TM9SF2 (Y-16): sc-84636



The Power to Question

BACKGROUND

TM9SF2 (transmembrane 9 superfamily member 2), also known as p76, is a 663 amino acid endosomal multi-pass membrane protein that is ubiquitously expressed, with high expression in pancreas and kidney, and lower levels in lung, liver, skeletal muscle, placenta, brain and heart. A member of the nonaspanin (TM9SF) family, TM9SF2 is thought to act as an endosome ion channel or small molecule transporter in intracellular compartments, and colocalizes with both transferrin receptors and various mannose 6-phosphate receptors. The gene encoding TM9SF2 maps to human chromosome 13, which houses over 400 genes, such as BRCA2 and RB1, and comprises nearly 4% of the human genome. Trisomy 13, also known as Patau syndrome, is deadly and the few who survive past one year suffer from permanent neurologic defects, difficulty eating and vulnerability to serious respiratory infections.

REFERENCES

- Díaz, E., Schimmöller, F. and Pfeffer, S.R. 1997. A novel Rab9 effector required for endosome-to-TGN transport. J. Cell Biol. 138: 283-290.
- Schimmöller, F., Díaz, E., Mühlbauer, B. and Pfeffer, S.R. 1998.
 Characterization of a 76 kDa endosomal, multispanning membrane protein that is highly conserved throughout evolution. Gene 216: 311-318.
- 3. Online Mendelian Inheritance in Man, OMIM™. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 604678. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- 4. Ghosh, P., Dahms, N.M. and Kornfeld, S. 2003. Mannose 6-phosphate receptors: new twists in the tale. Nat. Rev. Mol. Cell Biol. 4: 202-212.
- Hsu, H.F. and Hou, J.W. 2007. Variable expressivity in Patau syndrome is not all related to trisomy 13 mosaicism. Am. J. Med. Genet. A 143A: 1739-1748.
- Hall, H.E., Chan, E.R., Collins, A., Judis, L., Shirley, S., Surti, U., Hoffner, L., Cockwell, A.E., Jacobs, P.A. and Hassold, T.J. 2007. The origin of trisomy 13. Am. J. Med. Genet. A 143A: 2242-2248.

CHROMOSOMAL LOCATION

Genetic locus: TM9SF2 (human) mapping to 13q32.3; Tm9sf2 (mouse) mapping to 14 E5.

SOURCE

TM9SF2 (Y-16) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of TM9SF2 of human origin.

PRODUCT

Each vial contains 100 μg lgG in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-84636 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

TM9SF2 (Y-16) is recommended for detection of TM9SF2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

TM9SF2 (Y-16) is also recommended for detection of TM9SF2 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for TM9SF2 siRNA (h): sc-76676, TM9SF2 siRNA (m): sc-154311, TM9SF2 shRNA Plasmid (h): sc-76676-SH, TM9SF2 shRNA Plasmid (m): sc-154311-SH, TM9SF2 shRNA (h) Lentiviral Particles: sc-76676-V and TM9SF2 shRNA (m) Lentiviral Particles: sc-154311-V.

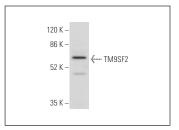
Molecular Weight of TM9SF2: 76 kDa.

Positive Controls: PC-12 cell lysate: sc-2250.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit lgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit lgG-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 lgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit lgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



TM9SF2 (Y-16): sc-84636. Western blot analysis of TM9SF2 expression in PC-12 whole cell lysate.

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.