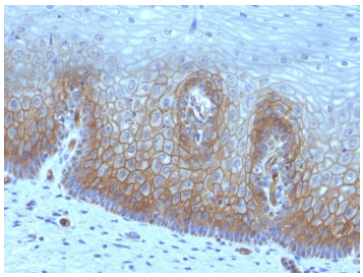
Thrombomodulin Antibody / Endothelial Cell Marker [clone rTHBD/1591] (V3557)

Catalog No.	Formulation	Size
V3557-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3557-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3557SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V3557IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

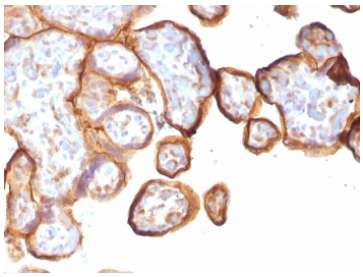
Recombinant MOUSE MONOCLONAL

Bulk quote request

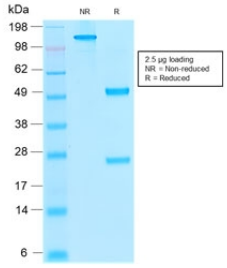
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG1, kappa
Clone Name	rTHBD/1591
Purity	Protein G affinity chromatography
UniProt	P07204
Localization	Cell surface, cytoplasmic
Applications	ELISA: 2-4ug/ml (order BSA/azide-free format) Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT
Limitations	This Thrombomodulin antibody is available for research use only.



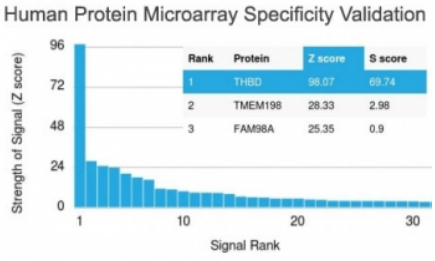
Thrombomodulin Antibody / Endothelial Cell Marker. Immunohistochemistry analysis of Thrombomodulin / THBD expression in human cervical carcinoma using clone rTHBD/1591. FFPE tissue sections show membranous HRP-DAB brown staining in tumor epithelial cells, with endothelial cell staining highlighting vascular structures within the tumor microenvironment. Antigen retrieval was performed by boiling sections in 10mM Tris buffer with 1mM EDTA, pH 9, for 10-20 minutes followed by cooling at room temperature.



Thrombomodulin Antibody / Endothelial Cell Marker. Immunohistochemistry analysis of Thrombomodulin / THBD expression in human placenta using clone rTHBD/1591. FFPE placental tissue shows membranous HRP-DAB brown staining in trophoblastic cells with additional endothelial cell staining highlighting placental vascular structures. Antigen retrieval was performed by boiling sections in 10mM Tris buffer with 1mM EDTA, pH 9, for 10-20 minutes followed by cooling at room temperature.



SDS-PAGE analysis of purified, BSA-free recombinant Thrombomodulin antibody (clone rTHBD/1591) as confirmation of integrity and purity.



Thrombomodulin Antibody / Endothelial Cell Marker. Specificity validation of clone rTHBD/1591 using a HuProt(TM) human protein microarray containing more than 19,000 full-length human proteins. The antibody demonstrates strong selective binding to Thrombomodulin / THBD with the highest signal intensity among all proteins on the array, supporting the target specificity of the rTHBD/1591 monoclonal antibody.
Z- and S-score interpretation: The Z-score represents the strength of the fluorescent signal generated when the antibody binds a specific protein on the HuProt(TM) array and is expressed as the number of standard deviations above the mean signal of all proteins on the array. Proteins are ranked based on descending Z-scores. The S-score represents the difference between consecutive Z-scores and therefore reflects the relative specificity of the antibody for its intended target compared with other proteins on the array.

Description

Thrombomodulin (THBD) is a vascular membrane glycoprotein expressed predominantly on endothelial cells where it functions as an important regulator of coagulation and vascular homeostasis. The protein is localized to the luminal surface of vascular endothelial cells that line blood vessels throughout the body. Because of this highly consistent endothelial distribution, Thrombomodulin Antibody is widely used as an endothelial cell marker for immunohistochemistry studies that aim to visualize vascular endothelium in tissue sections. In histological specimens, staining with thrombomodulin antibody highlights endothelial cells lining arteries, veins, and capillaries, allowing investigators to clearly identify blood vessel endothelium and examine vascular structures across diverse organs.

Thrombomodulin antibody, also referred to as THBD antibody and endothelial thrombomodulin antibody in the literature, recognizes a transmembrane receptor that binds thrombin and regulates activation of the protein C anticoagulant pathway. This endothelial surface receptor alters thrombin function when bound, converting thrombin from a procoagulant enzyme into an activator of protein C. Through this mechanism thrombomodulin plays a protective role in the vascular endothelium by limiting coagulation signaling and inflammatory responses within endothelial cells. The strong localization of thrombomodulin to vascular endothelial cells makes this protein a well established endothelial cell marker for studying blood vessel biology and endothelial cell differentiation.

In immunohistochemistry experiments, thrombomodulin antibody staining typically produces membranous labeling of endothelial cells lining blood vessels in a wide variety of tissues. This endothelial staining pattern allows investigators to visualize vascular networks and evaluate endothelial cell distribution within tissue sections. Vascular endothelial staining may be observed in organs such as lung, kidney, liver, and gastrointestinal tract where extensive networks of blood vessels are present. Because endothelial cells form the inner lining of the entire vascular system, detection of

thrombomodulin by immunohistochemistry provides a reliable approach for identifying vascular endothelium and studying the organization of blood vessel structures within histological samples.

In tumor biology and pathology research, thrombomodulin antibody is frequently used to evaluate endothelial cells that form tumor-associated blood vessels. Many tumors contain prominent vascular networks that support tumor growth and metastasis, and immunohistochemistry detection of endothelial cell markers helps investigators analyze these vascular structures. Thrombomodulin staining therefore serves as a useful endothelial marker for examining tumor vasculature and vascular architecture within the tumor microenvironment. Although thrombomodulin expression can occasionally be detected in certain epithelial cell populations such as mesothelial cells, the most consistent staining pattern remains strong expression in vascular endothelial cells lining blood vessels.

Clone rTHBD/1591 is a recombinant mouse monoclonal antibody designed to recognize thrombomodulin expression in research applications. When used in immunohistochemistry experiments, Thrombomodulin Antibody supports studies focused on endothelial cell identification, visualization of vascular endothelium, and analysis of endothelial cell organization within normal tissues and tumor-associated vasculature.

Application Notes

The concentration stated for each application is a general starting point. Variations in protocols, secondaries and substrates may require the Thrombomodulin Antibody / Endothelial Cell Marker to be titered up or down for optimal performance.

1. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

Human recombinant partial protein corresponding to amino acids 69-194 was used as the immunogen for this recombinant Thrombomodulin antibody.

Storage

Store the recombinant Thrombomodulin antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

Thrombomodulin antibody, Endothelial thrombomodulin antibody, Thrombomodulin endothelial marker antibody, Thrombomodulin vascular marker antibody

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