

connexin 43 (H-150): sc-9059

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 post-translationally 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 (H-150) is a rabbit polyclonal antibody raised against amino acids 233-382 mapping at the C-terminus of connexin 43 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

connexin 43 (H-150) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

connexin 43 (H-150) is also recommended for detection of connexin 43 in additional species, including equine, canine, bovine, porcine and avian.

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.

Molecular Weight of connexin 43: 43 kDa.

Positive Controls: connexin 43 (h2): 293T Lysate: sc-175005, mouse heart extract: sc-2254 or rat brain extract: sc-2392

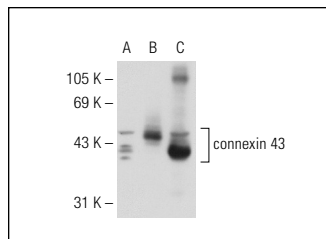
RESEARCH USE

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

STORAGE

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

DATA



connexin 43 (H-150): sc-9059. Western blot analysis of connexin 43 expression in non-transfected: sc-117752 (A) and human connexin 43 transfected: sc-175005 (B) 293T whole cell lysates and mouse brain tissue extract (C).



connexin 43 (H-150): sc-9059. Immunofluorescence staining of methanol-fixed SK-N-SH cells showing membrane localization.

SELECT PRODUCT CITATIONS

1. Fukuhara, S., et al. 2003. Direct cell-cell interaction of cardiomyocytes is key for bone marrow stromal cells to go into cardiac lineage *in vitro*. J. Thorac. Cardiovasc. Surg. 125: 1470-1480.
2. Alibardi, L. 2010. Gap and tight junctions in the formation of feather branches: A descriptive ultrastructural study. Ann. Anat. 192: 251-258.
3. Haider, K.H., et al. 2010. MicroRNA-21 is a key determinant in IL-11/Stat3 anti-apoptotic signalling pathway in preconditioning of skeletal myoblasts. Cardiovasc. Res. 88: 168-178.
4. Gingold-Belfer, R., et al. 2011. Popeye domain-containing 1 is down-regulated in failing human hearts. Int. J. Mol. Med. 27: 25-31.
5. Lunov, O., et al. 2011. Differential uptake of functionalized polystyrene nanoparticles by human macrophages and a monocytic cell line. ACS Nano 5: 1657-1669.
6. Miron, R.J., et al. 2011. Premature osteoblast clustering by enamel matrix proteins induces osteoblast differentiation through up-regulation of connexin 43 and N-cadherin. PLoS ONE 6: e23375.
7. Chen, C.H., et al. 2012. Homocysteine impairs endothelial wound healing by activating metabotropic glutamate receptor 5. Microcirculation 19: 285-295.
8. Li, C., et al. 2012. Regulatory effect of connexin 43 on basal Ca²⁺ signaling in rat ventricular myocytes. PLoS ONE 7: e36165.

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Try **connexin 43 (F-7): sc-271837** or **connexin 43 (D-7): sc-13558**, our highly recommended monoclonal alternatives to connexin 43 (H-150). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **connexin 43 (F-7): sc-271837**.