abcam

ab130748

Anti-alpha 1 Fetoprotein antibody [SP154]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.6 Preservative: 0.1% Sodium azide Constituents: PBS, 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	SP154
Purification technique	Affinity purification Protein A/G
Concentration	0.247 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from TCS by protein A/G.

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/50
Notes	Incubate for 10 minutes at room temperature.

Flow Cyt

Tested

Species	Human
Dilution info	1/240
Notes	-

WB

Tested

Species	Human
Dilution info	1/100
Notes	Incubate for 1 hour at room temperature.

ICC/IF

Tested

Species	Human
Dilution info	1/100
Notes	-

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 conditions	+4°C

Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

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

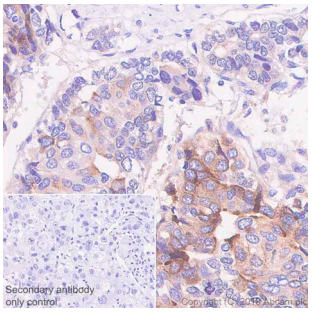
We do not recommend this combination. It is not covered by our product promise.

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.

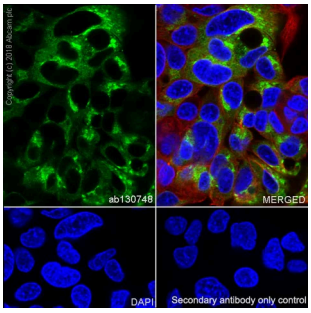
4 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-alpha 1 Fetoprotein antibody [SP154] (ab130748)

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

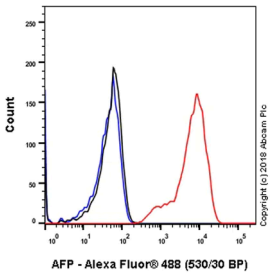
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human hepatocellular carcinoma tissue sections labeling alpha 1 Fetoprotein with ab130748 at 1/50 dilution (4.98 µg/ml). Heat mediated antigen retrieval was performed Heat mediated antigen retrieval with sodium citrate buffer (pH 6.0, epitope retrieval solution 1) for 10 mins. Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Immunocytochemistry/ Immunofluorescence - Anti-alpha 1 Fetoprotein antibody [SP154] (ab130748)

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

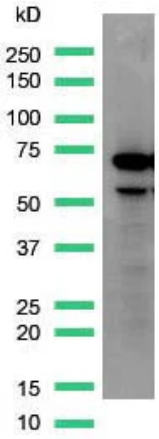
Immunocytochemistry/ Immunofluorescence analysis of HepG2 (human hepatocellular carcinoma epithelial cell) cells labeling alpha 1 Fetoprotein with purified ab130748 at 1:100 (2.5 µg/ml). Cells were fixed in 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Flow Cytometry - Anti-alpha 1 Fetoprotein antibody [SP154] (ab130748)

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

Flow Cytometry analysis of HepG2(Human hepatocellular carcinoma epithelial cell) cells labeling alpha 1 Fetoprotein with purified ab130748 at 1:240 dilution (1.04 µg/ml) Red. Cells were fixed with 4% paraformaldehyde . A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was used at 1:2000 dilution. Isotype control - Rabbit monoclonal IgG (ab172730) / Black. Unlabeled control - Unlabelled cells / Blue.



Western blot - Anti-alpha 1 Fetoprotein antibody [SP154] (ab130748)

All lanes:
Western blot - Anti-alpha 1 Fetoprotein antibody [SP154] (ab130748) at 1/100 dilution

All lanes:
HepG2 cell lysate

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'.