SANTA CRUZ BIOTECHNOLOGY, INC.

connexin 43 (CXN-6): sc-59949

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The connexins are a group of gap junction proteins which form a hexamer to compose a connexon. Clusters of connexons form a gap junction through which low molecular weight proteins may diffuse from cell to cell. Several mammalian cells with malignant phenotypes exhibit decreased connexin expression and gap junction communication. There is a decrease in gap junctional communication in Src transformed cells. The decreased communication appears to be associated with tyrosine phosphorylation of connexin 43. Activated c-Src phosphorylates the C-terminal tail of connexin 43 on residue Tyr 265, resulting in a stable interaction between both proteins leading to inhibition of gap junctional communication. In addition to tyrosine phosphorylation, connexin 43 has also been shown to be phosphorylated on serine in the absence of Src kinases and on both serine and tyrosine in cells expressing Src kinases, such as pp60v-Src and/or c-Src. In human vascular endothelial cells, connexin 43 is posttranslationally modified during mitosis. Mitosis-specific phosphorylation of connexin 43 correlates with the transient loss of gap junction intercellular communication and redistribution of connexin 43.

CHROMOSOMAL LOCATION

Genetic locus: GJA1 (human) mapping to 6q22.31; Gja1 (mouse) mapping to 10 B4.

SOURCE

connexin 43 (CXN-6) is a mouse monoclonal antibody raised against amino acids 362-381 of connexin 43 of human origin.

PRODUCT

Each vial contains 100 µl ascites containing IgM with < 0.1% sodium azide.

APPLICATIONS

connexin 43 (CXN-6) is recommended for detection of connexin 43 of mouse, rat, human and bovine origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:100-1:5000), immunoprecipitation [1-2 µl per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution to be determined by researcher, dilution range 1:100-1:1000) and immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range 1:100-1:1000).

Suitable for use as control antibody for connexin 43 siRNA (h): sc-29276, connexin 43 siRNA (m): sc-35091, connexin 43 siRNA (r): sc-60008, connexin 43 shRNA Plasmid (h): sc-29276-SH, connexin 43 shRNA Plasmid (m): sc-35091-SH, connexin 43 shRNA Plasmid (r): sc-60008-SH, connexin 43 shRNA (h Lentiviral Particles: sc-29276-V, connexin 43 shRNA (m) Lentiviral Particles: sc-35091-V and connexin 43 shRNA (r) Lentiviral Particles: sc-60008-V.

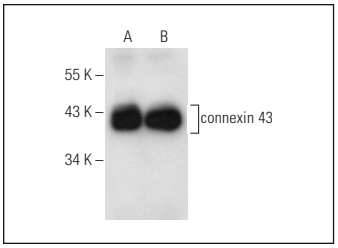
Molecular Weight of connexin 43: 43 kDa.

Positive Controls: mouse brain extract: sc-2253, rat cerebellum extract: sc-2398 or mouse cerebellum extract: sc-2403.

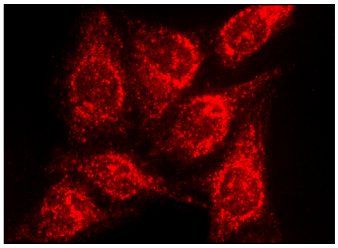
STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

DATA



connexin 43 (CXN-6): sc-59949. Western blot analysis of connexin 43 expression in rat cerebellum (**A**) and mouse cerebellum (**B**) tissue extracts.



connexin 43 (CXN-6): sc-59949. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

SELECT PRODUCT CITATIONS

1. Ito, S., et al. 2006. v-Src requires Ras signaling for the suppression of gap junctional intercellular communication. Oncogene 25: 2420-2424.
2. Karaöz, E., et al. 2011. Human dental pulp stem cells demonstrate better neural and epithelial stem cell properties than bone marrow-derived mesenchymal stem cells. Histochem. Cell Biol. 136: 455-473.
3. Yavasoglu, N.U., et al. 2012. Induction of oxidative stress and histological changes in liver by subacute doses of butyl cyclohexyl phthalate. Environ. Toxicol. 29: 345-353.
4. Fong, G., et al. 2013. Human tenocytes are stimulated to proliferate by acetylcholine through an EGFR signalling pathway. Cell Tissue Res. 351: 465-475.
5. Liu, M.C., et al. 2014. Effect of da-cheng-qi decoction on the repair of the injured enteric nerve-interstitial cells of cajal-smooth muscle cells network in multiple organ dysfunction syndrome. Evid. Based Complement. Alternat. Med. 2014: 596723.
6. Saglam, O., et al. 2015. IL-6 originated from breast cancer tissue-derived mesenchymal stromal cells may contribute to carcinogenesis. Tumour Biol. 36: 5667-5677.
7. Tsai, W.L., et al. 2017. Efficient programming of human mesenchymal stem cell-derived hepatocytes by epigenetic regulations. J. Gastroenterol. Hepatol. 32: 261-269.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

CONJUGATES

See **connexin 43 (F-7): sc-271837** for connexin 43 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.