abcam

Product datasheet

Anti-Thrombomodulin antibody [EPR4051] - BSA and Azide free ab271880

Recombinant RabMAb

2 Abreviews 12 Images

Overview

Product name	Anti-Thrombomodulin antibody [EPR4051] - BSA and Azide free
Description	Rabbit monoclonal [EPR4051] to Thrombomodulin - BSA and Azide free
Host species	Rabbit
Tested applications	**Suitable for:** Flow Cyt (Intra), WB, IP, IHC-P, ICC/IF
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	THP-1, Human placenta and Human heart lysates; Human placenta tissue, Human squamous cervical carcinoma tissue; A431 cells
General notes	ab271880 is the carrier-free version of **ab109189**. Our **carrier-free** antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications. Use our **conjugation kits** for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold. This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc. 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 production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR4051
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab271880 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

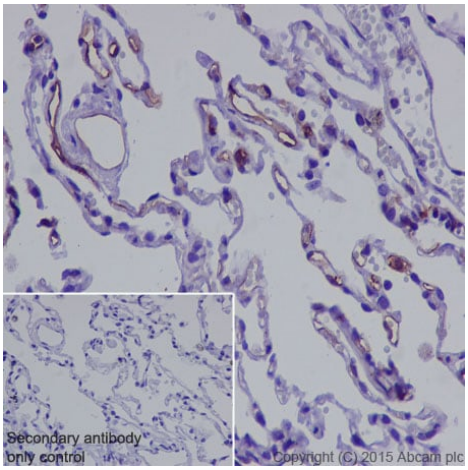
Application	Abreviews	Notes
Flow Cyt (Intra)		Use at an assay dependent concentration. **ab172730** - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
WB		Use at an assay dependent concentration. Predicted molecular weight: 60 kDa.
IP		Use at an assay dependent concentration.
IHC-P	★★★★☆ (2)	Use at an assay dependent concentration. See **IHC antigen retrieval protocols**.
ICC/IF		Use at an assay dependent concentration.

Target

Function	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.
Tissue specificity	Endothelial cells are unique in synthesizing thrombomodulin.
Involvement in disease	Defects in THBD are the cause of thrombophilia due to thrombomodulin defect (THR-THBD) [MIM:188040]. 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.
Sequence similarities	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.
Cellular localization	Membrane.

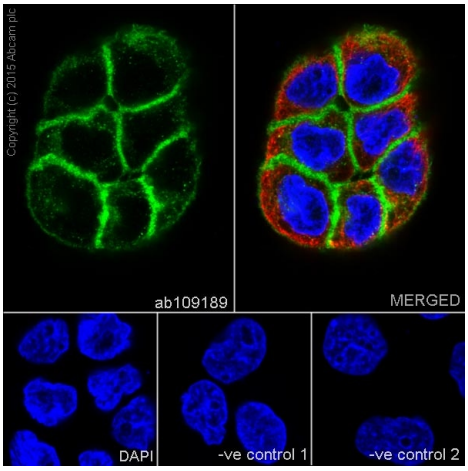
Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Thrombomodulin antibody [EPR4051] - BSA and Azide free (ab271880)

Immunohistochemical staining of paraffin embedded human lung with purified **ab109189** at a working dilution of 1/1000. The secondary antibody used is HRP goat anti-rabbit IgG H&L (**ab97051**) at 1/500. The sample is counter-stained with hematoxylin. Antigen retrieval was perfomed using Tris-EDTA buffer, pH 9.0. PBS was used instead of the primary antibody as the negative control, and is shown in the inset.

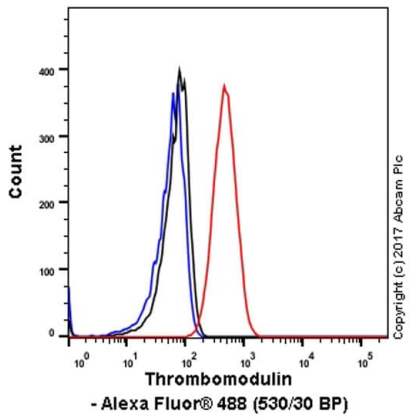
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab109189**).



Immunocytochemistry/ Immunofluorescence - Anti-Thrombomodulin antibody [EPR4051] - BSA and Azide free (ab271880)

Immunofluorescence staining of A431 cells with purified **ab109189** at a working dilution of 1/300, counter-stained with DAPI. The secondary antibody was Alexa Fluor® 488 goat anti-rabbit (**ab150077**), used at a dilution of 1/1000. **ab7291**, a mouse anti-tubulin antibody (1/1000), was used to stain tubulin along with **ab150120** (Alexa Fluor® 594 goat anti-mouse, 1/1000), shown in the top right hand panel. The cells were fixed in 4% PFA and permeabilized using 0.1% Triton X 100. The negative controls are shown in bottom middle and right hand panels - for negative control 1, purified **ab109189** was used at a dilution of 1/500 followed by an Alexa Fluor® 594 goat anti-mouse antibody (**ab150120**) at a dilution of 1/500. For negative control 2, **ab7291** (mouse anti-tubulin) was used at a dilution of 1/500 followed by an Alexa Fluor® 488 goat anti-rabbit antibody (**ab150077**) at a dilution of 1/400.

