

## Biotin anti-Connexin 43, 360-382 Antibody

<b>Catalog# / Size</b>	849605 / 25 µg 849606 / 100 µg
<b>Clone</b>	P2C4
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	GJA1, Cx43, Gap Junction Protein Alpha 1
<b>Isotype</b>	Mouse IgG2a, κ
<b>Description</b>	Connexins are a family of transmembrane proteins that assemble to form vertebrate gap junctions, thus also called Gap Junction Proteins. So far, 21 Connexins have been discovered in humans. The gene GJA1 encodes Connexin 43 (Cx43), which is the most expressed Connexin, and can be found in many human tissues including skin, bone, and brain. Cx43 has been reported to be involved in synchronized contraction of the heart as well as embryonic development. Besides its functions as a channel protein, Cx43 also performs channel-independent functions. During brain and heart development, cytoplasmic Cx43 regulates the microtubule network and thus affects cell migration and polarity. In addition, mitochondrial GJA1 has also been reported to promote cell survival by down-regulating the intrinsic apoptotic pathway during conditions such as oxidative stress.

### Product Details

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<b>Verified Reactivity</b>	Human, Mouse
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Immunogen</b>	KLH-conjugated peptide corresponding to amino acids 360-382 of Connexin 43.
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
<b>Preparation</b>	The antibody was purified by affinity chromatography and conjugated with biotin under optimal conditions.
<b>Concentration</b>	0.5 mg/ml
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">WB - Quality tested</a> <a href="#">IHC-P - Verified</a>
<b>Recommended Usage</b>	Each lot of this antibody is quality control tested by <a href="#">Western blotting</a> . For Western blotting, the suggested use of this reagent is 0.01 - 0.1 µg per ml. For immunohistochemistry, a concentration range of 5.0 - 10 µg/ml is suggested. It is recommended that the reagent be titrated for optimal performance for each application.
<b>Application Notes</b>	This antibody binds to the C-terminus of Connexin 43 and shows preference for non-phosphorylated Connexin 43 by western blotting.
<b>Application References</b>	1. Chu G, <i>et al.</i> 2002. <i>Cardiovasc. Res.</i> 54(1):105. (WB) 2. Wei CJ, <i>et al.</i> 2005. <i>J. Biol. Chem.</i> 280(20):19925. (WB)
<b>(PubMed link indicates BioLegend citation)</b>	
<b>RRID</b>	AB_2750331 (BioLegend Cat. No. 849605) AB_2750332 (BioLegend Cat. No. 849606)

### Antigen Details

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<b>Structure</b>	Connexin 43 (GJA1) is a 382 amino acid protein with a molecular mass of 43 kD.
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<b>Distribution</b>	Tissue distribution: Expressed in most tissues, enriched in brain, endocrine, muscle, bone marrow, immune System, ovaries, testes, and Skin.  Cellular distribution: Plasma membrane, cytosol, mitochondria, golgi apparatus, cytoskeleton and endoplasmic reticulum membrane.
<b>Function</b>	Connexin 43 plays a role in cell-to-cell communication by forming channels, or gap junctions between cells. It allows for the transport of nutrients, charged particles (ions), and other small molecules that carry necessary communication signals between cells.
<b>Molecular Family</b>	Gap Junction Proteins
<b>Antigen References</b>	1. Grek CL, <i>et al.</i> 2016. <i>Cancer Lett.</i> 374(1):117. 2. Lilly E, <i>et al.</i> 2016. <i>Semin. Cell Dev. Biol.</i> Feb; 50:4 3. Michela P, <i>et al.</i> 2015. <i>Eur. J. Pharmacol.</i> 768:71-6.
<b>Gene ID</b>	<a href="#">2697</a>

## Related Protocols

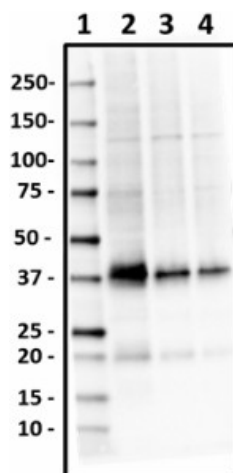
[Western Blotting Protocol](#)

[Immunohistochemistry Protocol for Paraffin-Embedded Sections](#)

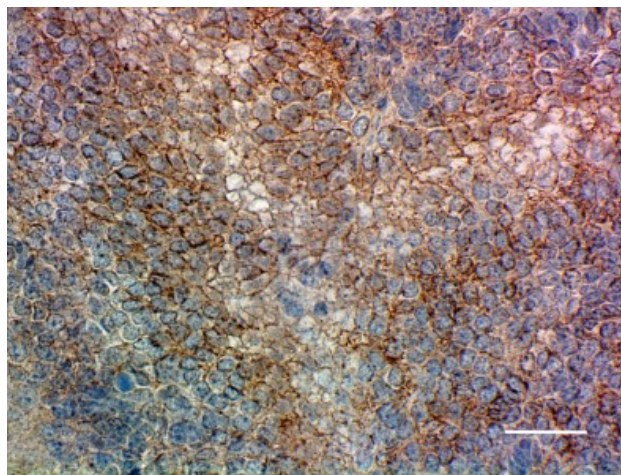
## Other Formats

Purified anti-Connexin 43, 360-382, HRP anti-Connexin 43, 360-382, Biotin anti-Connexin 43, 360-382

