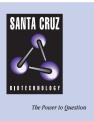
# SANTA CRUZ BIOTECHNOLOGY, INC.

# connexin 29 (Q-16): sc-66351



# 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  $\varepsilon$ -type subfamily. Connexin 29 is a membrane bound, multi-pass protein also known as gap junction  $\varepsilon$ -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 transmembrane 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 uncompacted myelin.

#### REFERENCES

- Altevogt, B.M., Kleopa, K.A., Postma, F.R., Scherer, S.S. and Paul, D.L. 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., Ionescu, A.V., Lynn, B.D. and Rash, J.E. 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., Ionescu, A.V., Lynn, B.D., Lu, S., Kamasawa, N., Morita, M., Davidson, K.G., Yasumura, T., Rash, J.E. and Nagy, J.I. 2004. Connexin 47, connexin 29 and connexin 32 coexpression in oligodendrocytes and Cx47 association with zonula occludens-1 (Z0-1) in mouse brain. Neuroscience 126: 611-630.
- Kleopa, K.A., Orthmann, J.L., Enriquez, A., Paul, D.L. and Scherer, S.S. 2004. Unique distributions of the gap junction proteins connexin 29, connexin 32, and connexin 47 in oligodendrocytes. Glia 47: 346-357.
- Yang, J.J., Liao, P.J., Su, C.C. and Li, S.Y. 2005. Expression patterns of connexin 29 (Gje1) in mouse and rat cochlea. Biochem. Biophys. Res. Commun. 338: 723-728.
- Li, J., Habbes, H.W., Eiberger, J., Willecke, K., Dermietzel, R. and Meier, C. 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 (human) mapping to 7q22.1.

#### SOURCE

connexin 29 ( $\Omega$ -16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of connexin 29 of human origin.

# **STORAGE**

Store at 4° C, \*\*D0 NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

#### PRODUCT

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

Blocking peptide available for competition studies, sc-66351 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

# **APPLICATIONS**

connexin 29 (Q-16) is recommended for detection of connexin 29 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 (h): sc-62136; and as shRNA Plasmid control antibody for connexin 29 shRNA Plasmid (h): sc-62136-SH.

Molecular Weight of connexin 29: 31 kDa.

# **RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluo-rescence: use donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

# **RESEARCH USE**

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

#### PROTOCOLS

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