

# TMTSP (V-16): sc-69052

## BACKGROUND

TMTSP (transmembrane molecule with thrombospondin module), also known as THSD1 (thrombospondin type-1 domain-containing protein 1), is an 852 amino acid protein expressed in endothelial cells and hematopoietic cells. Three isoforms of TMTSP are produced by alternative splicing events. Isoforms 1 and 2 are single-pass type I membrane proteins while isoform 3 is a secreted protein. TMTSP contains three immunoglobulin-like domains and one thrombospondin domain. Thrombospondin domains have been associated with cell migration and are found in a variety of different proteins, including extracellular matrix proteins, thrombospondins and complement pathway proteins.

## REFERENCES

1. Bork, P. 1993. The modular architecture of a new family of growth regulators related to connective tissue growth factor. *FEBS Lett.* 327: 125-130.
2. Clark, H.F., et al. 2003. The secreted protein discovery initiative (SPDI), a large-scale effort to identify novel human secreted and transmembrane proteins: a bioinformatics assessment. *Genome Res.* 13: 2265-2270.
3. Gerhard, D.S., et al. 2004. The status, quality, and expansion of the NIH full-length cDNA project: the Mammalian Gene Collection (MGC). *Genome Res.* 14: 2121-2127.
4. Orr, A.W., et al. 2004. Thrombospondin induces RhoA inactivation through FAK-dependent signaling to stimulate focal adhesion disassembly. *J. Biol. Chem.* 279: 48983-48992.
5. Takayanagi, S., et al. 2006. Genetic marking of hematopoietic stem and endothelial cells: identification of the *Tmtsp* gene encoding a novel cell surface protein with the thrombospondin-1 domain. *Blood* 107: 4317-4325.
6. Kis, E., et al. 2006. Microarray analysis of radiation response genes in primary human fibroblasts. *Int. J. Radiat. Oncol. Biol. Phys.* 66: 1506-1514.
7. Gruber, H.E., et al. 2006. Immunolocalization of thrombospondin in the human and sand rat intervertebral disc. *Spine* 31: 2556-2561.

## CHROMOSOMAL LOCATION

Genetic locus: THSD1 (human) mapping to 13q14.3; *Thsd1* (mouse) mapping to 8 A3.

## SOURCE

TMTSP (V-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of TMTSP of human origin.

## 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-69052 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

TMTSP (V-16) is recommended for detection of Thrombospondin type-1 domain-containing protein 1 precursor of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

TMTSP (V-16) is also recommended for detection of Thrombospondin type-1 domain-containing protein 1 precursor in additional species, including equine, canine and porcine.

Suitable for use as control antibody for TMTSP siRNA (h): sc-63139, TMTSP siRNA (m): sc-63140, TMTSP shRNA Plasmid (h): sc-63139-SH, TMTSP shRNA Plasmid (m): sc-63140-SH, TMTSP shRNA (h) Lentiviral Particles: sc-63139-V and TMTSP shRNA (m) Lentiviral Particles: sc-63140-V.

Molecular Weight of TMTSP: 95 kDa.

Positive Controls: Human platelet whole cell lysate: sc-363773.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (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.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.