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Anti-Connexin 43/GJA1 Antibody

Catalog Number: PA1026-1

About GJA1

Connexins 43 (Cx43), also called GAP Junction Protein, alpha-1 (GJA1). Connexin 43 is a member of the connexin gene family which abundantly expressed in the heart and liver and was mapped to 6q21-q23.2. Connexin43, the major protein of gap junctions in the heart, is targeted by several protein kinases that regulate myocardial cell-cell coupling. Mutations in the connexin43 gap-junction gene, which lead to abnormally regulated cell-cell communication, are associated with visceroatrial heterotaxia. Cx43 must also play a critical role in the physiology of hearing, presumably by participating in the recycling of potassium to the cochlear endolymph.

Overview

Product Name	Anti-Connexin 43/GJA1 Antibody
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Connexin 43/GJA1 Antibody catalog # PA1026-1. Tested in IHC, ICC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 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	P17302

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human Connexin 43, identical to the related rat and mouse sequences.
Predicted Reactive Species	Hamster
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

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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: Immunocytochemistry , 0.5-1ug/ml Immunohistochemistry (Frozen Section), 0.5-1ug/ml Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml Western blot, 0.1-0.5ug/ml

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Anti-Connexin 43/GJA1 Antibody (PA1026-1) Images

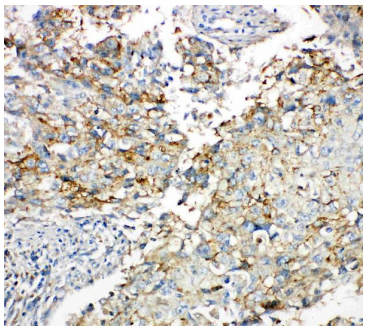

Figure 1. IHC analysis of Connexin 43/GJA1 using anti-Connexin 43/GJA1 antibody (PA1026-1).
Connexin 43/GJA1 was detected in paraffin-embedded section of human lung cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-Connexin 43/GJA1 Antibody (PA1026-1) 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.

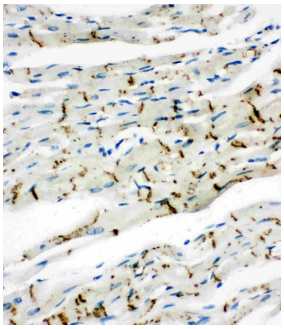

Figure 2. IHC analysis of Connexin 43/GJA1 using anti-Connexin 43/GJA1 antibody (PA1026-1).
Connexin 43/GJA1 was detected in paraffin-embedded section of rat cardiac muscle tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-Connexin 43/GJA1 Antibody (PA1026-1) 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.

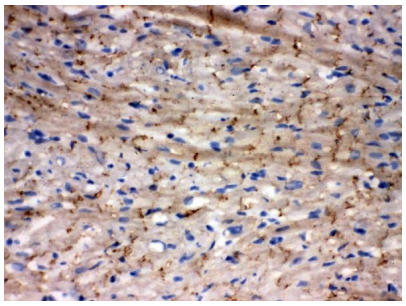

Figure 3. IHC analysis of Connexin 43/GJA1 using anti-Connexin 43/GJA1 antibody (PA1026-1).
Connexin 43/GJA1 was detected in frozen section of rat cardiac muscle tissues. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-Connexin 43/GJA1 Antibody (PA1026-1) 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.

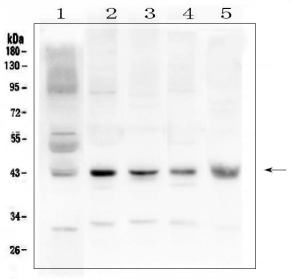

Figure 4. Western blot analysis of Connexin 43/GJA1 using anti-Connexin 43/GJA1 antibody (PA1026-1).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.
Lane 1: human placenta tissue lysates,
Lane 2: rat brain tissue lysates,
Lane 3: rat hear tissue lysates,
Lane 4: mouse brain tissue lysates,
Lane 5: mouse heart tissue lysates.
After Electrophoresis, proteins were transferred to a

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Nitrocellulose membrane at 150mA 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-Connexin 43/GJA1 antigen affinity purified polyclonal antibody (Catalog # PA1026-1) 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 1:10000 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 Connexin 43/GJA1 at approximately 43KD. The expected band size for Connexin 43/GJA1 is at 43KD.

