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Thrombomodulin Recombinant Rabbit mAb

Catalog # AP100162

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	P15306
Other Accession	P15306
Reactivity	Mouse
Host	Rabbit
Clonality	Recombinant
Calculated MW	61868
Physical State	Liquid
Immunogen	A synthesized peptide derived from mouse Thrombomodulin
Epitope Specificity	300-550
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	10mM phosphate buffered saline(pH 7.4) with 150mM sodium chloride, 0.05% BSA, 0.02% Proclin300 and 50% glycerol.
SIMILARITY	Contains 1 C-type lectin domain. Contains 6 EGF-like domains.
Post-translational modifications	N-glycosylated. The iron and 2-oxoglutarate dependent 3-hydroxylation of aspartate and asparagine is (R) stereospecific within EGF domains.
DISEASE	Defects in THBD are the cause of thrombophilia due to thrombomodulin defect (THPH12) [MIM:614486]. A hemostatic disorder characterized by a tendency to thrombosis. Defects in THBD are a cause of susceptibility to hemolytic uremic syndrome atypical type 6 (AHUS6) [MIM:612926]. An atypical form of hemolytic uremic syndrome. It is a complex genetic disease characterized by microangiopathic hemolytic anemia, thrombocytopenia, renal failure and absence of episodes of enterocolitis and diarrhea. In contrast to typical hemolytic uremic syndrome, atypical forms have a poorer prognosis, with higher death rates and frequent progression to end-stage renal disease. Note=Susceptibility to the development of atypical hemolytic uremic syndrome can be conferred by mutations in various components of or regulatory factors in the complement cascade system. Other genes may play a role in modifying the phenotype.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Thrombomodulin is a specific endothelial cell receptor that forms a 1:1 stoichiometric complex with thrombin. This complex is responsible for the conversion of protein C to the activated protein C (protein Ca). Once evolved, protein Ca scissions the activated cofactors of the coagulation mechanism, factor Va and factor VIIIa, and thereby reduces the amount of thrombin generated.

Additional Information

Gene ID	21824

Other Names	AHUS6; BDCA-3; BDCA3; CD141; THPH12; THRM; TM; TRBM_HUMAN; THBD; Fetomodulin; TRBM_MOUSE; thrombomodulin
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,Flow-Cyt=1:50-100,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	Thbd
Function	Endothelial cell receptor that plays a critical role in regulating several physiological processes including hemostasis, coagulation, fibrinolysis, inflammation, and angiogenesis. 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. 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 (By similarity). Plays critical protective roles in changing the cleavage specificity of protease-activated receptor 1/PAR1, inhibiting endothelial cell permeability and inflammation (PubMed:38174561). 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 (By similarity).
Cellular Location	Membrane {ECO:0000250|UniProtKB:P07204}; Single- pass type I membrane protein {ECO:0000250|UniProtKB:P07204}
Tissue Location	Endothelial cells are unique in synthesizing thrombomodulin

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