

# Connexin 43 Monoclonal Antibody (CX-1B1)

Product Details	
Size	100 µg
Species Reactivity	Dog, Human, Mouse, Rat
Published Species	Dog, Rabbit, Rat, Pig, Rodent, Sheep, Hamster, Cat, Mouse, Human
Host/Isotope	Mouse / IgG1
Class	Monoclonal
Type	Antibody
Clone	CX-1B1
Conjugate	Unconjugated
Immunogen	Synthetic peptide corresponding to a cytoplasmic sequence located near the C-terminus of rat Connexin 43.
Form	Liquid
Concentration	0.5 mg/mL
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.4
Contains	0.1% sodium azide
Storage Conditions	-20°C
RRID	AB_2533038

Applications	Tested	Dilution	Published
Immunofluorescence (IF)	✓	2-5 µg/mL	29 Publications
Western Blot (WB)	✓	1-3 µg/mL	55 Publications
Immunohistochemistry (IHC)	-		23 Publications
Immunocytochemistry (ICC)	-	1:100	19 Publications
Immunohistochemistry (Paraffin) (IHC (P))	✓	1:10-1:100	5 Publications
Miscellaneous PubMed (MISC)	-	0.5 µg/ml	13 Publications
Immunoprecipitation (IP)	-		4 Publications
Immunohistochemistry (Frozen) (IHC (F))	-		10 Publications
Flow Cytometry (Flow)	-		2 Publications
Immunohistochemistry - Free Floating (IHC (Free))	-		1 Publication
ELISA (ELISA)	✓	0.1-1 µg/mL	
Immunomicroscopy (IM)	✓	Assay Dependent	

## Product Specific Information

CX-1B1 is specific for one of the unphosphorylated forms of Connexin 43. This antibody was at one time thought to be specific for all unphosphorylated forms of Connexin 43, but that can no longer be claimed since it was discovered that Connexin 43 can be phosphorylated at multiple sites. Recent studies have shown that phosphorylation occurs at a serine within the epitope recognized by this antibody. CX-1B1 recognizes Connexin 43 only when the serine at residue 368 is unphosphorylated. CX-1B1 will, however, recognize Connexin 43 if it is phosphorylated at sites besides Ser368. In some cell types, cross-reactivity with a ~70 kDa protein of unknown identity has been observed. This cross-reactivity is likely due to a shared epitope.

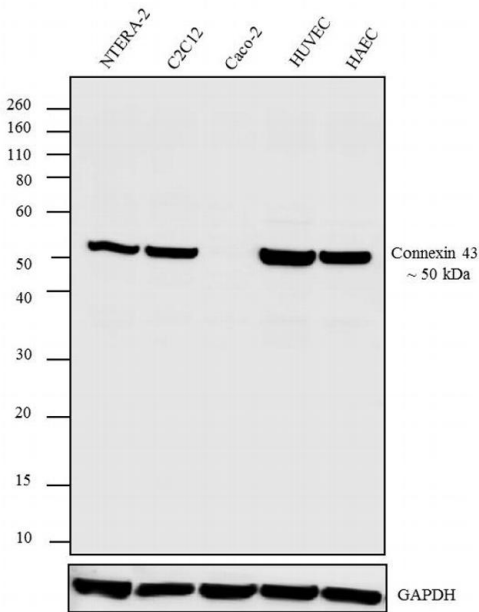
Reactivity has been confirmed by western blot analysis of extracts derived from dog heart, human heart, mouse brain, mouse heart, rat brain, and Clone 9 (C1-9) rat liver cells. Clone 9 is the recommended positive control for CX-1B1.

This antibody has also been used in immunofluorescence applications and immunolocalization of Connexin 43, however, for immunohistochemical applications polyclonal Rabbit anti-Connexin 43 (Cat. No. 71-0700) is recommended.

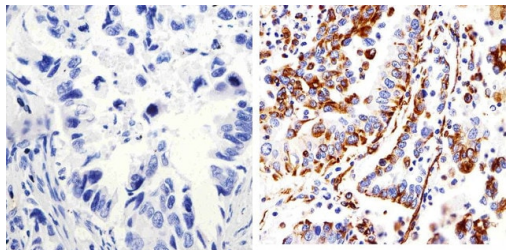
## Advanced Verification Data

### Connexin 43 Antibody (13-8300)

Antibody specificity was demonstrated by detection of differential basal expression of the target across cell models owing to their inherent genetic constitution. Relative expression of Connexin 43 was observed in Caco-2 cells and the other cell models tested, in western blot using Connexin 43 Monoclonal Antibody (Product # 13-8300). Caco-2 cells are documented to have differential basal expression of Connexin 43, where-in Connexin 43 expression is lower in Caco-2 cells. Relative expression validation info.

