abcam

ab252145

Alexa Fluor® 488 Anti-Thrombomodulin antibody [EPR18217]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 488
Excitation/Emission	Ex: 495nm, Em: 519nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR18217
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Mouse
Dilution info	1/100
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information 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).

Storage

Shipped at conditions Blue Ice

Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle, Stable for 12 months at -20°C, Store in the dark

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

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Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Thrombomodulin also known as CD141 is a glycoprotein with a mass of approximately 74 kDa. It is an integral membrane protein expressed on the surface of endothelial cells. Thrombomodulin acts mechanically by binding

	thrombin an enzyme involved in blood coagulation to modulate its activity. This binding substantially alters thrombin's substrate specificity turning it into an anticoagulant enzyme that activates protein C instead of a procoagulant enzyme.
Biological function summary	Thrombomodulin regulates blood coagulation and maintains hemostatic balance. It forms a complex with thrombin on endothelial cells facilitating the conversion of protein C to activated protein C (APC). Activated protein C plays a pivotal role in controlling blood clot formation by proteolytically inactivating Factors Va and VIIIa. This function is important for preventing excessive clotting while ensuring proper wound healing processes.
Pathways	Thrombomodulin works chiefly within the anticoagulation pathway. It interacts directly with the thrombin-protein C pathway to achieve the activation of protein C. Additionally it interfaces with other pathways sharing mutual components such as endothelial cell proliferation and inflammation modulation. Related proteins include thrombin and protein C along with protein S which serves as a cofactor for APC's anticoagulant actions.
Associated diseases and disorders	Thrombomodulin dysregulation can lead to thrombosis and vascular inflammation. A deficiency or altered expression of thrombomodulin has been linked to thromboembolic disorders and atherosclerosis. In these conditions improper activation of protein C in the presence of decreased thrombomodulin function can exacerbate clot formation. Monitoring the levels of proteins like thrombin and protein C within these diseases can provide insights into endothelial dysfunction and potential therapeutic approaches.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

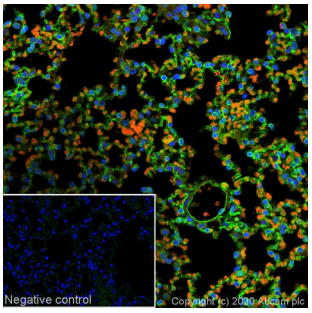
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

1 product image



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Alexa Fluor® 488 Anti-Thrombomodulin antibody [EPR18217] (ab252145)

Thrombomodulin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Thrombomodulin antibody

IHC image of Thrombomodulin staining in a section of formalin-fixed paraffin-embedded normal mouse lung.
The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6) in a Biocare Medical NxGen pressure cooker using retrieval settings of 110°C for 20 minutes. Non-specific protein-protein interactions were then blocked in TBS containing 0.025% (v/v) Triton X-100, 0.3M (w/v) glycine and 1% (w/v) BSA for 1h at room temperature. The section was then incubated overnight at +4°C in TBS containing 0.025% (v/v) Triton X-100 and 1% (w/v) BSA with ab252145 at 1/100 dilution (shown in green). Nuclear DNA was labelled with DAPI (shown in blue). The section was then mounted using Fluoromount®.

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

For other IHC staining systems (automated and non-automated), customers should optimize variable parameters such as antigen retrieval conditions, antibody concentrations and incubation times.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.