SANTA CRUZ BIOTECHNOLOGY, INC.

TMEM154 (F-8): sc-398803

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

TMEM154 is a 128 amino acid protein encoded by a gene mapping to human chromosome 4. Representing approximately 6% of the human genome, chromosome 4 contains nearly 900 genes. Notably, the Huntingtin gene, which is found to encode an expanded glutamine tract in cases of Huntington's disease, is on chromosome 4. FGFR-3 is also encoded on chromosome 4 and has been associated with thanatophoric dwarfism, achondroplasia, Muenke syndrome and bladder cancer. Chromosome 4 is also tied to Ellis-van Creveld syndrome, methylmalonic acidemia and polycystic kidney disease. Chromosome 4 reportedly contains the largest gene deserts (regions of the genome with no protein encoding genes) and has one of the two lowest recombination frequencies of the human chromosomes.

REFERENCES

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2. Cowan, C.M. and Raymond, L.A. 2006. Selective neuronal degeneration in Huntington's disease. Curr. Top. Dev. Biol. 75: 25-71.
3. Chandler, R.J., et al. 2007. Metabolic phenotype of methylmalonic acidemia in mice and humans: the role of skeletal muscle. BMC Med. Genet. 8: 64.
4. Cunningham, M.L., et al. 2007. Syndromic craniosynostosis: from history to hydrogen bonds. Orthod. Craniofac. Res. 10: 67-81.
5. de Frutos, C.A., et al. 2007. Snail1 is a transcriptional effector of FGFR-3 signaling during chondrogenesis and achondroplasias. Dev. Cell 13: 872-883.
6. Doherty, E.S., et al. 2007. Muenke syndrome (FGFR-3-related craniosynostosis): Expansion of the phenotype and review of the literature. Am. J. Med. Genet. A 143A: 3204-3215.
7. Ruiz-Perez, V.L., et al. 2007. EVC is a positive mediator of Ihh-regulated bone growth that localises at the base of chondrocyte cilia. Development 134: 2903-2912.
8. Stack, E.C., et al. 2007. Neuroprotective effects of synaptic modulation in Huntington's disease R6/2 mice. J. Neurosci. 27: 12908-12915.

CHROMOSOMAL LOCATION

Genetic locus: TMEM154 (human) mapping to 4q31.3; Tmem154 (mouse) mapping to 3 F1.

SOURCE

TMEM154 (F-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 124-145 within a cytoplasmic domain of TMEM154 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-398803 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

TMEM154 (F-8) is recommended for detection of TMEM154 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 TMEM154 siRNA (h): sc-88911, TMEM154 siRNA (m): sc-154386, TMEM154 shRNA Plasmid (h): sc-88911-SH, TMEM154 shRNA Plasmid (m): sc-154386-SH, TMEM154 shRNA (h) Lentiviral Particles: sc-88911-V and TMEM154 shRNA (m) Lentiviral Particles: sc-154386-V.

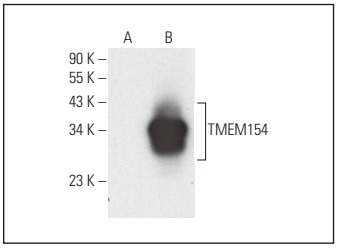
Molecular Weight of TMEM154: 20 kDa.

Positive Controls: TMEM154 (m): 293T Lysate: sc-124125.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



TMEM154 (F-8): sc-398803. Western blot analysis of TMEM154 expression in non-transfected: sc-117752 (**A**) and mouse TMEM154 transfected: sc-124125 (**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.

PROTOCOLS

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