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antibody and ELISA experts

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Anti-Connexin 43/GJA1 Antibody Picoband®

Catalog Number: A00599

About GJA1

Connexin 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 Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Connexin 43/GJA1 Antibody Picoband® catalog # A00599. Tested in ELISA, IF, IHC, 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	ELISA, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 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	P17302

Technical Details

Immunogen	E.coli-derived human Connexin 43/GJA1 recombinant protein (Position: D3-R362).
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.
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, 0.25-0.5ug/ml, Human, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat, By Heat Immunocytochemistry/Immunofluorescence, 2ug/ml, Human ELISA, 0.1-0.5ug/ml, -

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Anti-Connexin 43/GJA1 Antibody Picoband® (A00599) Images

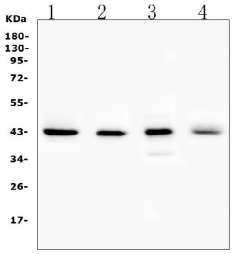

Figure 1. Western blot analysis of GJA1 using anti-GJA1 antibody (A00599).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.
Lane 1: human U-87MG whole cell lysates,
Lane 2: rat brain tissue lysates,
Lane 3: mouse brain tissue lysates,
Lane 4: mouse testicular tissue lysates,
After Electrophoresis, proteins were transferred to a 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-GJA1 antigen affinity purified polyclonal antibody (Catalog # A00599) 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 GJA1 at approximately 43KD. The expected band size for GJA1 is at 43KD.

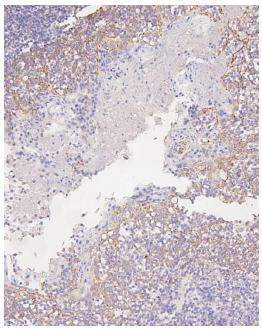

Figure 2. IHC analysis of GJA1 using anti-GJA1 antibody (A00599).
GJA1 was detected in paraffin-embedded section of human tonsil tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-GJA1 Antibody (A00599) 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.

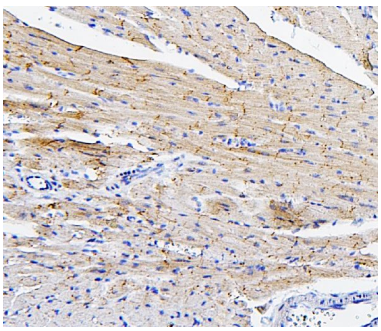

Figure 3. IHC analysis of GJA1 using anti-GJA1 antibody (A00599).
GJA1 was detected in paraffin-embedded section of mouse cardiac muscle tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-GJA1 Antibody (A00599) 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. IHC analysis of GJA1 using anti-GJA1 antibody (A00599).

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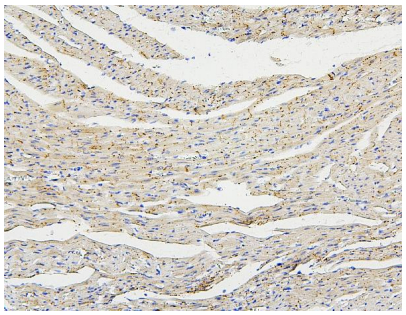

GJA1 was detected in paraffin-embedded section of rat cardiac muscle tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-GJA1 Antibody (A00599) 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.

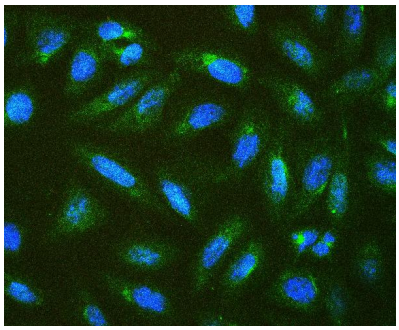

Figure 5. IF analysis of GJA1 using anti-GJA1 antibody (A00599).
GJA1 was detected in immunocytochemical section of U20S cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 2ug/mL rabbit anti-GJA1 Antibody (A00599) 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.

14 Publications Citing This Product

1. PubMed ID: 10.1186/1423-0127-19-6, Engineered myocardial tissues constructed in vivo using cardiomyocyte-like cells derived from bone marrow mesenchymal stem cells in rats

2. PubMed ID: 10.3892/mmr.2012.1185, Recombinant human brain natriuretic peptide therapy combined with bone mesenchymal stem cell transplantation for treating heart failure in rats

3. PubMed ID: 10.3233/BME-141214, Expression of Cx43 and Pax3 proteins in the human placental villi and decidua during early pregnancy

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