SANTA CRUZ BIOTECHNOLOGY, INC.

connexin 31 (LL8): sc-81803

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. Connexin 31, also known as GJB3 (gap junction β-3 protein), CX31, DFNA2 or EKV, is expressed in skin, testis, placenta, cochlea and developing hindbrain and, in mice, it is also found in peripheral auditory nerves. Mutations in the gene encoding connexin 31 can result in non-syndromic sensorineural deafness autosomal dominant type 2 (DFNA2) and/or erythrokeratodermia variabilis (EVK), a condition characterized by localized or generalized hyperkeratosis and random, transient erythematous patches.

REFERENCES

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2. Harris AL. 2001. Emerging issues of connexin channels: biophysics fills the gap. Q. Rev. Biophys. 34: 325-472.
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CHROMOSOMAL LOCATION

Genetic locus: GJB3 (human) mapping to 1p34.3.

SOURCE

connexin 31 (LL8) is a mouse monoclonal antibody raised against recombinant connexin 31 of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

connexin 31 (LL8) is recommended for detection of connexin 31 of 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).

Suitable for use as control antibody for connexin 31 siRNA (h): sc-78791, connexin 31 shRNA Plasmid (h): sc-78791-SH and connexin 31 shRNA (h) Lentiviral Particles: sc-78791-V.

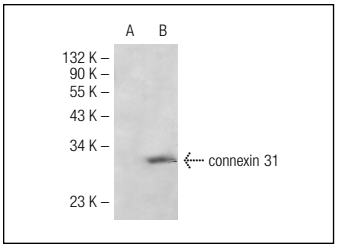
Molecular Weight of connexin 31: 31 kDa.

Positive Controls: connexin 31 (h): 293T Lysate: sc-113819 or HeLa whole cell lysate: sc-2200.

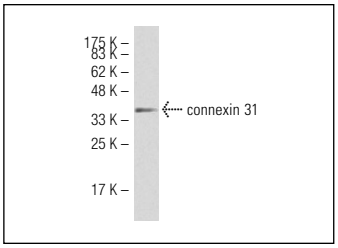
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



connexin 31 (LL8): sc-81803. Western blot analysis of connexin 31 expression in non-transfected: sc-117752 (**A**) and human connexin 31 transfected: sc-113819 (**B**) 293T whole cell lysates.



connexin 31 (LL8): sc-81803. Western blot analysis of connexin 31 expression in HeLa whole cell lysate.

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.

PROTOCOLS

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