

Datasheet for 600-401-MJ2S**Connexin 43 Antibody****Overview**

Description:	Anti-Connexin 43 (RABBIT) Antibody - 600-401-MJ2S
Item No.:	600-401-MJ2S
Size:	25 µL
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 ⁺ , Ca ²⁺) and second messengers (IP ₃ , 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
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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

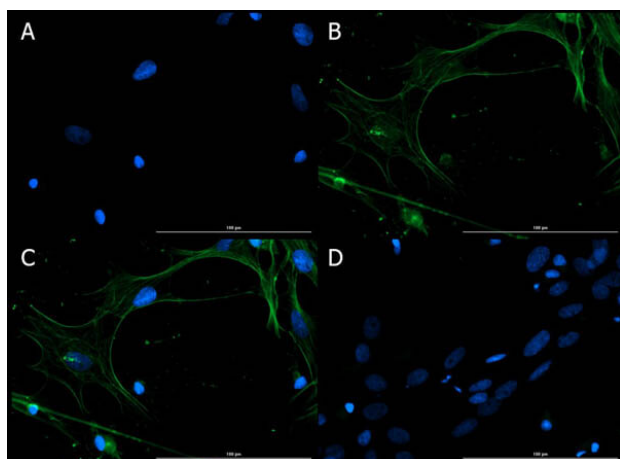
Formulation

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

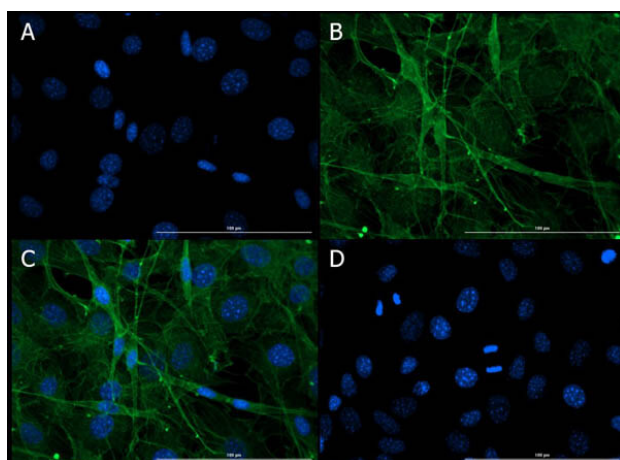
Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C or below prior to opening. This vial contains a relatively low volume of reagent (25 µL). To minimize loss of volume dilute 1:10 by adding 225 µL of the buffer stated above directly to the vial. Recap, mix thoroughly and briefly centrifuge to collect the volume at the bottom of the vial. Use this intermediate dilution when calculating final dilutions as recommended below. Store the vial at -20°C or below after dilution. Avoid cycles of freezing and thawing.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



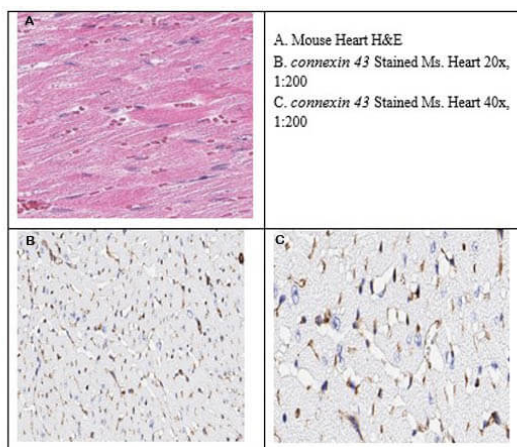
Immunofluorescence Microscopy

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).



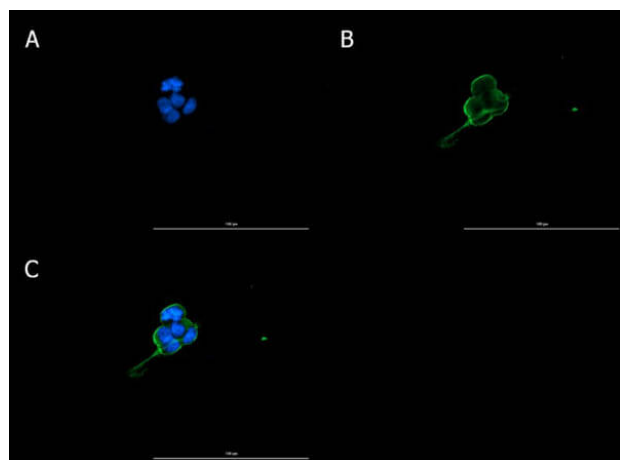
Immunofluorescence Microscopy

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).



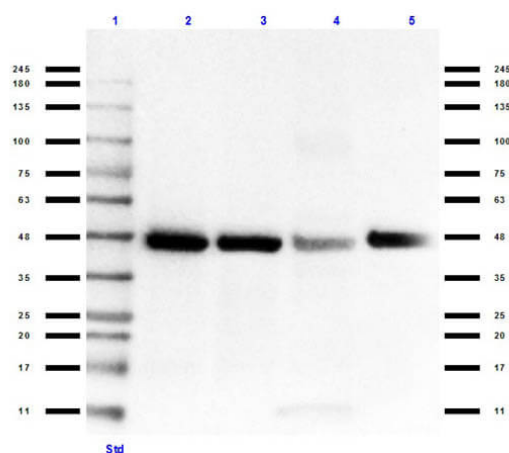
Immunohistochemistry

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

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.