

## Anti-alpha 1 Fetoprotein/AFP Antibody Picoband™

Catalog Number: PB9090

### About AFP

AFP, also called Alpha-fetoprotein; alpha-fetoprotein, is a protein that in humans is encoded by the AFP gene. It is mapped to 4q13.3. The level of AFP in amniotic fluid is used to measure renal loss of protein to screen for spina bifida and anencephaly. In rodents AFP binds estradiol to prevent the transport of this hormone across the placenta to the fetus. The main function of this is to prevent the virilization of female fetuses. Moreover, it has an important role as a diagnostic marker, especially in certain tumors and liver diseases of childhood. AFP is also used to test the potential usefulness of plasma alpha fetoprotein determination as a diagnostic marker in biliary atresia, hepatitis, and yolk sac derived tumours.

### Overview

Product Name	Anti-alpha 1 Fetoprotein/AFP Antibody Picoband™
Reactive Species	Human
Description	Boster Bio Anti-alpha 1 Fetoprotein/AFP Antibody Picoband™ catalog # PB9090. Tested in IHC, WB applications. This antibody reacts with Human.
Application	IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na <sub>2</sub> HPO <sub>4</sub> , 0.05mg NaN <sub>3</sub> .
Storage Instructions	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P02771

### Technical Details

Immunogen	E.coli-derived human AFP recombinant protein (Position: Q378-V609). Human AFP shares 71% and 73% amino acid (aa) sequences identity with mouse and rat AFP, respectively.
Predicted Reactive Species	Bovine, Canine, Monkey, Rabbit
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.

Purification	Immunogen affinity purified.
Suggested Dilutions	<p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows:</p> <p>Boster Bio's internal QC testing used:</p> <p>Western blot, 0.1-0.5ug/ml, Human</p> <p>Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, By Heat</p>

## Anti-alpha 1 Fetoprotein/AFP Antibody Picoband™ (PB9090) Images

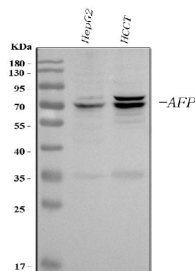


Figure 1. Western blot analysis of AFP using anti-AFP antibody (PB9090).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: human HepG2 whole cell lysates,

Lane 2: human hepatocellular carcinoma tumor tissue (HCCT) lysates.

After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-AFP antigen affinity purified polyclonal antibody (Catalog # PB9090) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for AFP at approximately 69 kDa. The expected band size for AFP is at 69 kDa.

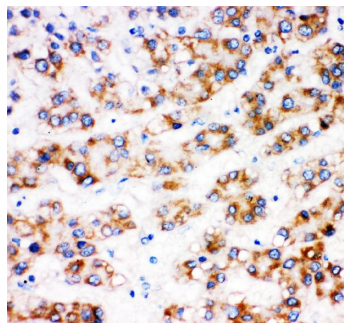


Figure 2. IHC analysis of AFP using anti-AFP antibody (PB9090).

AFP was detected in paraffin-embedded section of human liver cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-AFP Antibody (PB9090) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

## 11 Publications Citing This Product

1. PubMed ID: 26235702, Adipose tissue-derived mesenchymal stem cells differentiated into hepatocyte-like cells in vivo and in vitro
2. PubMed ID: 25576343, Extracellular regulated protein kinases 1/2 phosphorylation is required for hepatic differentiation of human umbilical cord-derived mesenchymal stem cells
3. PubMed ID: 29246405, Selective tropism of liver stem cells to hepatocellular carcinoma in vivo.

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