

connexin 62 (A-14): sc-241361

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 between connexins arise from specific amino-acid substitutions in the most highly conserved domains: the transmembrane and extracellular regions. Connexin 62, also known as CX62 or gap junction α -10 protein, is a 543 amino acid multi-pass membrane protein that belongs to the connexin family and α -type (group II) subfamily. Existing as a component of hexameric connexin complexes, connexin 62 is suggested to play a role in the regulation of horizontal cell patterning, and is expressed in heart and skeletal muscle, where it localizes to the cell membrane and cell junction.

REFERENCES

1. Willecke, K., Eiberger, J., Degen, J., Eckardt, D., Romualdi, A., Güldenagel, M., Deutsch, U. and Söhl, G. 2002. Structural and functional diversity of connexin genes in the mouse and human genome. *Biol. Chem.* 383: 725-737.
2. Söhl, G., Nielsen, P.A., Eiberger, J. and Willecke, K. 2003. Expression profiles of the novel human connexin genes hCx30.2, hCx40.1, and hCx62 differ from their putative mouse orthologues. *Cell Commun. Adhes.* 10: 27-36.
3. Söhl, G. and Willecke, K. 2003. An update on connexin genes and their nomenclature in mouse and man. *Cell Commun. Adhes.* 10: 173-180.
4. Delmar, M. 2003. Gap junction remodeling in the failing heart: different connexins—different message? *J. Cardiovasc. Electrophysiol.* 14: 1213-1214.
5. Miquerol, L., Dupays, L., Theveniau-Ruissy, M., Alcolea, S., Jarry-Guichard, T., Abran, P. and Gros, D. 2003. Gap junctional connexins in the developing mouse cardiac conduction system. *Novartis Found. Symp.* 250: 80-98.
6. Cruciani, V. and Mikalsen, S.O. 2005. The connexin gene family in mammals. *Biol. Chem.* 386: 325-332.
7. Li, J., Patel, V.V., Kostetskii, I., Xiong, Y., Chu, A.F., Jacobson, J.T., Yu, C., Morley, G.E., Molkentin, J.D. and Radice, G.L. 2005. Cardiac-specific loss of N-cadherin leads to alteration in connexins with conduction slowing and arrhythmogenesis. *Circ. Res.* 97: 474-481.
8. Herve, J.C., Derangeon, M., Theveniau-Ruissy, M., Miquerol, L., Sarrouilhe, D. and Gros, D. 2008. Connexins and junctional channels. Roles in the spreading of cardiac electrical excitation and heart development. *Pathol. Biol.* 56: 334-341.
9. Decrock, E., Vinken, M., De Vuyst, E., Krysko, D.V., D'Herde, K., Vanhaecke, T., Vandenaebelle, P., Rogiers, V. and Leybaert, L. 2009. Connexin-related signaling in cell death: to live or let die? *Cell Death Differ.* 16: 524-536.

STORAGE

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

CHROMOSOMAL LOCATION

Genetic locus: GJA10 (human) mapping to 6q15; Gja10 (mouse) mapping to 4 A5.

SOURCE

connexin 62 (A-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of connexin 62 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-241361 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

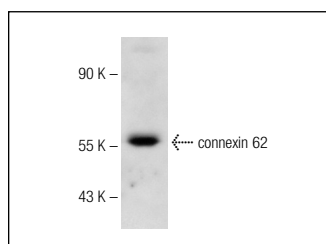
connexin 62 (A-14) is recommended for detection of connexin 62 of human origin and connexin 57 of mouse origin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], 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); non cross-reactive with other connexin family members.

Suitable for use as control antibody for connexin 62 siRNA (h): sc-95559, connexin 57 siRNA (m): sc-142500, connexin 62 shRNA Plasmid (h): sc-95559-SH, connexin 57 shRNA Plasmid (m): sc-142500-SH, connexin 62 shRNA (h) Lentiviral Particles: sc-95559-V and connexin 57 shRNA (m) Lentiviral Particles: sc-142500-V.

Molecular Weight of connexin 62: 62 kDa.

Positive Controls: A-10 cell lysate: sc-3806.

DATA



connexin 62 (A-14): sc-241361. Western blot analysis of connexin 62 expression in A-10 whole cell lysate.

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.