

# TM (M-17): sc-7097

## BACKGROUND

Thrombomodulin (TM, also called CD141) is a type I membrane receptor that is specific to endothelial cells. TM has a cysteine-rich extracellular domain with six EGF-like regions. TM forms a complex with thrombin, which activates protein C to generate activated protein C (APC), an anticoagulant enzyme. APC together with protein S inhibits coagulation by inactivating factors Va and VIIIa. Deletion of the TM gene results in embryonic lethality in mice.

## REFERENCES

1. Suzuki, K., et al. 1987. Structure and expression of human thrombomodulin, a thrombin receptor on endothelium acting as a cofactor for protein C activation. *EMBO J.* 6: 1891-1897.
2. Jackman, R.W., et al. 1987. Human thrombomodulin gene is intron depleted: nucleic acid sequences of the cDNA and gene predict protein structure and suggest sites of regulatory control. *Proc. Natl. Acad. Sci. USA* 84: 6425-6429.

## CHROMOSOMAL LOCATION

Genetic locus: THBD (human) mapping to 20p11.21; Thbd (mouse) mapping to 2 G3.

## SOURCE

TM (M-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of TM of mouse 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-7097 P, (100 µg 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

TM (M-17) is recommended for detection of thrombomodulin 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).

Suitable for use as control antibody for TM siRNA (h): sc-36686, TM siRNA (m): sc-36687, TM shRNA Plasmid (h): sc-36686-SH, TM shRNA Plasmid (m): sc-36687-SH, TM shRNA (h) Lentiviral Particles: sc-36686-V and TM shRNA (m) Lentiviral Particles: sc-36687-V.

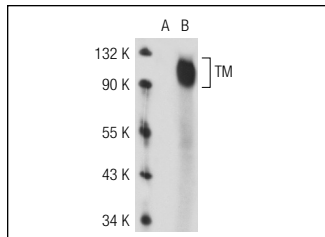
Molecular Weight of TM: 105 kDa.

Positive Controls: A549 cell lysate: sc-2413, TM (h): 293T Lysate: sc-115666 or TM (m): 293T Lysate: sc-127663.

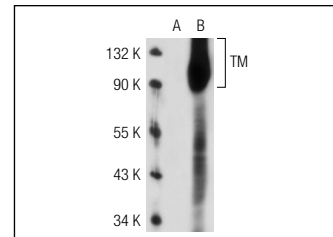
## RECOMMENDED SECONDARY REAGENTS

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

## DATA



TM (M-17): sc-7097. Western blot analysis of TM expression in non-transfected: sc-117752 (A) and human TM transfected: sc-115666 (B) 293T whole cell lysates.



TM (M-17): sc-7097. Western blot analysis of TM expression in non-transfected: sc-117752 (A) and mouse TM transfected: sc-127663 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Johst, U., et al. 2004. Liposome-mediated transfection of thrombomodulin in vascular smooth muscle cells—a gene therapy concept to inhibit recurrent stenosis. *Rofo* 176: 398-403.
2. Sohn, R.H., et al. 2005. Regulation of endothelial thrombomodulin expression by inflammatory cytokines is mediated by activation of nuclear factor-κ B. *Blood* 105: 3910-3917.
3. Hiroi, T., et al. 2009. Proteasome inhibitors enhance endothelial thrombomodulin expression via induction of Krüppel-like transcription factors. *Arterioscler. Thromb. Vasc. Biol.* 29: 1587-1593.
4. Starr, M.E., et al. 2010. Age-dependent vulnerability to endotoxemia is associated with reduction of anticoagulant factors activated protein C and thrombomodulin. *Blood* 115: 4886-4893.

## RESEARCH USE

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


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Try **TM (D-3): sc-13164** or **TM (H-11): sc-271804**, our highly recommended monoclonal alternatives to TM (M-17). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **TM (D-3): sc-13164**.