

connexin 26 (P1F5): sc-517456

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.

REFERENCES

1. Manjunath, C.K., Goings, G.E. and Page, E. 1987. Human cardiac gap junctions: isolation, ultrastructure, and protein composition. *J. Mol. Cell. Cardiol.* 19: 131-134.
2. Grossman, H.B., Liebert, M., Lee, I.W. and Lee, S.W. 1994. Decreased connexin expression and intercellular communication in human bladder cancer cells. *Cancer Res.* 54: 3062-3065.
3. Harris, A.L. 2001. Emerging issues of connexin channels: biophysics fills the gap. *Q. Rev. Biophys.* 34: 325-472.
4. Hone, S.W. and Smith, R.J. 2003. Genetic screening for hearing loss. *Clin. Otolaryngol.* 28: 285-290.

CHROMOSOMAL LOCATION

Genetic locus: Gjb2 (mouse) mapping to 14 C3.

SOURCE

connexin 26 (P1F5) is a mouse monoclonal antibody raised against a synthetic peptide corresponding to the intracellular loop (amino acids 110-126) of connexin 26 of rat origin.

PRODUCT

Each vial contains 200 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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 for detailed protocols and support products.

APPLICATIONS

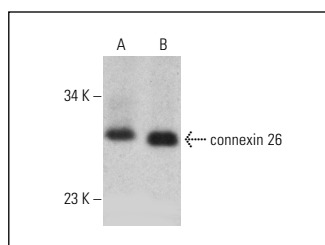
connexin 26 (P1F5) is recommended for detection of connexin 26 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for connexin 26 siRNA (m): sc-37051, connexin 26 shRNA Plasmid (m): sc-37051-SH and connexin 26 shRNA (m) Lentiviral Particles: sc-37051-V.

Molecular Weight of connexin 26: 26 kDa.

Positive Controls: mouse placenta extract: sc-364247 or rat placenta tissue extract: sc-364808.

DATA



connexin 26 (P1F5): sc-517456. Western blot analysis of connexin 26 expression in mouse placenta (A) and rat placenta (B) tissue extracts.

RESEARCH USE

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