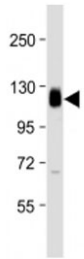
Thrombomodulin Antibody N-Terminus / THBD N-Terminal Domain Antibody (F54085)

Catalog No.	Formulation	Size
F54085-0.2ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.2 ml
F54085-0.05ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.05 ml

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity
UniProt	P07204
Applications	WB: 1:2000
Limitations	This Thrombomodulin antibody is available for research use only.



Thrombomodulin Antibody N-Terminus western blot testing at 1:2000 + human THP1 cell lysate. Expected molecular weight ~60/100 kDa (unmodified/glycosylated).

Description

Thrombomodulin (THBD), also known as CD141, is a type I transmembrane glycoprotein expressed predominantly on vascular endothelial cells where it functions as an essential regulator of the protein C anticoagulant pathway. The protein is encoded by the THBD gene on chromosome 20p11.2 and is widely studied in vascular biology, hemostasis, and endothelial cell signaling. Thrombomodulin Antibody N-Terminus targets the amino-terminal region of this membrane receptor and is commonly used in research examining thrombomodulin expression and endothelial surface receptor biology.

Structurally, thrombomodulin contains several functional domains including an N-terminal lectin-like domain, six epidermal growth factor-like repeats, a serine/threonine-rich region, a single-pass transmembrane segment, and a short cytoplasmic tail. The N-terminal region plays an important role in modulating inflammatory signaling and endothelial cell responses to vascular injury. Because the N-terminal domain participates in ligand interactions and structural stabilization of the extracellular region, antibodies recognizing this region provide a useful approach for detecting thrombomodulin expression at the cell surface and within endothelial membranes.

In vascular physiology, thrombomodulin acts as a high-affinity thrombin receptor on the endothelial surface. Binding of thrombin to thrombomodulin alters thrombin's enzymatic specificity, converting it from a procoagulant enzyme into an activator of protein C. Activated protein C subsequently degrades clotting factors Va and VIIIa, producing a strong anticoagulant effect that protects the vascular system from excessive thrombosis. This anticoagulant mechanism places thrombomodulin at the center of endothelial regulation of coagulation and vascular homeostasis.

Beyond its role in coagulation, thrombomodulin has also been implicated in inflammatory signaling, endothelial protection, and tissue injury responses. The lectin-like N-terminal domain has been reported to interact with inflammatory mediators and contribute to regulation of leukocyte adhesion and endothelial barrier function. Expression of thrombomodulin is therefore frequently examined in studies investigating vascular inflammation, endothelial activation, and tissue injury in cardiovascular and inflammatory diseases.

Thrombomodulin is primarily localized to the plasma membrane of vascular endothelial cells, where it forms part of the anticoagulant surface of blood vessels. Expression has also been reported in certain epithelial tissues and within specialized immune cell populations under specific biological conditions. Because of its prominent endothelial localization and its well-established role in regulating thrombin activity, detection of THBD expression provides an important tool for studying endothelial cell biology, vascular signaling pathways, and regulation of the protein C anticoagulant system.

Application Notes

The stated application concentrations are suggested starting points. Titration of the Thrombomodulin Antibody N-Terminus may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 92-126 from human THBD was used as the immunogen for the Thrombomodulin Antibody N-Terminus.

Storage

Aliquot the Thrombomodulin antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

THBD antibody, CD141 antibody, Thrombomodulin antibody, Thrombomodulin N-terminus antibody

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