

## Rabbit Connexin 43/GJA1 Polyclonal Antibody | anti-43/GJA1 antibody

Phospho-Connexin 43/GJA1 (Ser373) Antibody

| CATALOG # | HOST   | REACTIVITY                                                                                                                                  | APPLICATIONS                              |
|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| AAA329801 | Rabbit | Human, Mouse, Rat<br>Predicted Reactivity: Pig (100%), Bovine (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (100%), Chicken (100%) | ELISA, Immunohistochemistry, Western Blot |

### PRODUCT SYNONYMS

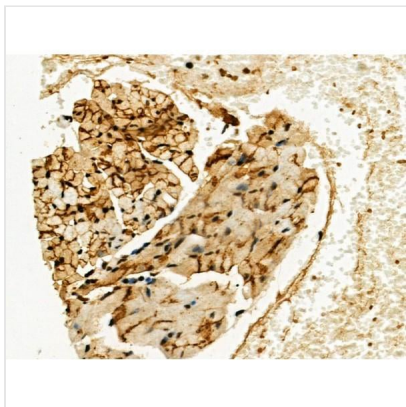
Connexin 43/GJA1; Polyclonal Antibody; Phospho-Connexin 43/GJA1 (Ser373) Antibody; Connexin 43; Connexin-43; Cx 43; Cx43; CXA1\_HUMAN; DFNB38; Gap junction 43kDa heart protein; Gap junction alpha-1 protein; Gap junction protein alpha 1 43kDa (connexin 43); Gap junction protein alpha 1 43kDa; Gap junction protein alpha like; GJA 1; Gja1; GJAL; ODD; ODDD; ODOD; SDTY3; anti-43/GJA1 antibody

### PRODUCT SPECIFICATIONS

|                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Host                                              | Rabbit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Reactivity                                        | Human, Mouse, Rat<br>Predicted Reactivity: Pig (100%), Bovine (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (100%), Chicken (100%)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Clonality                                         | Polyclonal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Isotype                                           | Rabbit IgG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Specificity                                       | Phospho-Connexin 43/GJA1 (Ser373) Antibody detects endogenous levels of Connexin 43/GJA1 only when phosphorylated at Ser373.<br>Tissue Specificity: Expressed in the heart and fetal cochlea.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Purity/Purification                               | The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Form/Format                                       | Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Concentration                                     | 1mg/ml (varies by lot)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Applicable Applications for anti-43/GJA1 antibody | ELISA (Peptide ELISA), IHC (Immunohistochemistry), WB (Western Blot)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Immunogen                                         | A synthesized peptide derived from human Connexin 43/GJA1 around the phosphorylation site of Ser373.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Conjugation                                       | Unconjugated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Fragment                                          | Fab fragment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Post Translational Modifications                  | Phosphorylated at Ser-368 by PRKCG; phosphorylation induces disassembly of gap junction plaques and inhibition of gap junction activity (By similarity). Phosphorylation at Ser-325, Ser-328 and Ser-330 by CK1 modulates gap junction assembly. Phosphorylation at Ser-368 by PRKCD triggers its internalization into small vesicles leading to proteasome-mediated degradation (By similarity). Sumoylated with SUMO1, SUMO2 and SUMO3, which may regulate the level of functional Cx43 gap junctions at the plasma membrane. May be desumoylated by SENP1 or SENP2. S-nitrosylation at Cys-271 is enriched at the muscle endothelial gap junction in arteries, it augments channel permeability and may regulate of smooth muscle cell to endothelial cell communication. Acetylated in the developing cortex; leading to delocalization from the cell membrane. |
| Subunit Structure                                 | A connexon is composed of a hexamer of connexins. Interacts (via C-terminus) with TJP1 (By similarity). Interacts (via C-terminus) with SRC (via SH3 domain) (By similarity). Interacts (not ubiquitinated) with UBQLN4 (via UBA domain) (By similarity). Interacts with SGSM3 and CNST (By similarity). Interacts with RIC1/CIP150. Interacts with CSNK1D. Interacts with NOV. Interacts with TMEM65 (By similarity).                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Similarity                                        | Belongs to the connexin family. Alpha-type (group II) subfamily.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

