10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-Thrombomodulin / CD141 Antibody

Mouse Monoclonal Antibody
Catalog # AH13534

Product Information

Application	WB, IHC-P, IF, FC, E
Primary Accession	P07204
Other Accession	2030
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG2b, kappa
Clone Names	THBD/1591
Calculated MW	60329

Additional Information

Gene ID	7056
Other Names	AHUS6; BDCA3; CD141; Fetomodulin; Thbd; THPH12; THRM; Thrombomodulin (TM)
Application Note	ELISA (Use Ab at 2-4ug/ml for coating) (Order Ab without BSA); ,Flow Cytometry (0.5-1ug/million cells); Immunofluorescence (0.5-1ug/ml); ,Western Blotting (0.5-1ug/ml); ,Immunohistology (Formalin-fixed) (1-2ug/ml for 30 minutes at RT),(Staining of formalin-fixed tissues is enhanced by boiling tissue sections in 10mM Tris buffer with1mM EDTA, pH 9.0, for 10-20 min followed by cooling at RT for 20 minutes),Optimal dilution for a specific application should be determined.
Format	200ug/ml of Ab purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1.0mg/ml.
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	Anti-Thrombomodulin / CD141 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	THBD
Synonyms	THRM
Function	Endothelial cell receptor that plays a critical role in regulating several

physiological processes including hemostasis, coagulation, fibrinolysis, inflammation, and angiogenesis (PubMed:10761923). Acts as a cofactor for thrombin activation of protein C/PROC on the surface of vascular endothelial cells leading to initiation of the activated protein C anticoagulant pathway (PubMed:29323190, PubMed:33836597, PubMed:9395524). Also accelerates the activation of the plasma carboxypeptidase B2/CPB2, which catalyzes removal of C-terminal basic amino acids from its substrates including kinins or anaphylatoxins leading to fibrinolysis inhibition (PubMed:26663133). Plays critical protective roles in changing the cleavage specificity of protease-activated receptor 1/PAR1, inhibiting endothelial cell permeability and inflammation (By similarity). Suppresses inflammation distinctly from its anticoagulant cofactor activity by sequestering HMGB1 thereby preventing it from engaging cellular receptors such as RAGE and contributing to the inflammatory response (PubMed:15841214).

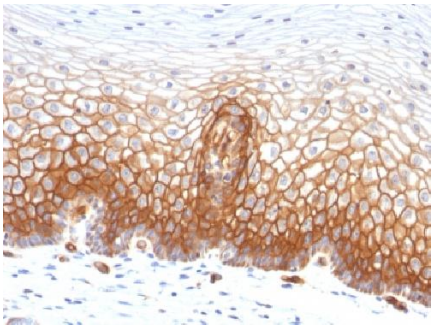
Cellular Location Membrane; Single-pass type I membrane protein.

Tissue Location Endothelial cells are unique in synthesizing thrombomodulin

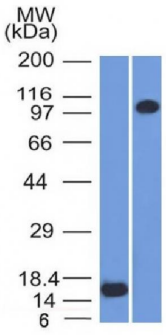
Background

It recognizes a protein of 75kDa, identified as Thrombomodulin. Thrombomodulin is a transmembrane glycoprotein with natural anticoagulant properties. It is normally expressed by a restricted number of cells, such as endothelial and mesothelial cells. In addition, synovial lining and syncytio-trophoblasts of placenta also express thrombomodulin. This protein is present in almost all of benign vascular tumors and majority of malignant vascular tumors (Kaposi s sarcoma, angiosarcoma, and epithelioid hemangioendothelioma). Hence, anti-thrombomodulin serves as a sensitive marker for lymphatic endothelial cells and their tumors. Recently, thrombomodulin antibody has been used for mesothelial cells and malignant mesotheliomas.

Images

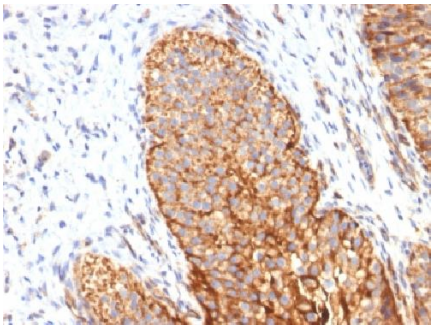


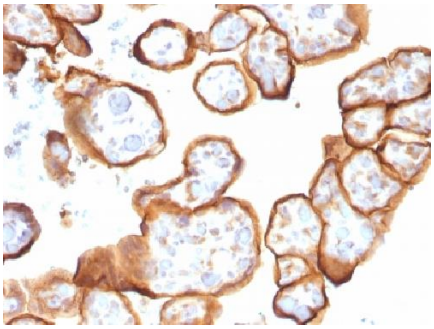
Formalin-fixed, paraffin-embedded human Cervical Carcinoma stained with Thrombomodulin/CD141 Monoclonal Antibody (THBD/1591).



Western Blot Analysis (A) Recombinant Protein (B) THP1 Cell lysate Using Thrombomodulin/CD141 Monoclonal Antibody (THBD/1591).

Formalin-fixed, paraffin-embedded human Bladder Carcinoma stained with Thrombomodulin Monoclonal/CD141 Antibody (THBD/1591).





Formalin-fixed, paraffin-embedded human Placenta stained with Thrombomodulin/CD141 Monoclonal Antibody (THBD/1591).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.