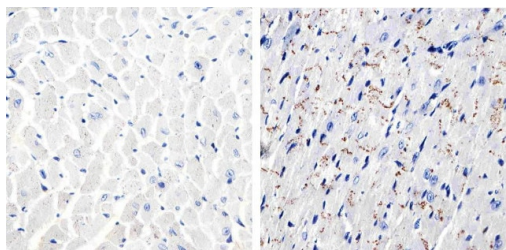


## Product Images For Connexin 43 Monoclonal Antibody (CX-1B1)



### Connexin 43 Antibody (13-8300) in IHC (P)

Immunohistochemistry analysis of Connexin 43 showing staining in the membrane of paraffin-embedded human lung adenocarcinoma (right) compared to a negative control without primary antibody (left). To expose target proteins, antigen retrieval was performed using 10mM sodium citrate (pH 6.0), microwaved for 8-15 min. Following antigen retrieval, tissues were blocked in 3% H<sub>2</sub>O<sub>2</sub>-methanol for 15 min at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with a Connexin 43 monoclonal antibody (Product # 13-8300) diluted in 3% BSA-PBS at a dilution of 1:20 overnight at 4°C in a humidified chamber. Tissues were washed extensively in PBST and detection was performed using an HRP-conjugated secondary antibody followed by colorimetric detection using a DAB kit. Tissues were counterstained with hematoxylin and dehydrated with ethanol and xylene to prep for mounting.



### Connexin 43 Antibody (13-8300) in IHC (P)

Immunohistochemistry analysis of Connexin 43 showing staining in the membrane of paraffin-embedded mouse heart tissue (right) compared to a negative control without primary antibody (left). To expose target proteins, antigen retrieval was performed using 10mM sodium citrate (pH 6.0), microwaved for 8-15 min. Following antigen retrieval, tissues were blocked in 3% H<sub>2</sub>O<sub>2</sub>-methanol for 15 min at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with a Connexin 43 monoclonal antibody (Product # 13-8300) diluted in 3% BSA-PBS at a dilution of 1:100 overnight at 4°C in a humidified chamber. Tissues were washed extensively in PBST and detection was performed using an HRP-conjugated secondary antibody followed by colorimetric detection using a DAB kit. Tissues were counterstained with hematoxylin and dehydrated with ethanol and xylene to prep for mounting.

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## Immunofluorescence (29)

The European journal of neuroscience

### Immunofluorescence reveals unusual patterns of labelling for connexin43 localized to calbindin-D28K-positive interstitial cells in the pineal gland.

"Published figure using Connexin 43 monoclonal antibody (Product # 13-8300) in Immunofluorescence"

Authors: Tsao DD,Wang SG,Lynn BD,Nagy JI

**Species**  
Not Applicable

**Dilution**  
Not Cited

**Year**  
2017

Frontiers in cardiovascular medicine

### Spatial Heterogeneity of Cx43 is an Arrhythmogenic Substrate of Polymorphic Ventricular Tachycardias during Compensated Cardiac Hypertrophy in Rats.

"Published figure using Connexin 43 monoclonal antibody (Product # 13-8300) in Immunofluorescence"

Authors: Boulaksil M,Bierhuizen MF,Engelen MA,Stein M,Kok BJ,van Amersfoort SC,Vos MA,van Rijen HV,de Bakker JM,van Veen TA

**Species**  
Not Applicable

**Dilution**  
Not Cited

**Year**  
2016

[View more IF references on thermofisher.com](#)

## Western Blot (55)

The European journal of neuroscience

### Immunofluorescence reveals unusual patterns of labelling for connexin43 localized to calbindin-D28K-positive interstitial cells in the pineal gland.

"Published figure using Connexin 43 monoclonal antibody (Product # 13-8300) in Immunofluorescence"

Authors: Tsao DD,Wang SG,Lynn BD,Nagy JI

**Species**  
Not Applicable

**Dilution**  
Not Cited

**Year**  
2017

Experimental eye research

### Inhibition of TGF cell signaling for limbal explant culture in serumless, defined xeno-free conditions.

"13-8300 was used in western blot to study limbal explant culture in serumless, defined xeno-free conditions by inhibition of of TGF-beta cell signaling"

Authors: Zamudio A,Wang Z,Chung SH,Wolosin JM

**Species**  
Not Applicable

**Dilution**  
Not Cited

**Year**  
2016

[View more WB references on thermofisher.com](#)

## More applications with references on thermofisher.com

IHC (23) ICC (19) IHC (P) (5) MISC (13) IP (4) IHC (F) (10) Flow (2) IHC (Free) (1)

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