SANTA CRUZ BIOTECHNOLOGY, INC.

connexin 43 (C-20): sc-6560



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. In Src transformed cells, there is a decrease in gap junctional communication, which appears to be associated with tyrosine phosphorylation of connexin 43. Activated c-Src phosphorylates the C-terminal tail of connexin 43 on Tyr 265, resulting in a stable interaction between both proteins, which leads 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 c-Src and/or pp60v-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; Gjb1 (mouse) mapping to 10 B4.

SOURCE

connexin 43 (C-20) is available as eigher goat (sc-6560) or rabbit (sc-6560-R) polyclonal antibody raised against a peptide mapping at the C-terminus of connexin 43 of human origin.

PRODUCT

Each vial contains 200 μ g lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-6560 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA). Available as agarose conjugate for immunoprecipitation, sc-6560 AC, 500 µg/0.25 ml agarose in 1 ml.

APPLICATIONS

connexin 43 (C-20) is recommended for detection of connexin 43 of mouse, rat, human, Xenopus laevis and zebrafish origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). connexin 43 (C-20) is also recommended for detection of connexin 43 in additional species, including equine, canine, bovine and porcine.

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

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA





Western blot analysis of connexin 43 phosphorylation in untreated (A,C) and lambda protein phosphatase (sc-200312A) treated (B,D) rat heart tissue extracts Antibodies tested include p-connexin 43 (Ser 368): sc-101660 (A,B) and connexin 43 (C-20)-R: sc-6560-R (C,D)

connexin 43 Antibody (C-20)-R: sc-6560-R. Immunoneroxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic and intercalated disc staining of myocytes

SELECT PRODUCT CITATIONS

- 1. Bao, X., et al. 2000. Temporal gradient in shear-induced signaling pathway: involvement of MAP kinase, c-fos, and connexin 43. Am. J. Physiol. Heart Circ. Physiol. 278: H1598-H1605.
- 2. Jovanova-Nesic, K., et al. 2009. Choroid plexus connexin 43 expression and gap junction flexibility are associated with clinical features of acute EAE. Ann. N.Y. Acad. Sci. 1173: 75-82.
- 3. Kanczuga-Koda, L., et al. 2010. Gradual loss of functional gap junction within progression of colorectal cancer—a shift from membranous CX32 and CX43 expression to cytoplasmic pattern during colorectal carcinogenesis. In Vitro 24: 101-107.
- 4. Hugyecz, M., et al. 2011. Hydrogen supplemented air inhalation reduces changes of prooxidant enzyme and gap junction protein levels after transient global cerebral ischemia in the rat hippocampus. Brain Res. 1404: 31-38.
- 5. Kikuchi, M., et al. 2011. Neural crest-derived multipotent cells in the adult mouse iris stroma. Genes Cells 16: 273-281.
- 6. Gago-Fuentes, R., et al. 2015. Proteomic analysis of connexin 43 reveals novel interactors related to osteoarthritis. Mol. Cell. Proteomics 14: 1831-1845.

RESEARCH USE

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

MONOS Satisfation Guaranteed

Try connexin 43 (F-7): sc-271837 or connexin 43 (D-7): sc-13558, our highly recommended monoclonal aternatives to connexin 43 (C-20). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see connexin 43 (F-7): sc-271837.

Molecular Weight of connexin 43: 43 kDa.