

**Connexin 43 Antibody (N-term)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP1541b****Specification**

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**Connexin 43 Antibody (N-term) - Product Information**

Application	WB,E
Primary Accession	<a href="#">P17302</a>
Other Accession	<a href="#">P16863</a> , <a href="#">P18246</a>
Reactivity	Human, Mouse, Rat
Predicted	Bovine, Xenopus
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	107-138

**Connexin 43 Antibody (N-term) - Additional Information****Gene ID** 2697**Other Names**

Gap junction alpha-1 protein, Connexin-43, Cx43, Gap junction 43 kDa heart protein, GJA1, GJAL

**Target/Specificity**

This Connexin 43 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 107-138 amino acids from the N-terminal region of human Connexin 43.

**Dilution**

WB~~1:2000

E~~Use at an assay dependent concentration.

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

Connexin 43 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**Connexin 43 Antibody (N-term) - Protein Information****Name** GJA1**Synonyms** GJAL

**Function** 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).

#### Cellular Location

Cell membrane; Multi-pass membrane protein. Cell junction, gap junction. Endoplasmic reticulum {ECO:0000250|UniProtKB:P23242}. Note=Localizes at the intercalated disk (ICD) in cardiomyocytes and the proper localization at ICD is dependent on TMEM65. {ECO:0000250|UniProtKB:P23242}

#### Tissue Location

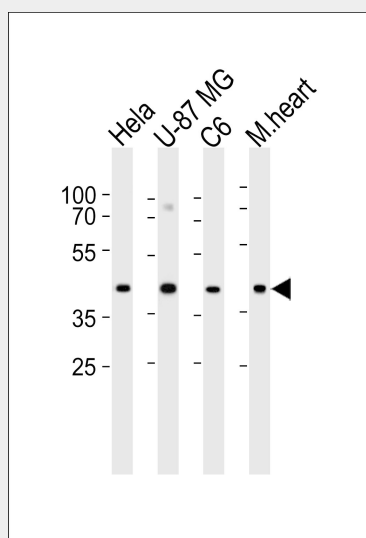
Expressed at intercalated disks in the heart (at protein level) (PubMed:11741837, PubMed:18662195). Expressed in the fetal cochlea (PubMed:11741837).

### Connexin 43 Antibody (N-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

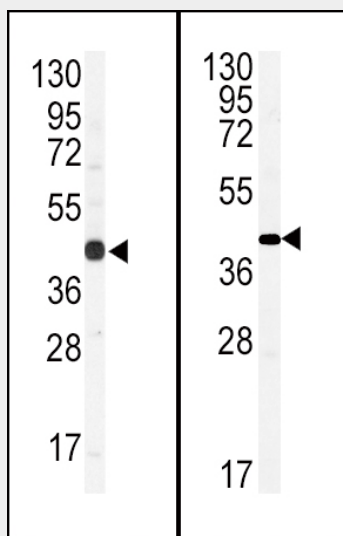
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Connexin 43 Antibody (N-term) - Images

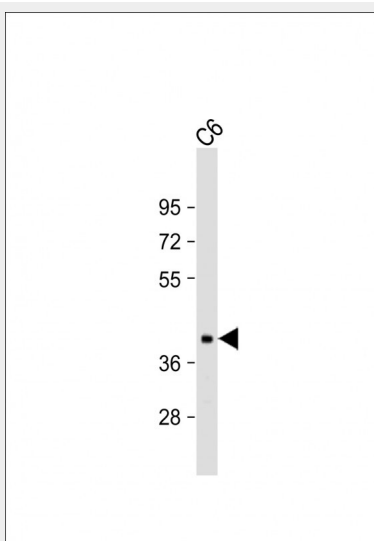


Western blot analysis of lysates from Hela, U-87 MG, C6 cell line and mouse heart tissue lysate (from left to right), using GJA1 Antibody (N121)(Cat. #AP1541b). AP1541b was diluted at 1:1000

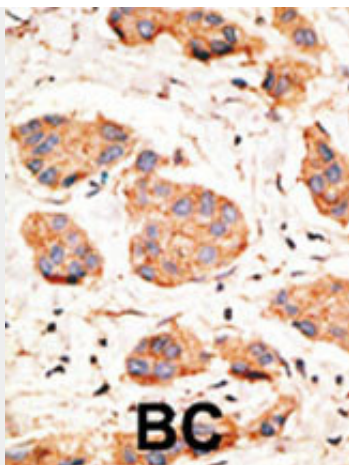
at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysates at 35ug per lane.



(LEFT)Western blot analysis of anti-GJA1 Antibody (N-term)(Cat.#AP1541b) in CEM cell line lysates (35ug/lane). GJA1(arrow) was detected using the purified Pab.(RIGHT)Western blot analysis of hGJA1-N121.Connexin (Cat.#AP1541b) in mouse brain tissue lysates (35ug/lane).GJA1 (arrow) was detected using the purified Pab.



Anti-GJA1 Antibody (N121) at 1:2000 dilution + C6 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 43 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

#### **Connexin 43 Antibody (N-term) - Background**

Gap junction protein, alpha 1 is a member of the connexin gene family and a component of gap junctions. Gap junctions are composed of arrays of intercellular channels and provide a route for the diffusion of materials of low molecular weight from cell to cell. Connexin 43 is the major protein of gap junctions in the heart, and gap junctions are thought to have a crucial role in the synchronized contraction of the heart and in embryonic development. Connexin 43 is targeted by several protein kinases that regulate myocardial cell-cell coupling. A related intron-less connexin 43 pseudogene, GJA1P, has been mapped to chromosome 5.

#### **Connexin 43 Antibody (N-term) - References**

Spinella, F., et al., J. Biol. Chem. 278(42):41294-41301 (2003). Contreras, J.E., et al., Proc. Natl. Acad. Sci. U.S.A. 100(20):11388-11393 (2003). Qin, H., et al., J. Biol. Chem. 278(32):30005-30014 (2003). Cameron, S.J., et al., J. Biol. Chem. 278(20):18682-18688 (2003). Ma, X.D., et al., World J. Gastroenterol. 9(5):946-950 (2003).

#### **Connexin 43 Antibody (N-term) - Citations**

- [A Systematic Study of the Mechanism of Acacetin Against Sepsis Based on Network Pharmacology and Experimental Validation](#)
- [Calcium-calmodulin gating of a pH-insensitive isoform of connexin43 gap junctions.](#)
- [The SH3-binding domain of Cx43 participates in loop/tail interactions critical for Cx43-hemichannel activity.](#)
- [The C-terminal domain of connexin43 modulates cartilage structure via chondrocyte phenotypic changes.](#)
- [Connexin 43 controls the multipolar phase of neuronal migration to the cerebral cortex.](#)
- [Intramolecular loop/tail interactions are essential for connexin 43-hemichannel activity.](#)
- [Knockdown of microRNA-181 by lentivirus mediated siRNA expression vector decreases the arrhythmogenic effect of skeletal myoblast transplantation in rat with myocardial infarction.](#)
- [Involvement of the cytoplasmic C-terminal domain of connexin43 in neuronal migration.](#)