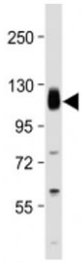
Thrombomodulin Antibody C-Terminus / THBD C-Terminal Domain Antibody (F54086)

Catalog No.	Formulation	Size
F54086-0.2ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.2 ml
F54086-0.05ML	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	Western Blot : 1:2000
Limitations	This Thrombomodulin antibody is available for research use only.



Thrombomodulin Antibody C-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 a key regulator of the protein C anticoagulant pathway. The THBD gene is located on chromosome 20p11.2 and encodes a membrane receptor that plays an essential role in maintaining vascular homeostasis by modulating thrombin activity at the endothelial surface. Thrombomodulin Antibody C-Terminus recognizes the carboxy-terminal region of this receptor and is used in research focused on endothelial cell biology, coagulation regulation, and membrane receptor signaling.

Thrombomodulin contains several structural domains that contribute to its biological activity. The extracellular portion includes a lectin-like domain followed by six epidermal growth factor-like repeats that participate in thrombin binding and activation of protein C. A serine/threonine-rich region connects these extracellular domains to a single-pass transmembrane segment. The C-terminal region of the protein includes the transmembrane domain and a short cytoplasmic tail that anchors the receptor in the plasma membrane and participates in intracellular signaling and membrane localization. Antibodies directed toward the C-terminal portion of thrombomodulin are useful for detecting membrane-associated receptor forms and for examining receptor expression in endothelial cells.

At the endothelial surface, thrombomodulin binds thrombin with high affinity and converts thrombin from a procoagulant protease into an anticoagulant enzyme that activates protein C. Activated protein C then degrades clotting factors Va and VIIIa, reducing thrombin generation and helping to maintain balanced coagulation within the vascular system. This mechanism places thrombomodulin at the center of endothelial control of blood coagulation and protection against pathological thrombosis.

In addition to its role in anticoagulation, thrombomodulin contributes to regulation of vascular inflammation and endothelial barrier stability. Studies have shown that thrombomodulin expression can influence inflammatory signaling pathways and cellular responses to vascular injury. Because of these functions, THBD expression is often examined in research investigating endothelial activation, vascular inflammation, and disorders affecting blood coagulation and vascular integrity.

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 observed in certain epithelial tissues and specialized immune cell populations depending on biological context. Detection of thrombomodulin expression therefore provides a valuable approach for studying endothelial physiology, thrombin signaling, and regulation of the protein C anticoagulant pathway in vascular and inflammatory research.

Application Notes

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

Immunogen

A portion of amino acids 537-571 from human THBD was used as the immunogen for the Thrombomodulin Antibody C-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 C-terminus antibody