SANTA CRUZ BIOTECHNOLOGY, INC.

TMED5 (N-13): sc-138688

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

TMED5 (transmembrane emp24 domain-containing protein 5) is a 229 amino acid single-pass type I membrane protein that belongs to the EMP24/GP25L family and contains one GOLD domain. The gene that encodes TMED5 contains nearly 31,000 bases and maps to human chromosome 1p22.1. As the largest human chromosome, chromosome 1 spans about 260 million base pairs and makes up approximately 8% of the human genome. There are about 3,000 genes on chromosome 1, and considering the great number of genes there are also a large number of diseases associated with chromosome 1. Notably, the rare aging disease Hutchinson-Gilford progeria is associated with the LMNA gene which encodes lamin A. When defective, the LMNA gene product can build up in the nucleus and cause characteristic nuclear blebs. The MUTYH gene is located on chromosome 1 and is partially responsible for familial adenomatous polyposis. Stickler syndrome, Parkinsons, Gaucher disease and Usher syndrome are also associated with chromosome 1.

REFERENCES

1. Dobbie, Z., et al. 1997. Identification of a modifier gene locus on chromosome 1p35-36 in familial adenomatous polyposis. Hum. Genet. 99: 653-657.
2. Eudy, J.D., et al. 1998. Isolation of a gene encoding a novel member of the nuclear receptor superfamily from the critical region of Usher syndrome type IIa at 1q41. Genomics 50: 382-384.
3. Eudy, J.D., et al. 1998. Mutation of a gene encoding a protein with extracellular matrix motifs in Usher syndrome type IIa. Science 280: 1753-1757.
4. Lau, E.K., et al. 1999. Two novel polymorphic sequences in the glucocerebrosidase gene region enhance mutational screening and founder effect studies of patients with Gaucher disease. Hum. Genet. 104: 293-300.
5. Tayebi, N., et al. 2001. Gaucher disease and parkinsonism: a phenotypic and genotypic characterization. Mol. Genet. Metab. 73: 313-321.
6. Plasilova, M., et al. 2004. Exclusion of an extracolonic disease modifier locus on chromosome 1p33-36 in a large Swiss familial adenomatous polyposis kindred. Eur. J. Hum. Genet. 12: 365-371.
7. Betarbet, R., et al. 2008. Fas-associated factor 1 and Parkinson's disease. Neurobiol. Dis. 31: 309-315.

CHROMOSOMAL LOCATION

Genetic locus: TMED5 (human) mapping to 1p22.1; Tmed5 (mouse) mapping to 5 F.

SOURCE

TMED5 (N-13) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of TMED5 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-138688 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TMED5 (N-13) is recommended for detection of TMED5 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other TMED family members.

TMED5 (N-13) is also recommended for detection of TMED5 in additional species, including equine and porcine.

Suitable for use as control antibody for TMED5 siRNA (h): sc-78724, TMED5 siRNA (m): sc-154334, TMED5 shRNA Plasmid (h): sc-78724-SH, TMED5 shRNA Plasmid (m): sc-154334-SH, TMED5 shRNA (h) Lentiviral Particles: sc-78724-V and TMED5 shRNA (m) Lentiviral Particles: sc-154334-V.

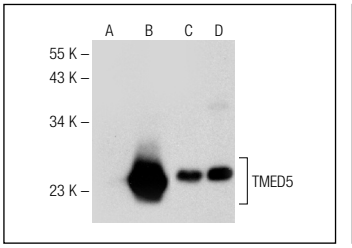
Molecular Weight of TMED5: 26 kDa.

Positive Controls: TMED5 (h): 293T Lysate: sc-113506, Hep G2 cell lysate: sc-2227 or HeLa whole cell lysate: sc-2200.

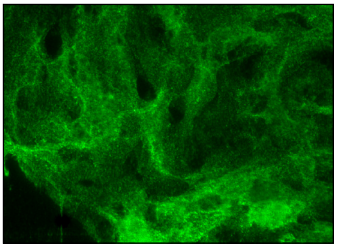
RECOMMENDED SECONDARY REAGENTS

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.

DATA



TMED5 (N-13): sc-138688. Western blot analysis of TMED5 expression in non-transfected 293T: sc-117752 (**A**), human TMED5 transfected 293T: sc-113506 (**B**), Hep G2 (**C**) and HeLa (**D**) whole cell lysates.



TMED5 (N-13): sc-138688. Immunofluorescence staining of formalin-fixed Hep G2 cells showing membrane localization.

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.