

# connexin 31.9 (Q-12): sc-109242

## 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  $\alpha$ -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  $\delta$ -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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8. Renner, R., et al. 2008. A new mutation in the GJB3 gene in a patient with erythrokeratoderma variabilis. *J. Eur. Acad. Dermatol. Venereol.* 22: 750-751.
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## CHROMOSOMAL LOCATION

Genetic locus: Gjd3 (mouse) mapping to 11 D.

## STORAGE

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

## SOURCE

connexin 31.9 (Q-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of connexin 31.9 of mouse origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-109242 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

connexin 31.9 (Q-12) is recommended for detection of connexin 31.9 of mouse and rat 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 31.9 siRNA (m): sc-142495, connexin 31.9 shRNA Plasmid (m): sc-142495-SH and connexin 31.9 shRNA (m) Lentiviral Particles: sc-142495-V.

Molecular Weight of connexin 31.9: 30-33 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) 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<sup>™</sup> 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](http://www.scbt.com) or our catalog for detailed protocols and support products.