SANTA CRUZ BIOTECHNOLOGY, INC.

connexin 31.1 (M-41): sc-134609

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 31.1, Cx31.1 or Gap junction β-5 protein, is a 271 amino acid protein that is predominantly expressed in skin with lower expression in testis. Expression of connexin 31.1 is also required for normal placental development in mice. Down-regulation of the connexin 31.1 gene correlates with head and neck squamous cell carcinomas (HNSCC) and therefore it may be a potential therapeutic target.

REFERENCES

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3. Budunova, I.V., Carbajal, S. and Slaga, T.J. 1995. The expression of gap junctional proteins during different stages of mouse skin carcinogenesis. Carcinogenesis 16: 2717-2724.
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CHROMOSOMAL LOCATION

Genetic locus: Gjb5 (mouse) mapping to 4 D2.2.

SOURCE

connexin 31.1 (M-41) is a rabbit polyclonal antibody raised against amino acids 129-169 mapping within an extracellular domain of connexin 31.1 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

connexin 31.1 (M-41) is recommended for detection of connexin 31.1 of mouse and rat 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 31.1 siRNA (m): sc-142494, connexin 31.1 shRNA Plasmid (m): sc-142494-SH and connexin 31.1 shRNA (m) Lentiviral Particles: sc-142494-V.

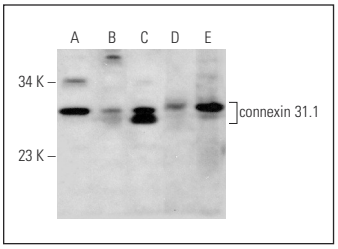
Molecular Weight of connexin 31.1: 31 kDa.

Positive Controls: mouse testis extract: sc-2405, F9 cell lysate: sc-2245 or NIH/3T3 whole cell lysate: sc-2210.

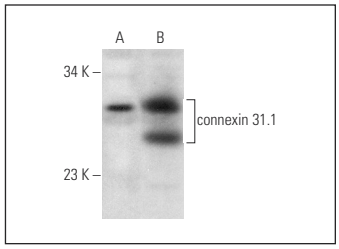
RECOMMENDED SECONDARY REAGENTS

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.

DATA



connexin 31.1 (M-41): sc-134609. Western blot analysis of connexin 31.1 expression in NIH/3T3 (**A**), HeLa (**B**) and F9 (**C**) whole cell lysates and human testis (**D**) and mouse testis (**E**) tissue extracts.



connexin 31.1 (M-41): sc-134609. Western blot analysis of connexin 31.1 expression in MDA-MB-231 whole cell lysate (**A**) and human skin tissue extract (**B**).

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.