SANTA CRUZ BIOTECHNOLOGY, INC.

TMCC3 (T-20): sc-248839

BACKGROUND

TMCC3 (transmembrane and coiled-coil domains protein 3) is a 477 amino acid multi-pass membrane protein that belongs to the TEX28 family. The gene that encodes TMCC3 contains approximately 83,429 bases and maps to human chromosome 12q22. Encoding over 1,100 genes within 132 million bases, chromosome 12 makes up about 4.5% of the human genome. A number of skeletal deformities are linked to chromosome 12, including hypochondrogenesis, achondrogenesis and Kniest dysplasia. Noonan syndrome, which includes heart and facial developmental defects among the primary symptoms, is caused by a mutant form of PTPN11 gene product, SH-PTP2. Chromosome 12 is also home to a homeobox gene cluster, which encodes crucial transcription factors for morphogenesis, and the natural killer complex gene cluster, encoding C-type lectin proteins which mediate the NK cell response to MHC I interaction. Trisomy 12p leads to facial development defects, seizure disorders and a host of other symptoms which vary in severity depending on the extent of mosaicism. It is most severe in cases of complete trisomy.

REFERENCES

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2. Delgado Carrasco, J., et al. 2001. Achondrogenesis type II-hypochondrogenesis: radiological features. Case report. An. Esp. Pediatr. 55: 553-557.
3. Yokoyama, T., et al. 2003. A case of Kniest dysplasia with retinal detachment and the mutation analysis. Am. J. Ophthalmol. 136: 1186-1188.
4. Forzano, F., et al. 2007. A familial case of achondrogenesis type II caused by a dominant COL2A1 mutation and "patchy" expression in the mosaic father. Am. J. Med. Genet. A 143A: 2815-2820.
5. Wainwright, H., et al. 2008. Visceral manifestations of hypochondrogenesis. Virchows Arch. 453: 203-207.
6. Lo, F.S., et al. 2009. High resolution melting analysis for mutation detection for PTPN11 gene: applications of this method for diagnosis of Noonan syndrome. Clin. Chim. Acta 409: 75-77.
7. Benussi, D.G., et al. 2009. Trisomy 12p and monosomy 4p: phenotype-genotype correlation. Genet. Test. Mol. Biomarkers. 13: 199-204.

CHROMOSOMAL LOCATION

Genetic locus: TMCC3 (human) mapping to 12q22; Tmcc3 (mouse) mapping to 10 C2.

SOURCE

TMCC3 (T-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TMCC3 of human origin.

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-248839 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TMCC3 (T-20) is recommended for detection of TMCC3 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 TMCC1 or TMCC2.

TMCC3 (T-20) is also recommended for detection of TMCC3 in additional species, including equine and canine.

Suitable for use as control antibody for TMCC3 siRNA (h): sc-95908, TMCC3 siRNA (m): sc-154323, TMCC3 shRNA Plasmid (h): sc-95908-SH, TMCC3 shRNA Plasmid (m): sc-154323-SH, TMCC3 shRNA (h) Lentiviral Particles: sc-95908-V and TMCC3 shRNA (m) Lentiviral Particles: sc-154323-V.

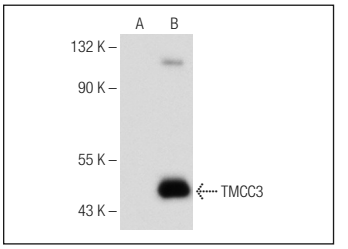
Molecular Weight of TMCC3: 54 kDa.

Positive Controls: TMCC3 (m): 293T Lysate: sc-124089

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.

DATA



TMCC3 (T-20): sc-248839. Western blot analysis of TMCC3 expression in non-transfected: sc-117752 (**A**) and mouse TMCC3 transfected: sc-124089 (**B**) 293T whole cell lysates.

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.