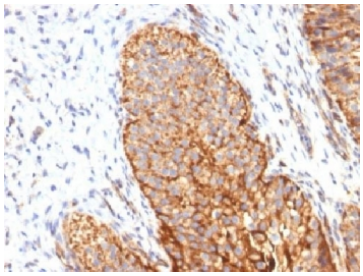
Thrombomodulin Antibody / Tumor Vascular Marker [clone THBD/1591] (V3407)

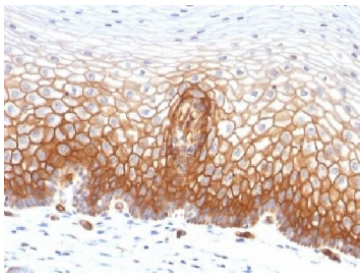
Catalog No.	Formulation	Size
V3407-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3407-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3407SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

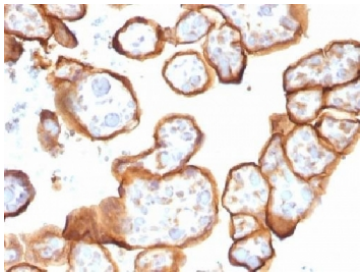
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	THBD/1591
Purity	Protein G affinity chromatography
Buffer	1X PBS, pH 7.4
UniProt	P07204
Localization	Cell surface, cytoplasmic
Applications	ELISA: 2-4ug/ml (order BSA/azide-free format) Western blot: 1-2ug/ml Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT
Limitations	This Thrombomodulin antibody is available for research use only.



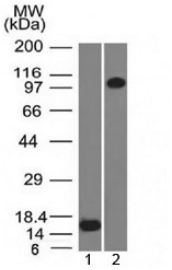
Thrombomodulin Antibody / Tumor Vascular Marker. Immunohistochemistry analysis of Thrombomodulin / THBD expression in human bladder carcinoma using clone THBD/1591. FFPE tumor tissue shows membranous HRP-DAB brown staining in tumor epithelial cells with additional staining of endothelial cells forming tumor-associated vascular structures, highlighting tumor vasculature 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.



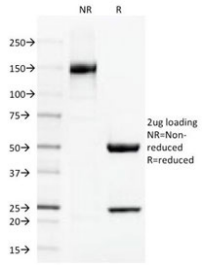
Thrombomodulin Antibody / Tumor Vascular Marker. Immunohistochemistry analysis of Thrombomodulin / THBD expression in human cervical carcinoma using clone THBD/1591. FFPE tumor tissue shows membranous HRP-DAB brown staining in tumor epithelial cells with additional labeling of endothelial cells lining tumor-associated blood vessels, highlighting tumor vasculature 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.



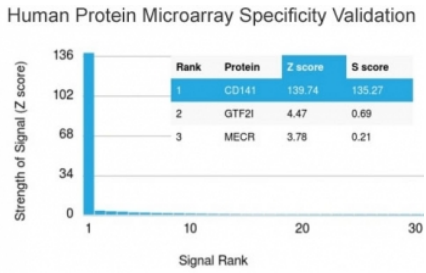
Thrombomodulin Antibody / Tumor Vascular Marker. Immunohistochemistry analysis of Thrombomodulin / THBD expression in human placenta using clone THBD/1591. FFPE placental tissue shows membranous HRP-DAB brown staining in trophoblastic cells with additional staining of endothelial cells lining placental blood vessels, highlighting vascular structures relevant to tumor vascular marker studies of endothelial biology and angiogenesis. 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.



Western blot testing of 1) recombinant partial protein and 2) human ThP1 lysate with Thrombomodulin antibody (clone THBD/1591). Expected molecular weight ~60/100 kDa (unmodified/glycosylated).



SDS-PAGE Analysis of Purified, BSA-Free Thrombomodulin Antibody (clone THBD/1591). Confirmation of Integrity and Purity of the Antibody.



Thrombomodulin Antibody / Tumor Vascular Marker. Specificity validation of clone THBD/1591 using a HuProt(TM) human protein microarray containing more than 19,000 full-length human proteins. The antibody demonstrates highly selective binding to Thrombomodulin / THBD (CD141), a protein widely studied as a tumor vascular marker associated with endothelial cells forming tumor blood vessels. The dominant signal for THBD with minimal background reactivity supports the strong target specificity of the THBD/1591 monoclonal antibody.
Z- and S-score interpretation: The Z-score represents the strength of the fluorescent signal produced when the antibody binds to a specific protein on the HuProt(TM) array and is expressed as the number of standard deviations above the mean signal intensity of all proteins on the array. Proteins are ranked according to 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 endothelial membrane glycoprotein expressed on endothelial cells that line blood vessels throughout the body. In cancer research, thrombomodulin is widely examined as a tumor vascular marker

because it is strongly expressed in endothelial cells that form tumor blood vessels. Thrombomodulin Antibody is therefore commonly used to visualize tumor vasculature and identify tumor-associated endothelial cells within malignant tissues. Detection of this tumor vascular marker allows investigators to examine the organization of tumor blood vessels and to study vascular structures that support tumor growth and tumor progression within the tumor microenvironment.

Thrombomodulin antibody, also referred to as THBD antibody and tumor vascular marker antibody in the literature, recognizes a transmembrane endothelial receptor that plays an important role in regulating thrombin activity and anticoagulant signaling in blood vessels. Because thrombomodulin is consistently expressed on endothelial cells forming the inner lining of blood vessels, immunohistochemical detection of thrombomodulin provides a reliable method for identifying tumor vasculature. In tumor tissues, this tumor vascular marker highlights endothelial cells that form vascular channels and blood vessels supplying oxygen and nutrients to malignant cells.

In immunohistochemistry experiments, thrombomodulin antibody staining typically reveals membranous labeling of endothelial cells lining tumor blood vessels as well as vascular structures in surrounding tissue. This staining pattern allows investigators to clearly visualize tumor-associated endothelial cells and evaluate the distribution of tumor vasculature within the tumor microenvironment. Because many cancers develop complex vascular networks through tumor angiogenesis, detection of tumor vascular markers such as thrombomodulin helps researchers analyze vascular density, vascular organization, and endothelial cell distribution within tumors.

Tumor angiogenesis plays a fundamental role in cancer progression because expanding tumors require new blood vessels to deliver oxygen and nutrients. Endothelial cells forming these tumor blood vessels create the vascular framework that supports tumor growth, invasion, and metastasis. As a tumor vascular marker, thrombomodulin enables visualization of these tumor-associated vascular structures and helps investigators study the vascular biology of tumors. Analysis of tumor vasculature using endothelial markers such as thrombomodulin is therefore widely used in research examining tumor angiogenesis and the tumor microenvironment.

Clone THBD/1591 is a mouse monoclonal antibody designed to recognize thrombomodulin expression in research applications. This clone has demonstrated strong specificity in human protein microarray validation experiments, where selective binding to the intended THBD target was observed among thousands of human proteins. When used in experimental studies, Thrombomodulin Antibody supports analysis of tumor vascular marker expression and enables visualization of tumor vasculature formed by endothelial cells within the tumor microenvironment.

Application Notes

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

Immunogen

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

Storage

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

Alternate Names

Thrombomodulin antibody, Tumor vascular marker antibody, Tumor endothelial marker antibody, Vascular thrombomodulin antibody, Tumor angiogenesis marker antibody

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