SANTA CRUZ BIOTECHNOLOGY, INC.

DFNB59 (Y-15): sc-167621

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The Power to Question

BACKGROUND

DFNB59 (deafness, autosomal recessive 59), also known as Pejvakin or PJVK, is a 352 amino acid belonging to the gasdermin family, which is a family exclusive to vertebrates. Encoded by a gene that maps to human chromosome 2q31.2, DFNB59 is essential for the proper function of auditory pathway neurons and outer hair cell function. DFNB59 defects may cause non-syndromic sensorineural deafness autosomal recessive type 59, a form of sensorineural hearing impairment characterized by absent or severely abnormal auditory brainstem response but normal otoacoustic emissions (auditory neuropathy or auditory dys-synchrony). DFNB contains a nuclear localization signal, a zinc-binding motif and consists of 7 exons spanning 9.8 kb of genomic sequence. DFNB59 shares significant similarity with DFNA5, indicating that these genes share a common origin.

REFERENCES

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2. Hashemzadeh Chaleshtori, M., et al. 2007. Novel mutations in the pejvakin gene are associated with autosomal recessive non-syndromic hearing loss in Iranian families. Clin. Genet. 72: 261-263.
3. Tamura, M., et al. 2007. Members of a novel gene family, Gsdm, are expressed exclusively in the epithelium of the skin and gastrointestinal tract in a highly tissue-specific manner. Genomics 89: 618-629.
4. Ebermann, I., et al. 2007. Truncating mutation of the DFNB59 gene causes cochlear hearing impairment and central vestibular dysfunction. Hum. Mutat. 28: 571-577.
5. Collin, R.W., et al. 2007. Involvement of DFNB59 mutations in autosomal recessive nonsyndromic hearing impairment. Hum. Mutat. 28: 718-723.
6. Schwander, M., et al. 2007. A forward genetics screen in mice identifies recessive deafness traits and reveals that pejvakin is essential for outer hair cell function. J. Neurosci. 27: 2163-2175.
7. Xu, S., et al. 2008. Sequence analysis of DFNB59 gene in a Chinese family with dominantly inherited auditory neuropathy. Lin Chung Er Bi Yan Hou Tou Jing Wai Ke Za Zhi 22: 880-882.
8. Mahdieh, N., Rabbani, B., Wiley, S., Akbari, M.T. and Zeinali, S. 2010. Genetic causes of nonsyndromic hearing loss in Iran in comparison with other populations. J. Hum. Genet. 55: 639-648.

CHROMOSOMAL LOCATION

Genetic locus: DFNB59 (human) mapping to 2q31.2; Dfnb59 (mouse) mapping to 2 C3.

SOURCE

DFNB59 (Y-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of DFNB59 of human origin.

RESEARCH USE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-167621 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DFNB59 (Y-15) is recommended for detection of DFNB59 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).

DFNB59 (Y-15) is also recommended for detection of DFNB59 in additional species, including equine, bovine, porcine and canine.

Suitable for use as control antibody for DFNB59 siRNA (h): sc-106723, DFNB59 siRNA (m): sc-143018, DFNB59 shRNA Plasmid (h): sc-106723-SH, DFNB59 shRNA Plasmid (m): sc-143018-SH, DFNB59 shRNA (h) Lentiviral Particles: sc-106723-V and DFNB59 shRNA (m) Lentiviral Particles: sc-143018-V.

Molecular Weight of DFNB59: 40 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

PROTOCOLS

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