**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. 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 µg 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 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).

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**

**SELECT PRODUCT CITATIONS**


**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.

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