

TM (H-11): sc-271804

BACKGROUND

Thrombomodulin™, 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. It 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.

CHROMOSOMAL LOCATION

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

SOURCE

TM (H-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 547-575 at the C-terminus of TM of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TM (H-11) is available conjugated to agarose (sc-271804 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271804 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271804 PE), fluorescein (sc-271804 FITC), Alexa Fluor® 488 (sc-271804 AF488), Alexa Fluor® 546 (sc-271804 AF546), Alexa Fluor® 594 (sc-271804 AF594) or Alexa Fluor® 647 (sc-271804 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271804 AF680) or Alexa Fluor® 790 (sc-271804 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271804 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

TM (H-11) is recommended for detection of thrombomodulin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (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.

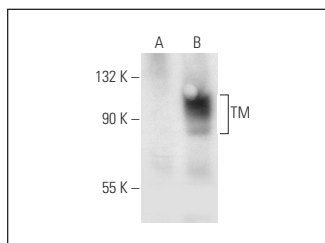
Molecular Weight of TM: 105 kDa.

Positive Controls: TM (h): 293T Lysate: sc-115666, THP-1 cell lysate: sc-2238 or CCRF-CEM cell lysate: sc-2225.

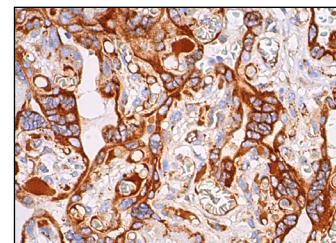
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



TM (H-11): sc-271804. Western blot analysis of TM expression in non-transfected: sc-117752 (A) and human TM transfected: sc-115666 (B) 293T whole cell lysates.



TM (H-11): sc-271804. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of trophoblastic cells.

SELECT PRODUCT CITATIONS

- Munoz-Pinto, D.J., et al. 2015. Collagen-mimetic hydrogels promote human endothelial cell adhesion, migration and phenotypic maturation. *J. Mater. Chem. B* 3: 7912-7919.
- Ding, H., et al. 2016. LXR agonist T0901317 upregulates thrombomodulin expression in glomerular endothelial cells by inhibition of nuclear factor-κB. *Mol. Med. Rep.* 13: 4888-4896.
- Munoz-Pinto, D.J., et al. 2017. Evaluation of late outgrowth endothelial progenitor cell and umbilical vein endothelial cell responses to thromboresistant collagen-mimetic hydrogels. *J. Biomed. Mater. Res. A* 105: 1712-1724.
- Yin, T., et al. 2022. Two-stage degradation and novel functional endothelium characteristics of a 3-D printed bioresorbable scaffold. *Bioact. Mater.* 10: 378-396.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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