SANTA CRUZ BIOTECHNOLOGY, INC.

connexin 26 (N-19): sc-7261

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. 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 instance, approximately half the cases of autosomal recessive non-syndromic hearing loss and a significant proportion of sporadic hearing loss can be linked to mutation in the gene encoding connexin 26.

CHROMOSOMAL LOCATION

Genetic locus: GJB2/GJB6 (human) mapping to 13q12.11; Gjb2/Gjb6 (mouse) mapping to 14 C3.

SOURCE

connexin 26 (N-19) is available as either goat (sc-7261) or rabbit (sc-7261-R) polyclonal affinity purified antibody raised against a peptide mapping at the N-terminus of connexin 26 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.

Blocking peptide available for competition studies, sc-7261 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

connexin 26 (N-19) is recommended for detection of connexin 26, and to a lesser extent, connexin 30 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

connexin 26 (N-19) is also recommended for detection of connexin 26, and to a lesser extent, connexin 30 in additional species, including equine, canine, bovine and avian.

Molecular Weight of connexin 26: 26 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, mouse liver extract: sc-2256 or rat liver extract: sc-2395.

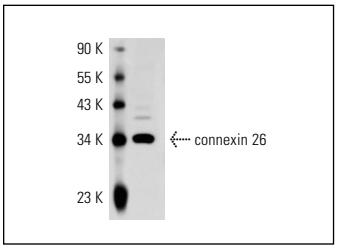
RESEARCH USE

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

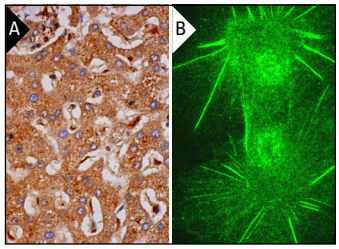
STORAGE

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

DATA



connexin 26 (N-19)-R: sc-7261-R. Western blot analysis of connexin 26 expression in Hep G2 whole cell lysate.



connexin 26 (N-19)-R: sc-7261-R. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes and bile duct cells (**A**). connexin 26 (N-19): sc-7261. Immunofluorescence staining of formalin-fixed HepG2 cells showing membrane localization (**B**).

SELECT PRODUCT CITATIONS

1. Costanzi, C. and Pehrson, J.R. 2001. MACROH2A2, a new member of the MACROH2A core histone family. J. Biol. Chem. 276: 21776-21784.
2. Kanczuga-Koda, L., et al. 2004. Expression of connexins 26, 32 and 43 in the human colon: an immunohistochemical study. Folia Histochem. Cytobiol. 42: 203-207.
3. Kanczuga-Koda, L., et al. 2006. Increased expression of connexins 26 and 43 in lymph node metastases of breast cancer. J. Clin. Pathol. 59: 429-433.
4. Alibardi, L. 2010. Gap and tight junctions in the formation of feather branches: A descriptive ultrastructural study. Ann. Anat. 192: 251-258.
5. Calvanese, V., et al. 2010. Sirtuin 1 regulation of developmental genes during differentiation of stem cells. Proc. Natl. Acad. Sci. USA 107: 13736-13741.
6. Xiao, Z., et al. 2011. Impaired membrane targeting and aberrant cellular localization of human Cx26 mutants associated with inherited recessive hearing loss. Acta Otolaryngol. 131: 59-66.

PROTOCOLS

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