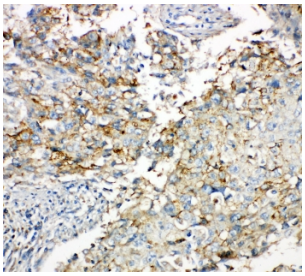
Cx43 Antibody / Connexin 43 (R30201)

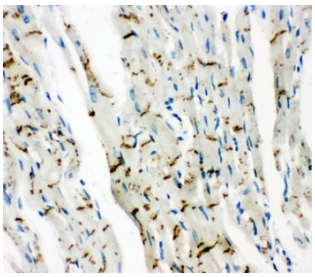
Catalog No.	Formulation	Size
R30201	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

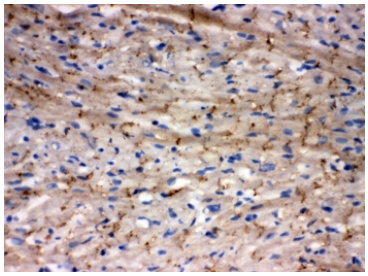
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2.5% BSA and 0.025% sodium azide/thimerosal
UniProt	P17302
Localization	Cytoplasm, plasma membrane
Applications	Western blot: 0.5-1ug/ml IHC (FFPE): 0.5-1ug/ml IHC (Frozen): 0.5-1ug/ml
Limitations	This Cx43 Antibody / Connexin 43 is available for research use only.



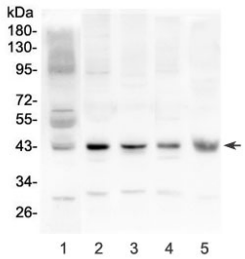
Cx43 Antibody Human Lung Cancer IHC. Immunohistochemical staining of FFPE human lung cancer tissue with Cx43 antibody. Cx43 immunoreactivity is observed predominantly along the membranes of malignant epithelial cells, consistent with the expected localization of this gap junction protein that mediates direct intercellular communication through gap junction channels. Cell nuclei are counterstained with hematoxylin (blue).



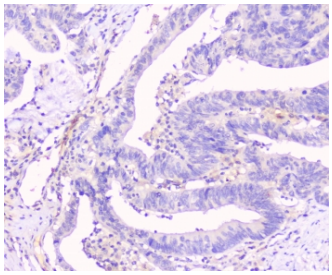
Cx43 Antibody Rat Heart Gap Junction IHC. Immunohistochemical staining of FFPE rat heart tissue with Cx43 antibody. Cx43 immunoreactivity is observed in a characteristic punctate pattern along cardiomyocyte cell borders, consistent with the expected localization of this gap junction protein that forms intercellular channels essential for electrical coupling and synchronized cardiac contraction. Cell nuclei are counterstained with hematoxylin (blue).



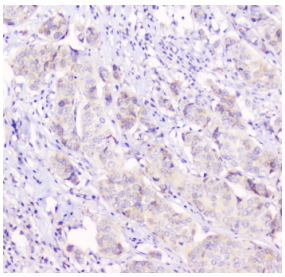
Cx43 Antibody Frozen Rat Heart IHC. Immunohistochemical staining of frozen rat heart tissue with Cx43 antibody. Cx43 immunoreactivity is observed in a punctate distribution along cardiomyocyte cell borders, consistent with the expected localization of this gap junction protein that forms intercellular channels essential for electrical coupling and synchronized cardiac contraction. Cell nuclei are counterstained with hematoxylin (blue).



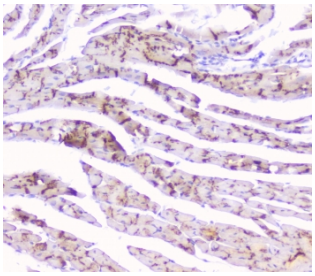
Cx43 Antibody Multi-Species WB. Western blot testing of 1) human placenta, 2) rat brain, 3) rat heart, 4) mouse brain, and 5) mouse heart lysates with Cx43 antibody at 0.5 ug/ml. A distinct immunoreactive band is detected at approximately 43 kDa in all five samples, consistent with the predicted molecular weight of Cx43. The results demonstrate specific detection of this gap junction protein, which forms intercellular channels that mediate direct cell-cell communication, electrical coupling, and coordinated tissue function in the heart and nervous system.



