

Rabbit anti-Human, Rat Thrombomodulin/THBD Polyclonal Antibody | anti-THBD antibody

Anti-Thrombomodulin/THBD Antibody Picoband

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA19747	Rabbit	Human, Rat	ELISA, Flow Cytometry, Functional Assay, Immunoprecipitation, Immunofluorescence, Immunohistochemistry, Immunocytochemistry, Western Blot

PRODUCT SYNONYMS

Thrombomodulin/THBD; Polyclonal Antibody; Anti-Thrombomodulin/THBD Antibody Picoband; Heparanase; WEE1 G2 checkpoint kinase; Wee1-like protein kinase; WEE1hu; Wee1A kinase; WEE1; anti-THBD antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Rat
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Predominantly Expressed in T-cells. Also detected in proliferating intestinal epithelial cells and in the basal epithelial cells of mammary gland epithelium.
Purity/Purification	Immunogen affinity purified.
Form/Format	Lyophilized. Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ .
Applicable Applications for anti-THBD antibody	ELISA, FCM/FACS (Flow Cytometry), IP (Immunoprecipitation), IF (Immunofluorescence), IHC (Immunohistochemistry), ICC (Immunocytochemistry), WB (Western Blot)
Application Notes	WB: 0.25-0.5ug/ml, Human, Rat IHC(Paraffin-embedded Section): 2-5ug/ml, Human ICC/IF: 5ug/ml, Human IP: 0.5-2ug/ml, Human FC/FACS (Fixed): 1-3ug/1x10 ⁶ cells, Human ELISA: 0.1-0.5ug/ml
Immunogen	E coli-derived human Thrombomodulin/THBD recombinant protein (Position: Q29-L575).
Subcellular Localization	Nucleus
Reconstitution	Adding 0.2 ml of distilled water will yield a concentration of 500ug/ml.
Cross Reactivity	No cross-reactivity with other proteins.
Protein Function	Acts as a negative regulator of entry into mitosis (G2 to M transition) by protecting the nucleus from cytoplasmically activated cyclin B1-complexed CDK1 before the onset of mitosis by mediating phosphorylation of CDK1 on 'Tyr-15'. Specifically phosphorylates and inactivates cyclin B1-complexed CDK1 reaching a maximum during G2 phase and a minimum as cells enter M phase. Phosphorylation of cyclin B1-CDK1 occurs exclusively on 'Tyr-15' and phosphorylation of monomeric CDK1 does not occur. Its activity increases during S and G2 phases and decreases at M phase when it is hyperphosphorylated. A correlated decrease in protein level occurs at M/G1 phase, probably due to its degradation.
Preparation and Storage	At -20 degree C for one year from date of receipt. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for six months. Avoid repeated freezing and thawing.



IP (Immunoprecipitation)

Figure 6. Immunoprecipitating Thrombomodulin/THBD in A431 whole cell lysate .Western blot analysis of Thrombomodulin/THBD using anti-Thrombomodulin/THBD antibody (AAA19747).Lane 1: A431 whole cell lysates (30ug)Lane 2: Rabbit control IgG instead of anti-Thrombomodulin/THBD antibody in A431 whole cell lysate.Lane 3: anti-Thrombomodulin/THBD antibody (2ug) + A431 whole cell lysate (500ug)After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-Thrombomodulin/THBD antigen affinity purified polyclonal antibody (AAA19747) at a dilution of 0.5ug/mL and probed with a goat anti-rabbit IgG-HRP secondary antibody (cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Thrombomodulin/THBD Antibody (AAA19747, 1ug/1x106 cells) for 30 min at 20 degree C. DyLight488 conjugated goat anti-rabbit IgG was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x106) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



IF (Immunofluorescence)

Figure 4. IF analysis of Thrombomodulin/THBD using anti-Thrombomodulin/THBD antibody (AAA19747) and anti-Tubulin Alpha antibody (M03989-3).Thrombomodulin/THBD was detected in immunocytochemical section of A431 cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-Thrombomodulin/THBD Antibody (AAA19747) overnight at 4 degree C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-Thrombomodulin/THBD Antibody (AAA19747) overnight at 4 degree C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Lane 2: human A431 whole cell lysates,Lane 3: rat PC-12 whole cell lysates.After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Thrombomodulin/THBD antigen affinity purified polyclonal antibody (#AAA19747) at 0.5ug/mL overnight at 4 degree C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for Thrombomodulin/THBD at approximately 100 kDa. The expected band size for Thrombomodulin/THBD is at 60 kDa.

ADDITIONAL INFORMATION

Related Product Information for anti-THBD antibody	The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Product Categories/Family for anti-THBD antibody	Primary Antibodies; Cell Biology; Cell Cycle; Epigenetics and Nuclear Signaling; Kinases/Phosphatases
References	1. Anastasiou, G., Gialeraki, A., Merkouri, E., Politou, M., Travlou, A. Thrombomodulin as a regulator of the anticoagulant pathway: implication in the development of thrombosis. Blood Coagul. Fibrinolysis 23: 1-10, 2012. 2. Cole, J. W., Roberts, S. C., Gallagher, M., Giles, W. H., Mitchell, B. D., Steinberg, K. K., Wozniak, M. A., Macko, R. F., Reinhart, L. J., Kittner, S. J. Thrombomodulin ala455val polymorphism and the risk of cerebral infarction in a biracial population: the Stroke Prevention in Young Women Study. BMC Neurol. 4: 21-27, 2004. 3. Delvaeye, M., Noris, M., De Vriese, A., Esmon, C. T., Esmon, N. L., Ferrell, G., Del-Favero, J., Plaisance, S., Claes, B., Lambrechts, D., Zoja, C., Remuzzi, G., Conway, E. M. Thrombomodulin mutations in atypical hemolytic-uremic syndrome. New Eng. J. Med. 361: 345-357, 2009.

NCBI AND UNIPROT INFORMATION

NCBI GI #	4507483
NCBI GeneID	7056
NCBI Accession #	NP_000352.1
NCBI GenBank Nucleotide #	NM_000361.2
UniProt Accession #	P07204; Q8IV29; Q9UC32
Molecular Weight	60,329 Da
NCBI Official Full Name	thrombomodulin
NCBI Official Synonym Full Names	thrombomodulin

NCBI Official Symbol	THBD
NCBI Official Synonym Symbols	TM; THRM; AHUS6; BDCA3; CD141; THPH12
NCBI Protein Information	thrombomodulin; fetomodulin; CD141 antigen
UniProt Protein Name	Thrombomodulin
UniProt Gene Name	THBD
UniProt Synonym Gene Names	THRM; TM
UniProt Entry Name	TRBM_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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