SANTA CRUZ BIOTECHNOLOGY, INC.

connexin 30 (E-15): sc-84802

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The Power to Question

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 between connexins arise from specific amino-acid substitutions in the most highly conserved domains: the transmembrane and extracellular regions. Connexin 30, also known as GJB6 (Gap junction β 6), ED2, EDH, HED or DFNA3, is a 261 amino acid multi-pass membrane protein that localizes to the cell junction and belongs to the connexin family. Functioning as a hexamer with other connexin proteins, connexin 30 facilitates the diffusion of low molecular weight materials from one cell to another. Defects in the gene encoding connexin 30 are the cause of ectodermal dysplasia type 2 (ED2) and non-syndromatic sensorineural deafness autosomal dominant type 3 (DFNA3), the former of which is characterized by abnormal development of ectodermal structures (such as skin and nails).

REFERENCES

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3. Del Castillo, I., et al. 2003. Prevalence and evolutionary origins of the del(GJB6-D13S1830) mutation in the DFNB1 locus in hearing-impaired subjects: a multicenter study. Am. J. Hum. Genet. 73: 1452-1458.
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5. Wilch, E., et al. 2006. Expression of GJB2 and GJB6 is reduced in a novel DFNB1 allele. Am. J. Hum. Genet. 79: 174-179.
6. Yum, S.W., et al. 2007. Human connexin 26 and connexin 30 form functional heteromeric and heterotypic channels. Am. J. Physiol., Cell Physiol. 293: C1032-C1048.
7. Gürtler, N., et al. 2008. Mutation analysis of the Cx26, Cx30, and Cx31 genes in autosomal recessive nonsyndromic hearing impairment. Acta Otolaryngol. 128: 1056-1062
8. Evirgen, N., et al. 2008. Genotyping for Cx26 and Cx30 mutations in cases with congenital hearing loss. Genet. Test. 12: 253-256.
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CHROMOSOMAL LOCATION

Genetic locus: GJB6 (human) mapping to 13q12.11; Gjb6 (mouse) mapping to 14 C3.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

SOURCE

connexin 30 (E-15) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of connexin 30 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-84802 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

connexin 30 (E-15) is recommended for detection of connexin 30 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

connexin 30 (E-15) is also recommended for detection of connexin 30 in additional species, including equine and canine.

Suitable for use as control antibody for connexin 30 siRNA (h): sc-43074, connexin 30 siRNA (m): sc-43075, connexin 30 shRNA Plasmid (h): sc-43074-SH, connexin 30 shRNA Plasmid (m): sc-43075-SH, connexin 30 shRNA (h) Lentiviral Particles: sc-43074-V and connexin 30 shRNA (m) Lentiviral Particles: sc-43075-V.

Molecular Weight of connexin 30: 30 kDa.

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) 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.

RESEARCH USE

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

PROTOCOLS

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