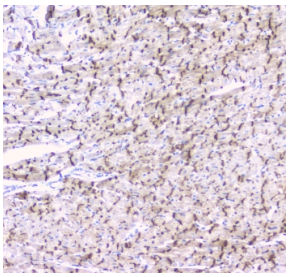
IHC testing of human intestinal cancer tissue with Cx43 antibody at 1ug/ml. HIER: steam section in pH6 citrate buffer for 20 min and allow to cool prior to staining.



IHC testing of human breast cancer tissue with Cx43 antibody at 1ug/ml. HIER: steam section in pH6 citrate buffer for 20 min and allow to cool prior to staining.



Cx43 Antibody Mouse Heart IHC. Immunohistochemical staining of FFPE mouse heart tissue with Cx43 antibody at 1 ug/ml. Heat-induced epitope retrieval (HIER) was performed by steaming tissue sections in pH 6 citrate buffer for 20 minutes and allowing them to cool prior to staining. Cx43 immunoreactivity is observed in a characteristic punctate pattern along cardiomyocyte cell borders, consistent with the expected localization of this gap junction protein that forms intercellular channels essential for electrical coupling and synchronized cardiac contraction. Cell nuclei are counterstained with hematoxylin (blue).



Cx43 Antibody Rat Heart Electrical Coupling IHC. Immunohistochemical staining of FFPE rat heart tissue with Cx43 antibody at 1 ug/ml. Heat-induced epitope retrieval (HIER) was performed by steaming tissue sections in pH 6 citrate buffer for 20 minutes and allowing them to cool prior to staining. Cx43 immunoreactivity is observed in a punctate pattern along cardiomyocyte cell borders, consistent with the expected localization of this gap junction protein that mediates electrical coupling, intercellular communication, and synchronized cardiac contraction. Cell nuclei are counterstained with hematoxylin (blue).

Description

Cx43 Antibody recognizes Cx43, also known as Connexin 43 or GJA1, the most abundant gap junction protein in vertebrate tissues. Cx43 assembles into hexameric connexons that align with connexons on adjacent cells to form gap junction channels, permitting the direct exchange of ions, metabolites, and small signaling molecules. This intercellular communication is essential for coordinating cellular activity, maintaining tissue homeostasis, and synchronizing physiological responses. As a result, Cx43 Antibody is widely used to study gap junction biology, cardiac physiology, nervous system function, and epithelial cell communication.

Cx43 is expressed in numerous tissues, including the heart, brain, skin, liver, kidney, lung, and vascular endothelium. In the myocardium, it is highly enriched at intercalated discs where it enables rapid electrical conduction between cardiomyocytes and supports synchronized cardiac contraction. Within the nervous system, Cx43 contributes to communication between astrocytes and other glial cells while participating in neuronal support and tissue repair. Dynamic regulation of Cx43 through phosphorylation, trafficking, assembly, and degradation allows gap junctions to respond rapidly to physiological and pathological stimuli.

Altered Cx43 expression or localization has been associated with numerous diseases, including cardiac arrhythmias, myocardial infarction, heart failure, stroke, epilepsy, chronic inflammation, fibrosis, impaired wound healing, and cancer. Changes in gap junction communication influence tissue remodeling, inflammatory responses, and tumor progression, making Cx43 an important biomarker in both basic and translational research. Consequently, Cx43 Antibody is frequently used to investigate mechanisms of cell-cell communication, cardiac disease, neurological disorders, and cancer biology.

NSJ Bioreagents offers highly validated Cx43 Antibody products for reliable detection of endogenous Cx43 in human and animal tissues. These antibodies support studies of gap junction formation, cardiac conduction, intercellular signaling, tissue homeostasis, and disease mechanisms while providing dependable performance across applications including western blotting, immunohistochemistry, immunofluorescence, and flow cytometry.

For additional information on Connexin 43 function, expression and validated applications, visit our Connexin 43 Antibody page.

Application Notes

Titration of the Cx43 Antibody / Connexin 43 may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Amino acids 351-367 (HELQPLAIVDQRPSSRA-human) were used as the immunogen for this Cx43 antibody (100% conserved in mouse and rat).

Storage

The lyophilized Cx43 antibody can be stored at 4oC to -20oC. After reconstitution, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

Connexin 43 antibody, GJA1 antibody, Gap Junction Alpha-1 Protein antibody, Gap Junction Protein Alpha 1 antibody, Connexin-43 antibody, CX43 antibody

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