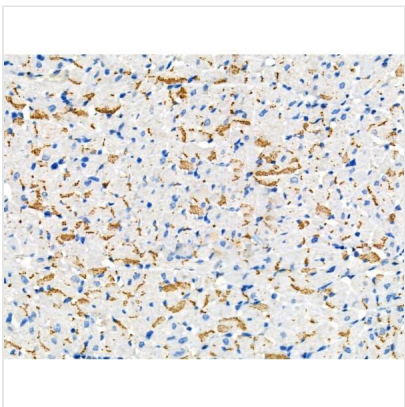
|                         |                                                                                                                                                                                                                              |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subcellular Location    | Cell membrane>Multi-pass membrane protein. Cell junction>Gap junction. Endoplasmic reticulum.<br>Note: Localizes at the intercalated disk (ICD) in cardiomyocytes and the proper localization at ICD is dependent on TMEM65. |
| Preparation and Storage | Store at -20 degree C. Stable for 12 months from date of receipt.                                                                                                                                                            |

## IMAGES



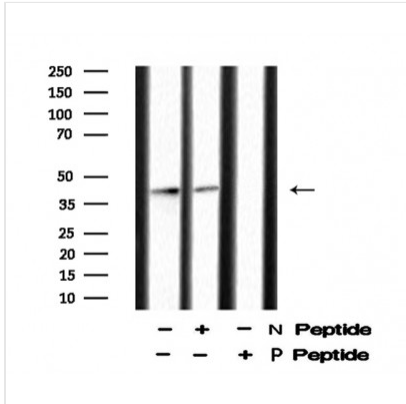
### IHC (Immunohistochemisry)

At 1/100 staining Mouse heart tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



### IHC (Immunohiostchemistry)

Staining Rat heart tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



### WB (Western Blot)

Western blot analysis of Connexin 43 (Phospho-Ser373) using Rat kidney tissue lysates. -/+ means absence or presence of N peptide¼non-phospho peptide) and P peptide(phospho peptide).

## ADDITIONAL INFORMATION

|                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Product Information for anti-43/GJA1 antibody | Gap junction protein that acts as a regulator of bladder capacity. A gap junction consists of a cluster of closely packed pairs of transmembrane channels, the connexons, through which materials of low MW diffuse from one cell to a neighboring cell. May play a critical role in the physiology of hearing by participating in the recycling of potassium to the cochlear endolymph. Negative regulator of bladder functional capacity: acts by enhancing intercellular electrical and chemical transmission, thus sensitizing bladder muscles to cholinergic neural stimuli and causing them to contract (By similarity). May play a role in cell growth inhibition through the regulation of NOV expression and localization. Plays an essential role in gap junction communication in the ventricles (By similarity). |
|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## NCBI AND UNIPROT INFORMATION

|             |         |
|-------------|---------|
| NCBI GI #   | 4504001 |
| NCBI GeneID | 2697    |

|                                  |                                                                                                   |
|----------------------------------|---------------------------------------------------------------------------------------------------|
| NCBI Accession #                 | <a href="#">NP_000156.1</a>                                                                       |
| NCBI GenBank Nucleotide #        | <a href="#">NM_000165.3</a>                                                                       |
| UniProt Accession #              | <a href="#">P17302</a> ; <a href="#">Q6FHU1</a> ; <a href="#">Q9Y5I8</a> ; <a href="#">B2R5U9</a> |
| Molecular Weight                 | 43,008 Da                                                                                         |
| NCBI Official Full Name          | gap junction alpha-1 protein                                                                      |
| NCBI Official Synonym Full Names | gap junction protein, alpha 1, 43kDa                                                              |
| NCBI Official Symbol             | GJA1                                                                                              |
| NCBI Official Synonym Symbols    | HSS; CX43; GJAL; ODDD; AVSD3; HLHS1; DFNB38                                                       |
| NCBI Protein Information         | gap junction alpha-1 protein; connexin 43; connexin-43; gap junction 43 kDa heart protein         |
| UniProt Protein Name             | Gap junction alpha-1 protein                                                                      |
| UniProt Gene Name                | <b>GJA1</b>                                                                                       |
| UniProt Synonym Gene Names       | GJAL; Cx43                                                                                        |
| UniProt Entry Name               | CXA1_HUMAN                                                                                        |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/connexin-43-gja1-antibody-peptide-elisa-immunohistochemistry-western-blot-elisa/329801>