

connexin 31.9 (A-13): sc-109237

BACKGROUND

The connexin family of proteins form hexameric complexes, called connexons, that facilitate movement of low molecular weight proteins between cells via gap junctions. Connexin proteins share a common topology of four transmembrane α -helical domains, two extracellular loops, a cytoplasmic loop and cytoplasmic N- and C-termini. Many of the key functional differences arise from specific amino acid substitutions in the most highly conserved domains; the transmembrane and extracellular regions. Connexin 31.9, also known as GJD3 (Gap junction δ -3 protein), is a 294 amino acid protein that interacts with ZO-1, a tight junction protein. Connexin 31.9 is expressed in heart, brain, kidney, spleen, lung, testis, colon and vascular smooth muscle cells. There are two isoforms of connexin 31.9 that are produced as a result of alternative splicing events.

REFERENCES

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3. Nielsen, P.A. and Kumar, N.M. 2003. Differences in expression patterns between mouse connexin-30.2 (Cx30.2) and its putative human orthologue, connexin-31.9. *FEBS Lett.* 540: 151-156.
4. Miquerol, L., et al. 2003. Gap junctional connexins in the developing mouse cardiac conduction system. *Novartis Found. Symp.* 250: 80-98.
5. Cruciani, V. and Mikalsen, S.O. 2005. The connexin gene family in mammals. *Biol. Chem.* 386: 325-332.
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7. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 607425. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: GJD3 (human) mapping to 17q21.2.

SOURCE

connexin 31.9 (A-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of connexin 31.9 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-109237 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

connexin 31.9 (A-13) is recommended for detection of connexin 31.9 of human 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 31.9 siRNA (h): sc-93706, connexin 31.9 shRNA Plasmid (h): sc-93706-SH and connexin 31.9 shRNA (h) Lentiviral Particles: sc-93706-V.

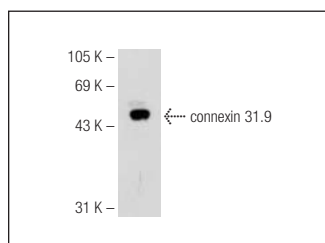
Molecular Weight of connexin 31.9: 30-33 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



connexin 31.9 (A-13): sc-109237. Western blot analysis of connexin 31.9 expression in HeLa 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.

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.