Fetoprotein Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-alpha 1 Fetoprotein antibody

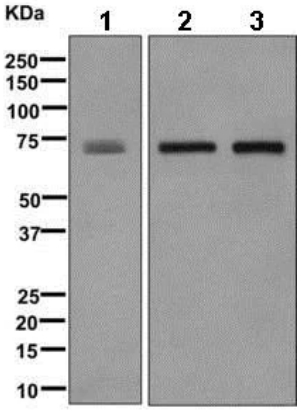
Immunohistochemical analysis of paraffin embedded Human poorly differentiated hepatocellular carcinoma tissue labeling alpha 1 Fetoprotein with ab169552 antibody at 1/50.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunoprecipitation - Anti-alpha 1 Fetoprotein antibody [EPR9309] (ab169552)

Immunoprecipitation. ab169552 at 1/1000 staining alpha 1 Fetoprotein in HepG2 cell lysate immunoprecipitated using ab169552 at 1/10. Predicted band size : 68 kDa.
All lanes:
Immunoprecipitation - Anti-alpha 1 Fetoprotein antibody [EPR9309] (ab169552)

Predicted band size: 68 kDa



Western blot - Anti-alpha 1 Fetoprotein antibody [EPR9309] (ab169552)

All lanes:
Western blot - Anti-alpha 1 Fetoprotein antibody [EPR9309] (ab169552) at 1/1000 dilution

Lane 1:
Human plasma lysate at 10 µg

Lane 2:
HepG2 lysate at 10 µg

Lane 3:
Human fetal liver lysate at 10 µg

Secondary

All lanes:
HRP labelled goat anti-rabbit at 1/2000 dilution

Predicted band size: 68 kDa

Observed band size: 70 kDa

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