BOSTER BIOLOGICAL TECHNOLOGY
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Anti-Aquaporin 1/AQP1 Antibody Picoband®

Catalog Number: PA1010

About AQP1

Aquaporin 1 is a 28-kD integral protein though at first to be a breakdown product of the Rh polypeptide but was later shown to be a unique molecule that is abundant in erythrocytes and renal tubules. AQP1 is also expressed by the choroid plexus and various other tissues. It forms a water-specific channel that provides the plasma membranes of red cells and kidney proximal tubules with high permeability to water, thereby permitting water to move in the direction of an osmotic gradient.

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Overview

Product Name	Anti-Aquaporin 1/AQP1 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Aquaporin 1/AQP1 Antibody catalog # PA1010. Tested in Flow Cytometry, IHC, 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, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg Na2HPO4.
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	P29972

Technical Details

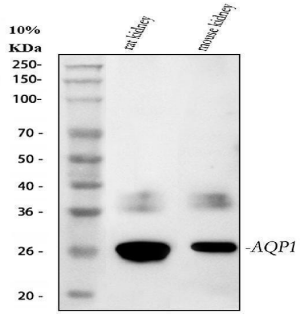
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human Aquaporin 1, identical to the related rat and mouse sequences.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western

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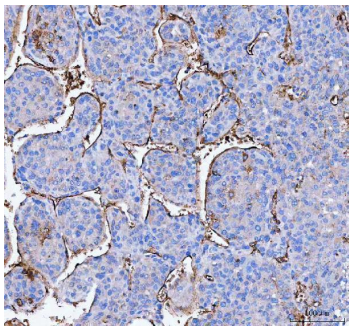
	blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human, Mouse, Rat Flow Cytometry(Fixed), 1-3 ug/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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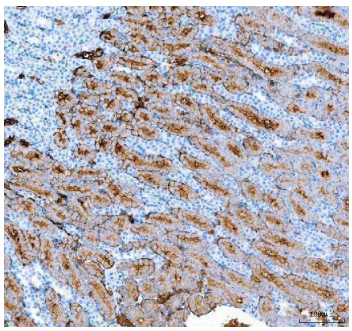
Anti-Aquaporin 1/AQP1 Antibody Picoband® (PA1010) Images



Western blot analysis of AQP1 using anti-AQP1 antibody (PA1010). 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: rat kidney tissue lysates, Lane 2: mouse kidney 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-AQP1 antigen affinity purified polyclonal antibody (Catalog # PA1010) 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 AQP1 at approximately 29 kDa. The expected band size for AQP1 is at 29 kDa.



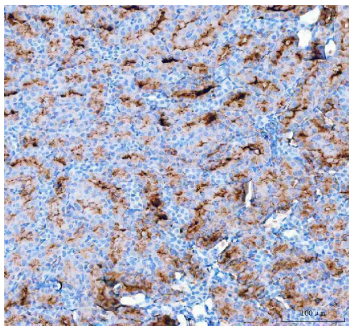
IHC analysis of AQP1 using anti-AQP1 antibody (PA1010). AQP1 was detected in a paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-AQP1 Antibody (PA1010) 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.



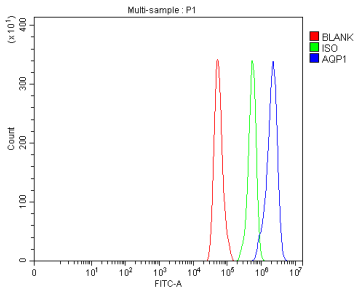
IHC analysis of AQP1 using anti-AQP1 antibody (PA1010). AQP1 was detected in a paraffin-embedded section of mouse kidney tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-AQP1 Antibody (PA1010) 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.

IHC analysis of AQP1 using anti-AQP1 antibody (PA1010). AQP1 was detected in a paraffin-embedded section of rat kidney tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat

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serum. The tissue section was then incubated with 2 ug/ml rabbit anti-AQP1 Antibody (PA1010) 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.



Flow Cytometry analysis of Hela cells using anti-AQP1 antibody (PA1010). Overlay histogram showing Hela cells stained with PA1010 (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-AQP1 Antibody (PA1010, 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 (Red line) was also used as a control.

7 Publications Citing This Product

1. PubMed ID: 20512452, Ran X, Wang H, Chen Y, Zeng Z, Zhou Q, Zheng R, Sun J, Wang B, Lv X, Liang Y, Zhang K, Liu W. Heart Vessels. 2010 May;25(3):237-47. Doi: 10.1007/S00380-009-1179-5. Epub 2010 May 29. Aquaporin-1 Expression And Angiogenesis In Rabbit Chronic Myocard...

2. PubMed ID: 25624795, Huo J, Liu J, Wang J, Zhang Y, Wang C, Yang Y, Sun W, Xu S. Neural Regen Res. 2012 Aug 5;7(22):1729-35. Doi: 10.3969/J.Issn.1673-5374.2012.22.008. Early Hyperbaric Oxygen Therapy Inhibits Aquaporin 4 And Adrenocorticotropic Hormone Expression In T...

3. PubMed ID: 25624795, Huo J, Liu J, Wang J, Zhang Y, Wang C, Yang Y, Sun W, Xu S. Neural Regen Res. 2012 Aug 5;7(22):1729-35. Doi: 10.3969/J.Issn.1673-5374.2012.22.008. Early Hyperbaric Oxygen Therapy Inhibits Aquaporin 4 And Adrenocorticotropic Hormone Expression In T...

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