BOSTER BIOLOGICAL TECHNOLOGY
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Anti-alpha 1 Fetoprotein/AFP Antibody Picoband®

Catalog Number: A00522-3

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.

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Overview

Product Name	Anti-alpha 1 Fetoprotein/AFP Antibody Picoband®
Reactive Species	Human
Description	Boster Bio Anti-alpha 1 Fetoprotein/AFP Antibody Picoband® catalog # A00522-3. Tested in ELISA, WB applications. This antibody reacts with Human. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	ELISA, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
Storage Instructions	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 freezing and thawing.
Host	Rabbit
Uniprot ID	P02771

Technical Details

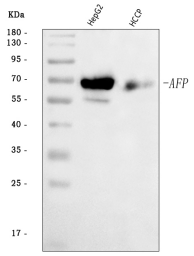
Immunogen	E.coli-derived human alpha 1 Fetoprotein/AFP recombinant protein (Position: R19-L258).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western

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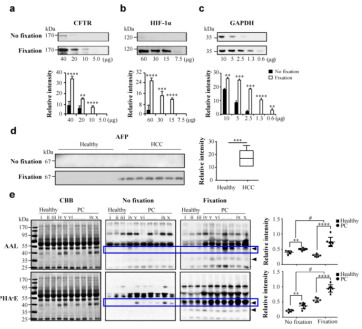
	blot.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.25-0.5 ug/ml, Human ELISA, 0.1-0.5 ug/ml, -

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Anti-alpha 1 Fetoprotein/AFP Antibody Picoband® (A00522-3) Images



Western blot analysis of alpha 1 Fetoprotein/AFP using anti-alpha 1 Fetoprotein/AFP antibody (A00522-3). 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 HCCP tissue 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-alpha 1 Fetoprotein/AFP antigen affinity purified polyclonal antibody (Catalog # A00522-3) 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 alpha 1 Fetoprotein/AFP at approximately 69 kDa. The expected band size for alpha 1 Fetoprotein/AFP is at 69 kDa.



Application of the optimised immunostaining and lectin staining methods. (a) CFTR levels in HT-29 cells. (b) HIF-1alpha levels in HEK-293T cells. (c) GAPDH levels in liver tissue of mouse. Various amounts (quantity represented in ug) of total cellular proteins analysed using 8% SDS-PAGE and immunostained using PVDF membrane and treated with or without fixation treatments. (d) AFP levels in the sera of healthy volunteers (n = 6) and HCC patients (n = 7), with different sample volumes using the PVDF membranes, with or without the fixation. ** Significantly different $p < 0.01$, *** $p < 0.001$, **** $p < 0.0001$. All values are means ± S.E. (error bars). (e) AAL and PHA-E staining, using 6 ug of proteins from the sera of healthy volunteers (n = 6) and prostate cancer patients (PC, n = 10), blotted on PVDF membranes, with or without fixation. Three representative healthy samples (lane i, ii, iii) and seven representative prostate cancer samples (lane iv-x) are presented (left). Boxplot provides the quantification of the total band intensities (right). Circle, healthy subjects; square, prostate cancer patients. Student's t-test. ** $P < 0.01$ and **** $P < 0.0001$, healthy subjects vs. PC patients; # $P < 0.0001$, No fixation vs fixation groups. Band intensities were compared using Image Lab software (Bio-Rad Laboratories) and GraphPad Prism version 6. Index in PubMed under a CC BY license. PMID: 31040299

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