Datasheet for 600-401-MJ2

Connexin 43 Antibody

Overview

Description:	Anti-Connexin 43 (RABBIT) Antibody - 600-401-MJ2
Item No.:	600-401-MJ2
Size:	100 µg
Applications:	ELISA, IF, IHC, WB
Reactivity:	Human, Mouse, Rat
Host Species:	Rabbit

Product Details

Background:	Connexin 43 or GJA1 (Gap Junction Protein Alpha 1) is a gap junction protein that acts as a regulator of bladder capacity. Gap channels (gap junctions) are specialized cell-cell contacts that provide direct intracellular communication. They allow passive diffusion of molecules up to 1 kDa, including nutrients, metabolites (glucose), ions (K+, Ca2+) and second messengers (IP3, cAMP). It 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. Connexin 43 may play a role in cell growth inhibition through the regulation of NOV expression and localization. It plays an essential role in gap junction communication in the ventricles. Anti-Connexin 43 Antibody is useful for researchers interested in EGF/EGFR Signaling Pathways or signaling receptor binding.
Synonyms:	Rabbit Anti-Connexin 43 Antibody, Rabbit Anti-Gja1 Antibody, Gap Junction Protein Alpha 1, Gap Junction Protein, Alpha 1, 43kDa, Gap Junction 43 KDa Heart Protein, Connexin-43, GJAL, Gap Junction Protein, Alpha 1, 43kDa (Connexin 43), Oculodentodigital Dysplasia (Syndactyly Type III), Gap Junction Protein, Alpha-Like, Gap Junction Alpha-1 Protein, Connexin 43, AVSD3, EKVP3, HLHS1, PPKCA, CMDR, CX43, EKVP, ODDD, Cx43, HSS
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	Gja1

Reactivity:	Human, Mouse, Rat
Immunogen Type:	Conjugated Peptide
Immunogen:	Anti-Connexin 43 antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to an internal portion of mouse connexin 43 conjugated to Keyhole Limpet Hemocyanin (KLH).
Purity/Specificity:	This affinity purified antibody is directed against rat connexin 43. This product was affinity purified from monospecific antiserum by immunoaffinity purification. A BLAST analysis was used to suggest cross-reactivity with the antigen based on 100% homology with the immunizing sequence to rat, black bear, European rabbit, wild boar, Macaca fascicularis, and Chlorocebus aethiops.
Relevant Links:	• UniProtKB - P23242 • NCBI - NP_034418.1 • GeneID - 14609

Application Details

Tested Applications:	ELISA, IF, IHC, WB
Application Note:	Anti-Connexin 43 Antibody has been tested in ELISA, WB, IF, and IHC. Expect a band at ~43Da in western blot using appropriate lysates. Positive control used: Mouse Heart in IHC, Rat Pup Brain cells, NIH-3T3, or HEK293T in IF, and HEK293T, Mouse Heart, or Rat Brain in WB.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:10,000 - 1:15,000
IF:	15 µg/ml
IHC:	1:200
WB:	1:1000

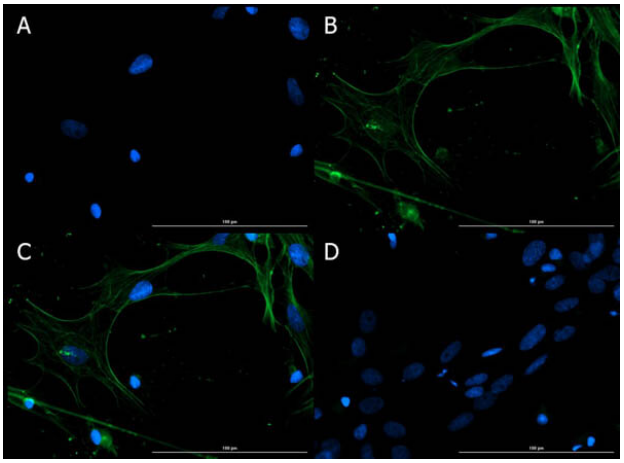
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	0.92 mg/ml by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

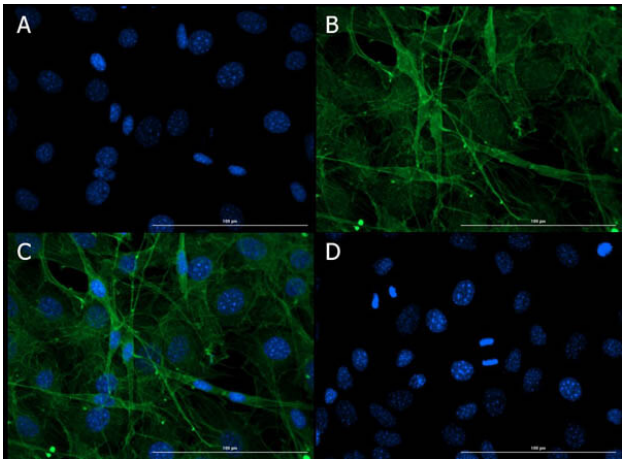
Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

