Connexin 43 Antibody

Background: Connexin 43 (Cx43) is a member of the large family of gap junction proteins. Connexins assemble as a hexamer and are transported to the plasma membrane to create a hemichannel that can associate with hemichannels on nearby cells to create cell-to-cell channels. Clusters of these channels assemble to make gap junctions. Gap junction communication is important in development and regulation of cell growth. Phosphorylation of Cx43 is important in regulating assembly and function of gap junctions (1,2). Ser368 of Cx43 is phosphorylated by protein kinase C (PKC) after activation by phorbol esters, which decreases cell-to-cell communication (3). Src can interact with and phosphorylate Cx43 to alter gap junction communication (4,5).

Specificity/Sensitivity: Connexin 43 Antibody detects endogenous levels of total connexin 43. This antibody does not cross-react with other connexins.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide (KLH-coupled) corresponding to residues of human connexin 43. Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

Recommended Antibody Dilutions:
Western blotting 1:1000
Immunohistochemistry (Paraffin) 1:100
Optimal IHC dilutions determined using SignalStain® Boost IHC Detection Reagent.
Unmasking buffer: Citrate
Antibody diluent: SignalStain® Antibody Diluent #8112
Detection reagent: SignalStain® Boost (HRP, Rabbit) #8114
Immunofluorescence (IF-IC) 1:50–1:100
Immunofluorescence (IF-F) 1:50–1:100
For application specific protocols please see the web page for this product at www.cellsignal.com.
Please visit www.cellsignal.com for a complete listing of recommended companion products.

Applications
W, IHC-P, IF-IC, IF-F

Species Cross-Reactivity
H, M, R, Mk, Z, (Pg, Dg)

Molecular Wt. 39, 41, 43, 44 kDa

Source Rabbit**

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

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IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

IMPORTANT: For research use only. Not for use in diagnostic procedures.

For application specific protocols please see the web page for this product at www.cellsignal.com.
Immunohistochemical analysis of paraffin-embedded human heart, using Connexin 43 Antibody.

Immunohistochemical analysis of paraffin-embedded human lung carcinoma using Connexin 43 Antibody.

Immunohistochemical analysis of paraffin-embedded mouse heart using Connexin 43 Antibody in the presence of control peptide (left) or antigen specific peptide (right).

Confocal immunofluorescent analysis of rat optic nerve and ciliary epithelium using Connexin 43 Antibody (green) and S6 Ribosomal Protein (54D2) Mouse mAb #2317 (red). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).

Immunohistochemical analysis of paraffin-embedded human breast carcinoma, using Connexin 43 Antibody.