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Anti-ZBTB7A Antibody Picoband™

Catalog Number: PB9910

About ZBTB7A

Zinc finger and BTB domain-containing protein 7A is a protein that in humans is encoded by the ZBTB7A gene. ZBTB7A has a critical oncosuppressive role in the prostate. Prostate-specific inactivation of ZBTB7A leads to a marked acceleration of PTEN loss-driven prostate tumorigenesis through bypass of PTEN loss-induced cellular senescence. It has been showed that ZBTB7A physically interacts with SOX9 and functionally antagonizes its transcriptional activity on key target genes such as MIA, which is involved in tumor cell invasion, and H19, a long noncoding RNA precursor for an RB-targeting microRNA. Inactivation of ZBTB7A in vivo leads to RB downregulation, bypass of PTEN loss-induced cellular senescence, and invasive prostate cancer. Notably, it has been also found that ZBTB7A is genetically lost, as well as downregulated at both the mRNA and protein levels, in a subset of human advanced prostate cancers. Therefore, ZBTB7A is identified as a context-dependent cancer gene that can act as an oncogene in some contexts but that also has oncosuppressive-like activity in PTEN-null tumors.

Overview

Product Name	Anti-ZBTB7A Antibody Picoband™
Reactive Species	Human
Description	Boster Bio Anti-ZBTB7A Antibody Picoband™ catalog # PB9910. Tested in Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human.
Application	Flow Cytometry, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
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	O95365

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human ZBTB7A, different from the related mouse sequence by eleven amino acids, and from the related rat sequence by ten amino acids.
Predicted Reactive Species	Bovine, Canine, Monkey
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) and ICC.
Cross Reactivity	No cross-reactivity with other proteins.

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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	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.1-0.5ug/ml, Human Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, By Heat Immunocytochemistry/Immunofluorescence, 5ug/ml, Human Flow Cytometry, 1-3ug/1x10^6 cells, Human

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Anti-ZBTB7A Antibody Picoband™ (PB9910) Images

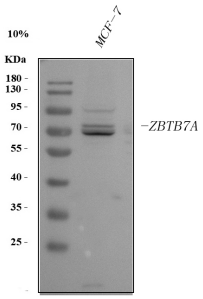

Figure 1. Western blot analysis of ZBTB7A using anti-ZBTB7A antibody (PB9910).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human MCF-7 whole cell 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-ZBTB7A antigen affinity purified polyclonal antibody (Catalog # PB9910) 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 ZBTB7A at approximately 72 kDa. The expected band size for ZBTB7A is at 61 kDa.

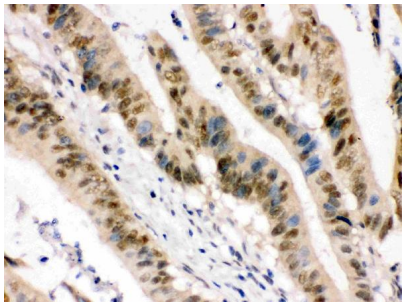

Figure 2. IHC analysis of ZBTB7A using anti-ZBTB7A antibody (PB9910).
ZBTB7A was detected in a paraffin-embedded section of human intestinal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-ZBTB7A Antibody (PB9910) 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 Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

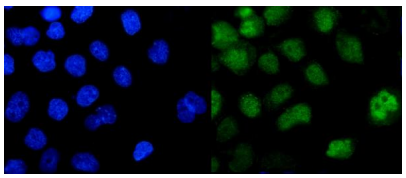

Figure 3. IF analysis of ZBTB7A using anti-ZBTB7A antibody (PB9910).
ZBTB7A was detected in immunocytochemical section of A431 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5ug/mL rabbit anti-ZBTB7A Antibody (PB9910) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

Figure 4. Flow Cytometry analysis of MCF-7 cells using anti-ZBTB7A antibody (PB9910).
Overlay histogram showing MCF-7 cells stained with PB9910 (Blue line).The cells were blocked with 10% normal goat

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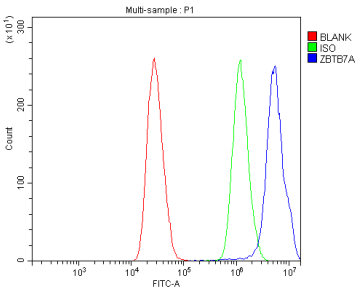

serum. And then incubated with rabbit anti-ZBTB7A Antibody (PB9910, 1ug/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

Anti-ZBTB7A Antibody ™