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antibody and ELISA experts

BOSTER BIOLOGICAL TECHNOLOGY
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Anti-PIWIL4/PIWI Antibody Picoband®

Catalog Number: A06797-1

About PIWIL4

PIWI-like protein 4 (PIWIL4) is a 97 kDa member of the argonaute family of proteins and the PIWI subfamily. Human PIWIL4 is 852 amino acids (aa) in length and contains one PAZ domain (aa 268-384) and one PIWI domain (aa 546-838). There are three isoforms for human PIWIL4. Isoform 1 is the standard protein. Isoform 2 has a two aa substitution for aa 1-29 in isoform 1 and a deletion of aa 523-852. Isoform 3 has a deletion of aa 1-69 and a deletion of aa 523-852. Human PIWIL4 shares 77% aa sequence identity with mouse and rat PIWIL4. PIWIL4 plays a central role in spermatogenesis.

Overview

Product Name	Anti-PIWIL4/PIWI Antibody Picoband®
Reactive Species	Human
Description	Boster Bio Anti-PIWIL4/PIWI Antibody Picoband® catalog # A06797-1. Tested in ELISA, Flow Cytometry, IHC, 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, Flow Cytometry, IHC, 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	Q7Z3Z4

Technical Details

Immunogen	E.coli-derived human PIWIL4/PIWI recombinant protein (Position: R51-N749).
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.

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Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.25-0.5 ug/ml, Human Immunohistochemistry(Paraffin-embedded Section), 2-5 ug/ml, Human Flow Cytometry (Fixed), 1-3 ug/1x10^6 cells, Human ELISA, 0.1-0.5 ug/ml, -

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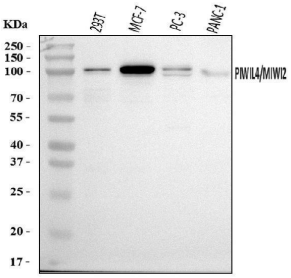
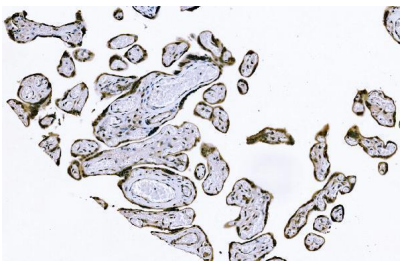
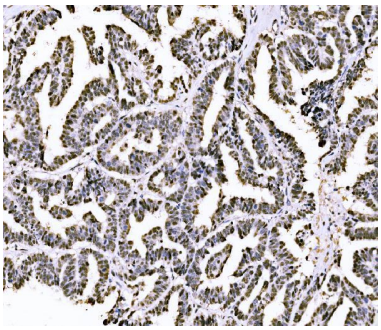
Anti-PIWIL4/PIWI Antibody Picoband® (A06797-1) Images



Western blot analysis of PIWIL4/PIWI using anti-PIWIL4/PIWI antibody (A06797-1). 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 293T whole cell lysates, Lane 2: human MCF-7 whole cell lysates, Lane 3: human PC-3 whole cell lysates, Lane 4: human PANC-1 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-PIWIL4/PIWI antigen affinity purified polyclonal antibody (Catalog # A06797-1) 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 PIWIL4/PIWI at approximately 97 kDa. The expected band size for PIWIL4/PIWI is at 97 kDa.



IHC analysis of PIWIL4/PIWI using anti-PIWIL4/PIWI antibody (A06797-1). PIWIL4/PIWI was detected in a paraffin-embedded section of human placenta 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 2 ug/ml rabbit anti-PIWIL4/PIWI Antibody (A06797-1) 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.



IHC analysis of PIWIL4/PIWI using anti-PIWIL4/PIWI antibody (A06797-1). PIWIL4/PIWI was detected in a paraffin-embedded section of human ovarian serous adenocarcinoma 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 2 ug/ml rabbit anti-PIWIL4/PIWI Antibody (A06797-1) 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.

Flow Cytometry analysis of PC-3 cells using anti-PIWIL4/PIWI antibody (A06797-1). Overlay histogram showing PC-3 cells stained with A06797-1 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and

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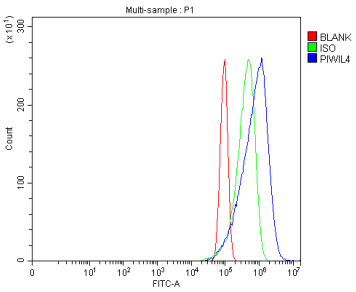

permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-PIWIL4/PIWI Antibody (A06797-1, 1 ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x106) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

Anti-PIWIL4/PIWI Antibody

For Research Use Only. Not for use in diagnostic procedures.