

Product Information

Anti-Connexin 43 antibody, Mouse monoclonal
Clone CXN-6, purified from hybridoma cell culture

Product Number **SAB4200819**

Product Description

Monoclonal Anti-Connexin 43 (mouse IgM isotype) is derived from the hybridoma CXN-6 produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with a synthetic peptide from the C-terminal region of Connexin 43 protein, conjugated to KLH. The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents (Product Number ISO2). The antibody is purified from culture supernatant of hybridoma cells.

Monoclonal Anti-Connexin 43 specifically recognizes Connexin 43 from human,^{1,2} mouse,² rat,³ porcine,⁴ chicken,⁵ and feline⁶ origin. The antibody may be used in various immunochemical techniques including immunoblot² (~43 kDa), immunohistochemistry,² and immunofluorescence.

Connexin 43 protein (Cx43), also known as Gap junction alpha-1 protein or Gap junction 43 kDa heart protein, is a member of the Connexins family including structurally-related transmembrane proteins that span the plasma membrane four times with N- and C-terminal oriented cytoplasmic tails.⁷ Six connexin subunits form a connexon or hemichannel in the plasma membrane and a head-to-head docking between two hemichannels results in the formation of a gap junction channel.

Gap junctions are necessary to coordinate the cell function by passing electrical current flow between heart and nerve cells, or by allowing the exchange of chemical signals and energy substrates.⁷ Connexin 43 is the most abundant connexin protein in the brain and heart.⁸ It functions as a neuroprotector and is most prominently expressed in astrocytes and microglial cells in the brain.^{7,9} Connexin 43 is purported to play a crucial role in the synchronized contraction of the heart.⁷ In addition, Connexin 43 is suggested to function as a modulator of the cell migration and cell adhesion processes.¹⁰

Changes in Connexin 43 expression pattern may contribute to several cardiovascular pathologies (e.g., brain and heart irreversible injury and arrhythmias) and malignancies (e.g., breast and pancreatic cancers).

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody Concentration: ~1.0 mg/mL

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store at -20 °C. For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 0.5-1 µg/mL is recommended using mouse brain extract.

Immunofluorescence: a working concentration of 10-20 µg/mL is recommended using mouse myoblast C2C12 cell line.

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration test.

References

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