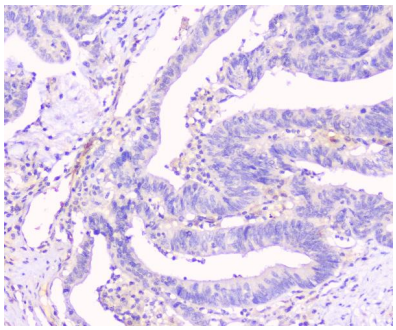

Figure 5. IHC analysis of Connexin 43/GJA1 using anti-Connexin 43/GJA1 antibody (PA1026-1).
Connexin 43/GJA1 was detected in paraffin-embedded section of human intestinal cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-Connexin 43/GJA1 Antibody (PA1026-1) 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.

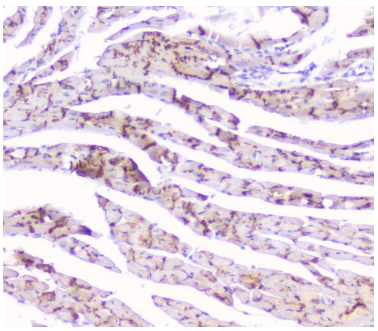

Figure 6. IHC analysis of Connexin 43/GJA1 using anti-Connexin 43/GJA1 antibody (PA1026-1).
Connexin 43/GJA1 was detected in paraffin-embedded section of mouse cardiac muscle tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-Connexin 43/GJA1 Antibody (PA1026-1) 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.

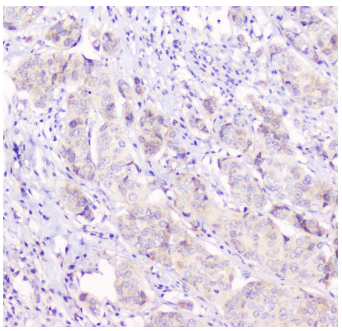

Figure 7. IHC analysis of Connexin 43/GJA1 using anti-Connexin 43/GJA1 antibody (PA1026-1).
Connexin 43/GJA1 was detected in paraffin-embedded section of human mammary cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-Connexin 43/GJA1 Antibody (PA1026-1) 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.

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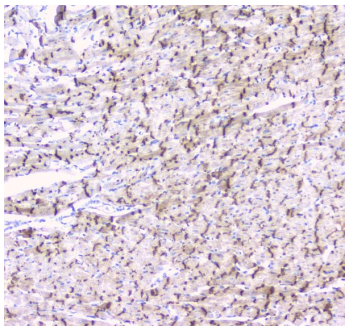

Figure 8. IHC analysis of Connexin 43/GJA1 using anti-Connexin 43/GJA1 antibody (PA1026-1).
Connexin 43/GJA1 was detected in paraffin-embedded section of rat cardiac muscle tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-Connexin 43/GJA1 Antibody (PA1026-1) 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.

15 Publications Citing This Product

1. PubMed ID: 10.7150/thno.60160, Iron Oxide Nanoparticles Promote Cx43-Overexpression of Mesenchymal Stem Cells for Efficient Suicide Gene Therapy during Glioma Treatment

2. PubMed ID: 10.1016/j.theriogenology.2021.09.008, LIF and bFGF enhanced chicken primordial follicle activation by Wnt/beta-catenin pathway

3. PubMed ID: , Perineurium-like sheath derived from long-term surviving mesenchymal stem cells confers nerve protection to the injured spinal cord

Visit bosterbio.com/anti-connexin-43-gja1-antibody-pa1026-1-boster.html to see all 15 publications.