



connexin 37 (L-14): sc-27715

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 4 transmembrane α -helical domains, two extracellular loops, a cytoplasmic loop, and cytoplasmic N-termini 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. Each of the approximately 20 connexin isoforms produces channels with distinct permeabilities and electrical and chemical sensitivities; therefore, one connexin usually cannot fully substitute for another. Consequently, a wide variety of malignant phenotypes associate with decreased connexin expression and gap junction communication, dependent on the particular connexin that is effected. For example, connexin 37, while expressed in the cardiac endothelium, does not exhibit downregulation associated with heart failure, as is the case with other cardiac connexins.

REFERENCES

1. Manjunath, C.K., et al. 1987. Human cardiac gap junctions: isolation, ultrastructure, and protein composition. *J. Mol. Cell. Cardiol.* 19: 131-134.
2. Grossman, H.B., et al. 1994. Decreased connexin expression and intercellular communication in human bladder cancer cells. *Cancer Res.* 54: 3062-3065.
3. Dupont, E., et al. 2001. Altered connexin expression in human congestive heart failure. *J. Mol. Cell Cardiol.* 33: 359-371.
4. Harris AL. 2001. Emerging issues of connexin channels: biophysics fills the gap. *Q. Rev. Biophys.* 34: 325-472.

CHROMOSOMAL LOCATION

Genetic locus: Gja4 (mouse) mapping to 4 D2.2.

SOURCE

connexin 37 (L-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal cytoplasmic domain of connexin 37 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-27715 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

connexin 37 (L-14) is recommended for detection of connexin 37 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 37 siRNA (m): sc-142497, connexin 37 shRNA Plasmid (m): sc-142497-SH and connexin 37 shRNA (m) Lentiviral Particles: sc-142497-V.

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) 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.

SELECT PRODUCT CITATIONS

1. Trovato-Salinaro, A., et al. 2009. Regulation of connexin gene expression during skeletal muscle regeneration in the adult rat. *Am. J. Physiol. Cell. Physiol.* 296: C593-606.

PROTOCOLS

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