SANTA CRUZ BIOTECHNOLOGY, INC.

TMEM184B (K-13): sc-86911

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The Power to Question

BACKGROUND

TMEM184B (transmembrane protein 184B), also known as FM08, HS5O6A or C22orf5, is a 407 amino acid multi-pass membrane protein that is thought to play a role in the activation of the MAPK (mitogen-activated protein kinase) signaling pathway. The gene encoding TMEM184B maps to human chromosome 22, which houses over 500 genes and is the second smallest human chromosome. Mutations in several of the genes that map to chromosome 22 are involved in the development of Phelan-McDermid syndrome, neurofibromatosis type 2, autism and schizophrenia. Additionally, translocations between chromosomes 9 and 22 may lead to the formation of the Philadelphia chromosome and the subsequent production of the novel fusion protein Bcr-Abl, a potent cell proliferation activator found in several types of leukemias.

REFERENCES

1. Gilbert, F. 1998. Disease genes and chromosomes: disease maps of the human genome. Chromosome 22. Genet. Test. 2: 89-97.
2. Schwab, S.G. and Wildenauer, D.B. 1999. Chromosome 22 workshop report. Am. J. Med. Genet. 88: 276-278.
3. Matsuda, A., et al. 2003. Large-scale identification and characterization of human genes that activate NFκB and MAPK signaling pathways. Oncogene 22: 3307-3318.
4. Tsilchorozidou, T., et al. 2004. Constitutional rearrangements of chromosome 22 as a cause of neurofibromatosis 2. J. Med. Genet. 41: 529-534.
5. Arinami, T. 2006. Analyses of the associations between the genes of 22q11 deletion syndrome and schizophrenia. J. Hum. Genet. 51: 1037-1045.
6. Paylor, R., et al. 2006. Tbx1 haploinsufficiency is linked to behavioral disorders in mice and humans: implications for 22q11 deletion syndrome. Proc. Natl. Acad. Sci. USA 103: 7729-7734.
7. Zheng, X., et al. 2006. BCR and its mutants, the reciprocal t(9;22)-associated Abl/Bcr fusion proteins, differentially regulate the cytoskeleton and cell motility. BMC Cancer 6: 262.
8. Ahronowitz, I., et al. 2007. Mutational spectrum of the NF2 gene: a meta-analysis of 12 years of research and diagnostic laboratory findings. Hum. Mutat. 28: 1-12.
9. Hay, B.N. 2007. Deletion 22q11: spectrum of associated disorders. Semin. Pediatr. Neurol. 14: 136-139.

CHROMOSOMAL LOCATION

Genetic locus: TMEM184B (human) mapping to 22q13.1; Tmem184b (mouse) mapping to 15 E1.

SOURCE

TMEM184B (K-13) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of TMEM184B of human origin.

RESEARCH USE

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

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-86911 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TMEM184B (K-13) is recommended for detection of TMEM184B 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).

TMEM184B (K-13) is also recommended for detection of TMEM184B in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for TMEM184B siRNA (h): sc-76688, TMEM184B siRNA (m): sc-154423, TMEM184B shRNA Plasmid (h): sc-76688-SH, TMEM184B shRNA Plasmid (m): sc-154423-SH, TMEM184B shRNA (h) Lentiviral Particles: sc-76688-V and TMEM184B shRNA (m) Lentiviral Particles: sc-154423-V.

Molecular Weight of TMEM184B: 46 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

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.