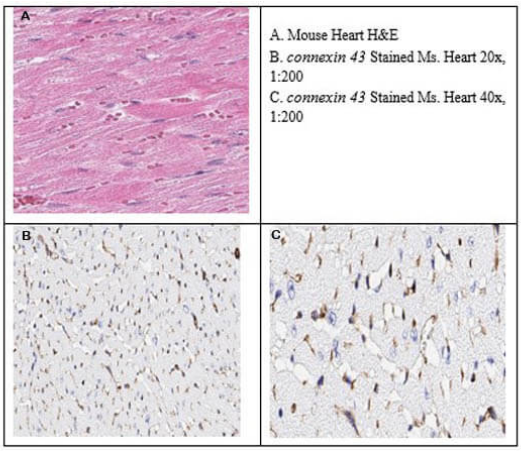
Images



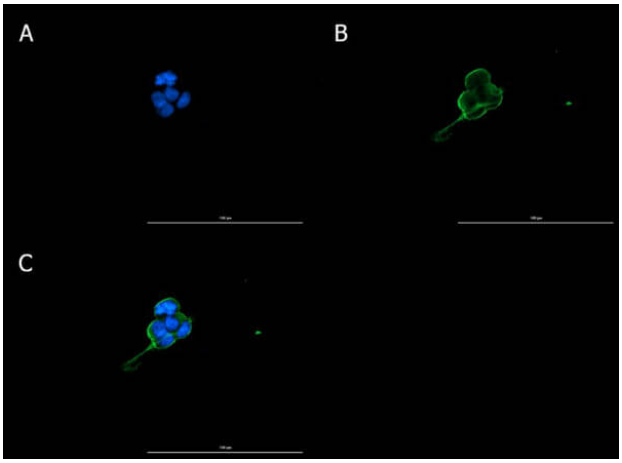
Immunofluorescence Microscopy
Immunofluorescence of Rabbit Anti-Connexin 43 Antibody. Cell Line: Rat Pup Brain Cells. Fixative: 4% PFA. Permeabilization: 0.3% Triton X-100. Primary Antibody: Anti-Connexin 43 Antibody at 15µg/mL overnight at 2-8°C. Secondary Antibody: Donkey Anti-Rabbit IgG DyLight™488 (p/n 611-741-127) at 5µg/mL for 1hr at RT. Nuclear Counterstain: DAPI. Staining: (A). DAPI. (B). Primary + Secondary Antibody. (C). Merged A+B. (D). Secondary Only. Expected localization: cell membrane, ER – (UniProtID). Vesicles, cell junctions, nucleoplasm - (Human Protein Atlas).



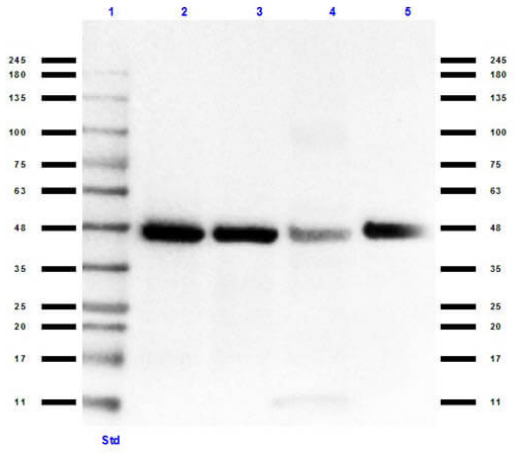
Immunofluorescence Microscopy
Immunofluorescence of Rabbit Anti-Connexin 43 Antibody. Cell Line: NIH-3T3 Cells. Fixative: 4% PFA. Permeabilization: 0.3% Triton X-100. Primary Antibody: Anti-Connexin 43 Antibody at 15µg/mL overnight at 2-8°C. Secondary Antibody: Donkey Anti-Rabbit IgG DyLight™488 (p/n 611-741 -127) at 5µg/mL for 1hr at RT. Nuclear Counterstain: DAPI. Staining: (A). DAPI. (B). Primary + Secondary Antibody. (C). Merged A+B. (D). Secondary Only. Expected localization: cell membrane, ER – (UniProtID). Vesicles, cell junctions, nucleoplasm - (Human Protein Atlas).



Immunohistochemistry
Immunohistochemistry of Rabbit Anti-Connexin 43 Antibody. Tissue: Mouse Heart. Antigen Retrieval: HIER citrate buffer for 20 min. Primary Antibody: Anti-Connexin 43 at 1:200 for 30min at RT. Secondary Antibody: Anti-Rabbit Poly IgG-HRP Ready-to-Use for 8 min at RT. Stain: DAB. Counterstain: Hematoxylin. Connexin 43 showed moderate to intense staining of myocytes and vascular endothelium.



Immunofluorescence Microscopy
Immunofluorescence of Rabbit Anti-Connexin 43 Antibody. Cell Line: HEK293T Cells. Fixative: 4% PFA. Permeabilization: 0.3% Triton X-100. Primary Antibody: Anti-Connexin 43 Antibody at 15µg/mL overnight at 2-8°C. Secondary Antibody: Donkey Anti-Rabbit IgG DyLight™488 (p/n 611-741 -127) at 5µg/mL for 1hr at RT. Nuclear Counterstain: DAPI. Staining: (A). DAPI. (B). Primary + Secondary Antibody. (C). Merged A+B. Expected localization: cell membrane, ER – (UniProtID). Vesicles, cell junctions, nucleoplasm - (Human Protein Atlas).



Western Blot
Western Blot of Rabbit Anti-Connexin 43 Antibody. Lane 1: PreStained Opal Molecular Weight Ladder (p/n MB-210-0500). Lane 2: Connexin HEK293T overexpressing lysate (10µg). Lane 3: HEK293T lysate (p/n W09-001-GX5) [10µg]. Lane 4: Mouse Heart lysate (p/n W10-000-T014) [35µg]. Lane 5: Rat Brain lysate (p/n W12-000-T077) [35µg]. Primary Antibody: Anti-Connexin 43 Antibody at 1:1000 overnight at 2-8°C. Secondary Antibody: Goat Anti-Rabbit HRP (p/n 611-103-122) at 1:70,000 for 30min at RT. Buffer: BlockOut (p/n MB-073). Predicted: ~43kDa for ms, rt, hu.

Disclaimer

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