

TM4SF4 (T-15): sc-103272

BACKGROUND

The transmembrane 4 superfamily (also known as the tetraspanin family) is a group of cell surface proteins that regulate cell development, activation, growth and motility. Each member contains four hydrophobic domains and participates in the mediation of signal transduction. TM4SF4 (transmembrane 4 L6 family member 4), also known as intestine and liver tetraspan membrane protein (ILTMP), is a 202 amino acid multi-pass membrane protein that belongs to the L6 tetraspanin family. Expressed in jejunum and liver, TM4SF4 regulates density-dependent cell proliferation as well as the adhesive and proliferative state of intestinal epithelial cells. TM4SF4 contains four membrane spanning domains and two sites that undergo post translational N-linked glycosylation, which is necessary for TM4SF4 to produce its growth inhibitory effect. The gene encoding TM4SF4 maps to human chromosome 3q25.1.

REFERENCES

1. Wice, B.M. and Gordon, J.I. 1995. A tetraspan membrane glycoprotein produced in the human intestinal epithelium and liver that can regulate cell density-dependent proliferation. *J. Biol. Chem.* 270: 21907-21918.
2. Ferrer, M., Yunta, M. and Lazo, P.A. 1998. Pattern of expression of tetraspanin antigen genes in Burkitt lymphoma cell lines. *Clin. Exp. Immunol.* 113: 346-352.
3. Wright, M.D., Ni, J. and Rudy, G.B. 2000. The L6 membrane proteins — a new four-transmembrane superfamily. *Protein Sci.* 9: 1594-1600.
4. Liu, Z., Zhao, M., Yokoyama, K.K. and Li, T. 2001. Molecular cloning of a cDNA for rat TM4SF4, a homolog of human il-TMP (TM4SF4), and enhanced expression of the corresponding gene in regenerating rat liver. *Biochim. Biophys. Acta* 1518: 183-189.
5. Berditchevski, F. 2001. Complexes of tetraspanins with integrins: more than meets the eye. *J. Cell Sci.* 114: 4143-4151.
6. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 606567. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
7. Qiu, J., Liu, Z., Da, L., Li, Y., Xuan, H., Lin, Q., Li, F., Wang, Y., Li, Z. and Zhao, M. 2007. Overexpression of the gene for transmembrane 4 superfamily member 4 accelerates liver damage in rats treated with CCl4. *J. Hepatol.* 46: 266-275.

CHROMOSOMAL LOCATION

Genetic locus: TM4SF4 (human) mapping to 3q25.1; Tm4sf4 (mouse) mapping to 3 D.

SOURCE

TM4SF4 (T-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of TM4SF4 of human origin.

STORAGE

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

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-103272 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TM4SF4 (T-15) is recommended for detection of TM4SF4 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 other TM4SF family members.

TM4SF4 (T-15) is also recommended for detection of TM4SF4 in additional species, including canine and bovine.

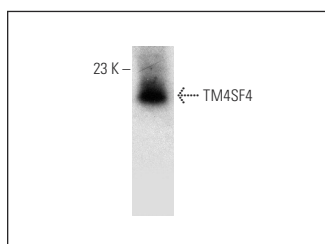
Suitable for use as control antibody for TM4SF4 siRNA (h): sc-78315, TM4SF4 siRNA (m): sc-154303, TM4SF4 shRNA Plasmid (h): sc-78315-SH, TM4SF4 shRNA Plasmid (m): sc-154303-SH, TM4SF4 shRNA (h) Lentiviral Particles: sc-78315-V and TM4SF4 shRNA (m) Lentiviral Particles: sc-154303-V.

Molecular Weight (predicted) of TM4SF4: 21 kDa.

Molecular Weight (observed) of TM4SF4: 30/42 kDa.

Positive Controls: mouse liver extract: sc-2256.

DATA



TM4SF4 (T-15): sc-103272. Western blot analysis of TM4SF4 expression in mouse liver tissue extract.

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.



Try **TM4SF4 (4E6): sc-293348**, our highly recommended monoclonal alternative to TM4SF4 (T-15).