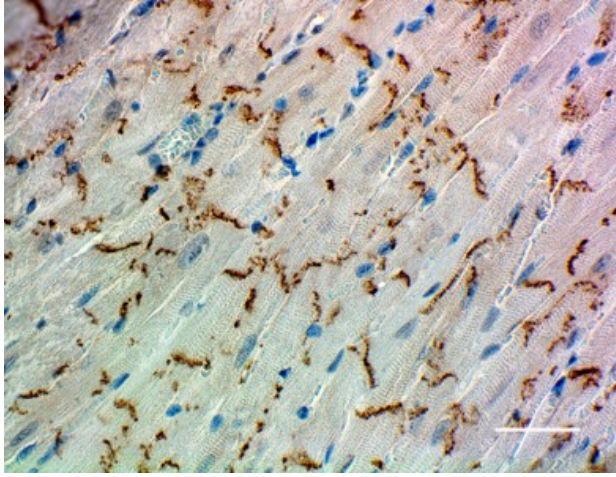
## Product Data



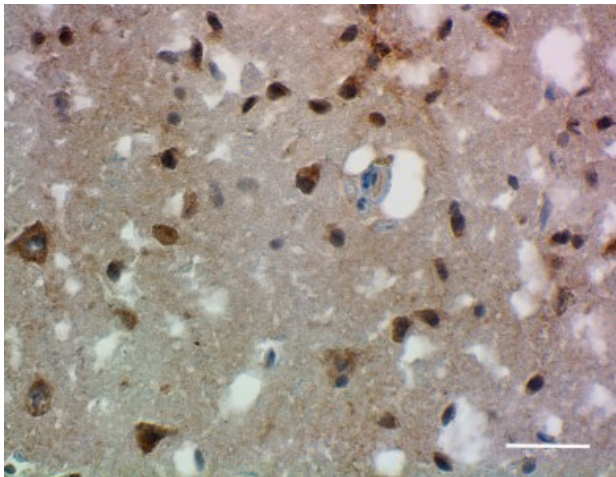
Western blot of Biotin anti-Connexin 43, 360-382 antibody (clone P2C4). Lane 1: Molecular weight marker; Lane 2: 20 µg of human brain lysate; Lane 3: 5 µg of mouse brain lysate; Lane 4: 5 µg of rat brain lysate. The blot was incubated with 0.1 µg/mL of the primary antibody overnight at 4°C, followed by incubation with HRP Streptavidin (Cat. No. 405210). Enhanced chemiluminescence was used as the detection system.



IHC staining of Biotin anti-Connexin 43, 360-382 antibody (clone P2C4) on formalin-fixed paraffin-embedded mouse brain tissue. Following antigen retrieval using Sodium Citrate H.I.E.R. (Cat. No. 928602), the tissue was incubated with 5 µg/ml of the primary antibody overnight at 4°C. For detection, the HRP labeling reagent and DAB from BioLegend Ultra Streptavidin (USA) HRP Detection Kit was used (Multi-Species, component #5, DAB; Cat. No. 929901). Slides were counterstained with hematoxylin, according to the protocol provided. The image was captured with a 40X objective. Scale Bar: 50 µm



IHC staining of Biotin anti-Connexin 43, 360-382 antibody (clone P2C4) on formalin-fixed paraffin-embedded mouse heart tissue. Following antigen retrieval using Sodium Citrate H.I.E.R. (Cat. No. 928602), the tissue was incubated with 10 µg/ml of the primary antibody overnight at 4°C. For detection, the HRP labeling reagent and DAB from BioLegend Ultra Streptavidin (USA) HRP Detection Kit was used (Multi-Species, component #5, DAB; Cat. No. 929901). Slides were counterstained with hematoxylin, according to the protocol provided. The image was captured with a 40X objective. Scale Bar: 50 µm



IHC staining of Biotin anti-Connexin 43, 360-382 antibody (clone P2C4) on formalin-fixed paraffin-embedded human brain tissue. Following antigen retrieval using Sodium Citrate H.I.E.R. (Cat. No. 928602), the tissue was incubated with 5 µg/ml of the primary antibody overnight at 4°C. For detection, the HRP labeling reagent and DAB from BioLegend Ultra Streptavidin (USA) HRP Detection Kit was used (Multi-Species, component #5, DAB; Cat. No. 929901). Slides were counterstained with hematoxylin, according to the protocol provided. The image was captured with a 40X objective. Scale Bar: 50 µm

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