

# connexin 26 (O-24): sc-130729

## 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  $\alpha$ -helical domains, two extracellular loops, a cytoplasmic loop and cytoplasmic N- and C-termini. 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 affected. Approximately half the cases of autosomal recessive non-syndromic hearing loss and a significant proportion of sporadic hearing loss can be linked to mutations in the gene encoding connexin 26, while mutations in the gene encoding connexin 32 are the cause of Charcot-Marie-tooth disease. Defects in the gene encoding connexin 30 are the cause of ectodermal dysplasia type 2 (ED2) and non-syndromic sensorineural deafness autosomal dominant type 3 (DFNA3), the former of which is characterized by abnormal development of ectodermal structures (such as skin and nails).

## CHROMOSOMAL LOCATION

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

## SOURCE

connexin 26 (O-24) is a purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of connexin 26 of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

connexin 26 (O-24) is recommended for detection of connexin 26 of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

Suitable for use as control antibody for connexin 26 siRNA (h): sc-37050, connexin 26 siRNA (m): sc-37051, connexin 26 shRNA Plasmid (h): sc-37050-SH, connexin 26 shRNA Plasmid (m): sc-37051-SH, connexin 26 shRNA (h) Lentiviral Particles: sc-37050-V and connexin 26 shRNA (m) Lentiviral Particles: sc-37051-V.

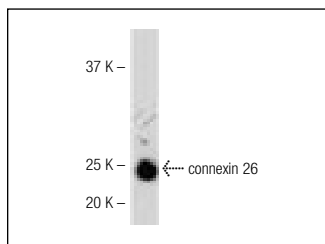
Molecular Weight of connexin 26: 26 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, mouse brain extract: sc-2253 or mouse liver extract: sc-2256.

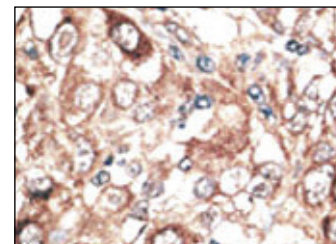
## RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



connexin 26 (O-24): sc-130729. Western blot analysis of connexin 26 expression in mouse brain tissue extract.



connexin 26 (O-24): sc-130729. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human hepatocarcinoma tissue showing cytoplasmic and membrane localization.

## SELECT PRODUCT CITATIONS

1. Yu, J., et al. 2011. Disruption of gap junctions reduces biomarkers of decidualization and angiogenesis and increases inflammatory mediators in human endometrial stromal cell cultures. *Mol. Cell. Endocrinol.* 344: 25-34.
2. Silva, M.A., et al. 2013. Expression of connexin 26 and bovine papillomavirus E5 in cutaneous fibropapillomas of cattle. *Vet. J.* 195: 337-343.

## 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.

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Try **connexin 26 (1C6): sc-293223**, our highly recommended monoclonal alternative to connexin 26 (O-24).