

# Pannexin-3 (H-176): sc-134797

## BACKGROUND

Gap junctions are formed by a hexameric group of proteins called connexins for the transport of low molecular weight proteins from cell to cell. Connexins, which are present in all metazoan organisms, serve diverse functions ranging from control of cell growth and differentiation to electric conduction in excitable tissues. Several mammalian cells with malignant phenotypes exhibit decreased connexin expression and gap junction communication. The pannexin gene family encodes a second class of putative gap junction proteins. Pannexins are highly conserved in invertebrates and mammals, indicating the importance of their gap junctional coupling function. Mammalian Pannexin-3 and Pannexin-1 are closely related, while Pannexin-2 is more distantly related. Pannexin-3 is a multi-pass membrane protein that is not associated with channel activity or modulatory function.

## REFERENCES

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2. Baranova, A., et al. 2004. The mammalian pannexin family is homologous to the invertebrate innexin gap junction proteins. *Genomics* 83: 706-716.
3. Panchin, Y.V. 2005. Evolution of gap junction proteins—the pannexin alternative. *J. Exp. Biol.* 208: 1415-1419.
4. Söhl, G., et al. 2005. Expression and functions of neuronal gap junctions. *Nat. Rev. Neurosci.* 6: 191-200.
5. Ray, A., et al. 2005. Site-specific and developmental expression of Pannexin-1 in the mouse nervous system. *Eur. J. Neurosci.* 21: 3277-3290.
6. Barbe, M.T., et al. 2006. Cell-cell communication beyond connexins: the pannexin channels. *Physiology* 21: 103-114.
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8. Locovei, S., et al. 2006. Activation of Pannexin-1 channels by ATP through P2Y receptors and by cytoplasmic calcium. *FEBS Lett.* 580: 239-244.
9. Vanden Abeele, F., et al. 2006. Functional implications of calcium permeability of the channel formed by Pannexin-1. *J. Cell Biol.* 174: 535-546.

## CHROMOSOMAL LOCATION

Genetic locus: PANX3 (human) mapping to 11q24.2; Panx3 (mouse) mapping to 9 A4.

## SOURCE

Pannexin-3 (H-176) is a rabbit polyclonal antibody raised against amino acids 68-243 mapping within an internal region of Pannexin-3 of human origin.

## PRODUCT

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

## RESEARCH USE

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

## APPLICATIONS

Pannexin-3 (H-176) is recommended for detection of Pannexin-3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

Pannexin-3 (H-176) is also recommended for detection of Pannexin-3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Pannexin-3 siRNA (h): sc-72254, Pannexin-3 siRNA (m): sc-72255, Pannexin-3 shRNA Plasmid (h): sc-72254-SH, Pannexin-3 shRNA Plasmid (m): sc-72255-SH, Pannexin-3 shRNA (h) Lentiviral Particles: sc-72254-V and Pannexin-3 shRNA (m) Lentiviral Particles: sc-72255-V.

Molecular Weight of Pannexin-3: 45 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.