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Anti-Tight junction protein ZO-2 TJP2 Antibody Picoband®

Catalog Number: PA1957

About TJP2

TJP2 (Tight Junction Protein 2), also known as Zona Occludens 2 or ZO2 is a protein that in humans is encoded by the TJP2 gene. Tight junction proteins (TJPs) belong to a family of membrane-associated guanylate kinase (MAGUK) homologs that are involved in the organization of epithelial and endothelial intercellular junctions. Duclos et al. (1994) mapped the TJP2 gene telomeric to the Friedreich ataxia critical region on chromosome 9q13-q21. TJP2 lies about 70 kb centromeric to the X123 gene and is transcribed in the centromere-to-telomere direction. Using in vitro assays and immunoprecipitation studies, Itoh et al. (1999) showed that the mouse Tjp1, Tjp2, and Tjp3 PDZ1 domains interacted with the C-terminal cytoplasmic domains of Cldn1 through Cldn8. In the mouse inner ear, Walsh et al. (2010) found that Tjp2 expression decreased rapidly between E16.5 and age 1 week to a level in adult mice that was approximately 50% of the level at birth (P0).

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Overview

Product Name	Anti-Tight junction protein ZO-2 TJP2 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Tight junction protein ZO-2 TJP2 Antibody catalog # PA1957. Tested in Flow Cytometry, IF, IHC, IHC-F, ICC, WB applications. This antibody reacts with Human, Mouse, Rat. 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	Flow Cytometry, IF, IHC, IHC-F, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.01mg NaN3. *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.
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	Q9UDY2

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antibody and ELISA experts

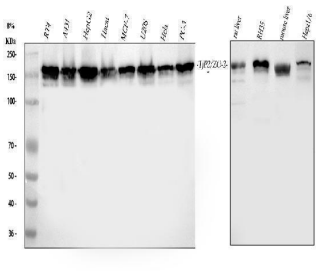
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Technical Details

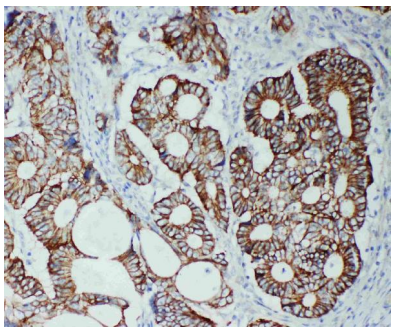
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human TJP2.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P), IHC(F) and ICC.
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, 0.1-0.5ug/ml, Human, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human Immunohistochemistry (Frozen Section), 0.5-1ug/ml, Human, - Immunocytochemistry/Immunofluorescence, 5ug/ml, Human Flow Cytometry (Fixed), 1-3ug/1x10^6 cells, Human Note: For flow cytometry (FCM), suitable for fixed cells only. Not suitable for FACS or surface flow cytometry using live cells.

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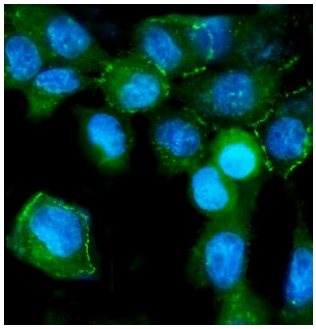
Anti-Tight junction protein ZO-2 TJP2 Antibody Picoband® (PA1957) Images



Western blot analysis of TJP2 using anti-TJP2 antibody (PA1957). 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 RT4 whole cell lysates, Lane 2: human A431 whole cell lysates, Lane 3: human HepG2 whole cell lysates, Lane 4: human Hacat whole cell lysates, Lane 5: human MCF-7 whole cell lysates, Lane 6: human U20S whole cell lysates, Lane 7: human Hela whole cell lysates, Lane 8: human PC-3 whole cell lysates, Lane 9: rat liver tissue lysates, Lane 10: rat RH35 whole cell lysates, Lane 11: mouse liver tissue lysates, Lane 12: mouse HEPA1-6 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-TJP2 antigen affinity purified polyclonal antibody (Catalog # PA1957) 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 TJP2 at approximately 150 kDa. The expected band size for TJP2 is at 134 kDa.

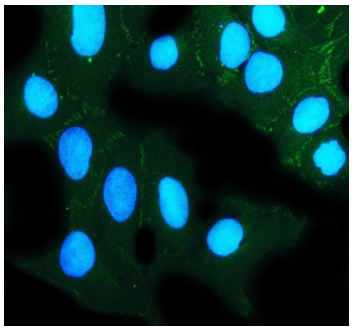


IHC analysis of TJP2 using anti-TJP2 antibody (PA1957). TJP2 was detected in a paraffin-embedded section of Human Intestinal Cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-TJP2 Antibody (PA1957) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

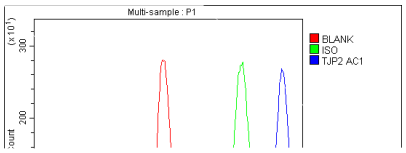


IF analysis of TJP2 using anti-TJP2 antibody (PA1957). TJP2 was detected in immunocytochemical section of A431 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5ug/mL rabbit anti-TJP2 Antibody (PA1957) 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.

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IF analysis of TJP2 using anti-TJP2 antibody (PA1957). TJP2 was detected in immunocytochemical section of U2OS 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-TJP2 Antibody (PA1957) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:500 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.



Flow Cytometry analysis of MCF-7 cells using anti-TJP2 antibody (PA1957). Overlay histogram showing MCF-7 cells stained with PA1957 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-TJP2 Antibody (PA1957, 1ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x106) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

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