SANTA CRUZ BIOTECHNOLOGY, INC.

TMC2 (F-12): sc-85966

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The Power to Question

BACKGROUND

TMC2 (transmembrane channel-like 2), also known as transmembrane cochlear-expressed protein 2, is a 906 amino acid multi-pass membrane protein belonging to the TMC family of proteins. Expressed in fetal cochlea, TMC2 is essential for normal auditory function and may be necessary for proper function of cochlear hair cells. TMC2 exists as three alternatively spliced isoforms that are encoded by a gene located on human chromosome 20. Comprising approximately 2% of the human genome, chromosome 20 contains nearly 63 million bases that encode over 600 genes, some of which are associated with Creutzfeldt-Jakob disease, ring chromosome 20 epilepsy syndrome and Alagille syndrome. Additionally, chromosome 20 contains a region with numerous genes which are thought important for seminal production and may be potential targets for male contraception.

REFERENCES

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4. Kurima, K., et al. 2003. Characterization of the transmembrane channel-like (TMC) gene family: functional clues from hearing loss and epidermodysplasia verruciformis. Genomics 82: 300-308.
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7. Elghezal, H., et al. 2007. Ring chromosome 20 syndrome without deletions of the subtelomeric and CHRNA4–KCNQ2 genes loci. Eur. J. Med. Genet. 50: 441-445.
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CHROMOSOMAL LOCATION

Genetic locus: TMC2 (human) mapping to 20p13; Tmc2 (mouse) mapping to 2 F1.

SOURCE

TMC2 (F-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of TMC2 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-85966 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TMC2 (F-12) is recommended for detection of TMC2 of mouse, rat 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with isoform TMC2-3.

TMC2 (F-12) is also recommended for detection of TMC2 in additional species, including equine, canine, bovine, porcine and avian.

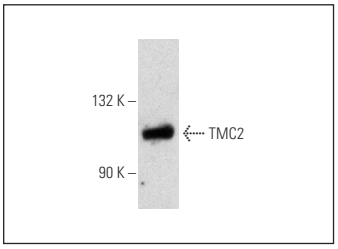
Suitable for use as control antibody for TMC2 siRNA (h): sc-76678, TMC2 siRNA (m): sc-154315, TMC2 shRNA Plasmid (h): sc-76678-SH, TMC2 shRNA Plasmid (m): sc-154315-SH, TMC2 shRNA (h) Lentiviral Particles: sc-76678-V and TMC2 shRNA (m) Lentiviral Particles: sc-154315-V.

Molecular Weight (predicted) of TMC2 isoforms: 103/77/18 kDa.

Molecular Weight (observed) of TMC2: 118-140 kDa.

Positive Controls: mouse brain extract: sc-2253 or HeLa whole cell lysate: sc-2200.

DATA



TMC2 (F-12): sc-85966. Western blot analysis of TMC2 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 or our catalog for detailed protocols and support products.