

connexin 29 (M-88): sc-68377

BACKGROUND

Connexin 29 is a 258 amino acid protein encoded by the mouse gene Gje1. Connexin 29 belongs to the connexin family and is a member of the ϵ -type subfamily. Connexin 29 is a membrane-bound, multi-pass protein also known as gap junction ϵ -1 protein. A connexon, consisting of connexin hexamers, is a membrane-bound structure that is integral in the formation of a gap junction. One gap junction consists of a cluster of closely packed pairs of trans-membrane channels, the connexons, through which materials of low molecular weight diffuse from one cell to a neighboring cell. Connexin 29 expression is restricted to the central nervous system and is present in brain, spinal cord and sciatic nerve samples. It has been suggested that connexin 29 in the mature CNS contributes minimally to gap junctional intercellular communication in oligodendrocyte cell bodies. Rather, connexin 29 is targeted to myelin where it, along with connexin 32, may contribute to connexin-mediated communication between adjacent layers of uncompact myelin.

REFERENCES

- Altevogt, B.M., et al. 2002. Connexin 29 is uniquely distributed within myelinating glial cells of the central and peripheral nervous systems. *J. Neurosci.* 22: 6458-6470.
- Nagy, J.I., et al. 2003. Connexin 29 and connexin 32 at oligodendrocyte and astrocyte gap junctions and in myelin of the mouse central nervous system. *J. Comp. Neurol.* 464: 356-370.
- Li, X., et al. 2004. Connexin 47, connexin 29 and connexin 32 coexpression in oligodendrocytes and Cx47 association with zonula occludens-1 (ZO-1) in mouse brain. *Neuroscience* 126: 611-630.
- Kleopa, K.A., et al. 2004. Unique distributions of the gap junction proteins connexin 29, connexin 32, and connexin 47 in oligodendrocytes. *Glia* 47: 346-357.
- Yang, J.J., et al. 2005. Expression patterns of connexin 29 (Gje1) in mouse and rat cochlea. *Biochem. Biophys. Res. Commun.* 338: 723-728.
- Li, J., et al. 2006. Analysis of connexin expression during mouse Schwann cell development identifies connexin 29 as a novel marker for the transition of neural crest to precursor cells. *Glia* 55: 93-103.

CHROMOSOMAL LOCATION

Genetic locus: Gje1 (mouse) mapping to 5 G2.

SOURCE

connexin 29 (M-88) is a rabbit polyclonal antibody raised against amino acids 171-258 mapping at the C-terminus of connexin 29 of mouse origin.

PRODUCT

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

RESEARCH USE

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

APPLICATIONS

connexin 29 (M-88) is recommended for detection of connexin 29 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

Suitable for use as control antibody for connexin 29 siRNA (m): sc-62137, connexin 29 shRNA Plasmid (m): sc-62137-SH and connexin 29 shRNA (m) Lentiviral Particles: sc-62137-V.

Molecular Weight (predicted) of connexin 29: 31 kDa.

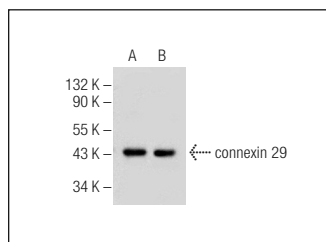
Molecular Weight (observed) of connexin 29: 44 kDa.

Positive Controls: AML-193 cell lysate.

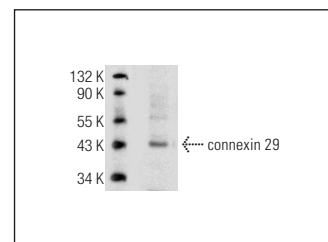
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



connexin 29 (M-88): sc-68377. Western blot analysis of connexin 29 expression in MCF7 (A) and C32 (B) whole cell lysates.



connexin 29 (M-88): sc-68377. Western blot analysis of connexin 29 expression in AML-193 whole cell lysate.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.