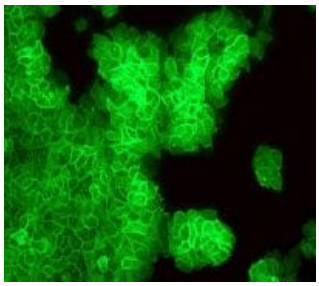
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab109189**).



Flow Cytometry (Intracellular) - Anti-Thrombomodulin antibody [EPR4051] - BSA and Azide free (ab271880)

Intracellular Flow Cytometry analysis of A431 (human epidermoid carcinoma) cells labeling Thrombomodulin with purified **ab109189** at 1/150 (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. A Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (**ab150077**) (1/2000 dilution) was used as the secondary antibody. Rabbit IgG, monoclonal [EPR25A] - Isotype Control (**ab172730**) (Black) was used as the isotype control, cells without incubation with primary antibody and secondary antibody (Blue) were used as the unlabeled control.

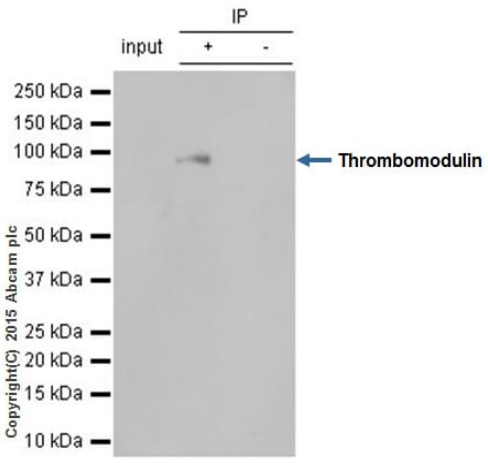
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab109189**).



Immunocytochemistry/ Immunofluorescence - Anti-Thrombomodulin antibody [EPR4051] - BSA and Azide free (ab271880)

Unpurified **ab109189**, at 1/100 dilution, staining Thombomodulin in A431 cells by Immunofluorescence.

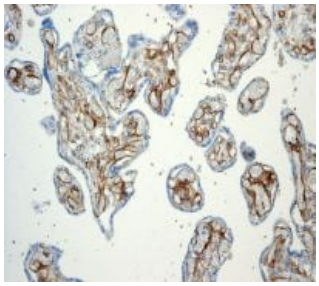
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab109189**).



Immunoprecipitation - Anti-Thrombomodulin antibody [EPR4051] - BSA and Azide free (ab271880)

ab109189 (purified) at 1/90 immunoprecipitating thrombomodulin in 10 µg human placenta whole cell lysate (Lanes 1 and 2, observed at 100 kDa). Lane 3 - PBS. For western blotting, VeriBlot for IP Detection Reagent (HRP) (**ab131366**), was used for detection at 1/10,000 dilution. Blocking buffer and concentration: 5% NFDM/TBST Dilution buffer and concentration: 5% NFDM/TBST

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab109189**).

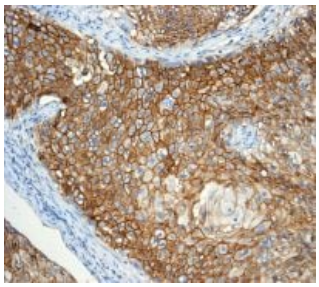


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Thrombomodulin antibody [EPR4051] - BSA and Azide free (ab271880)

Unpurified **ab109189**, at 1/100 dilution, staining Thrombomodulin in Human placenta tissue by Immunohistochemistry.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab109189**).

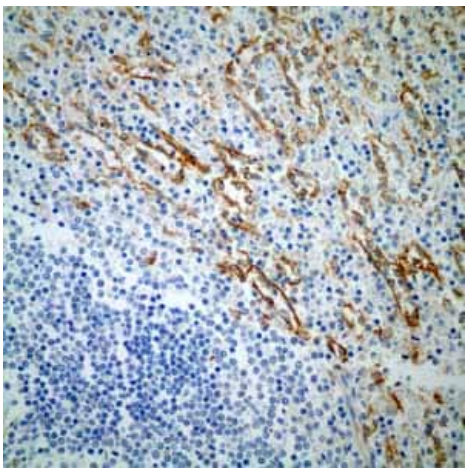


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Thrombomodulin antibody [EPR4051] - BSA and Azide free (ab271880)

Unpurified **ab109189**, at 1/100 dilution, staining Thrombomodulin in Human squamous cervical carcinoma tissue by Immunohistochemistry.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab109189**).

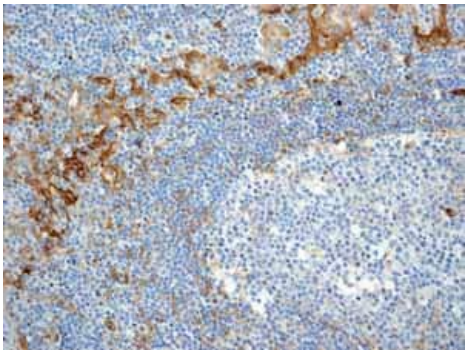


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Thrombomodulin antibody [EPR4051] - BSA and Azide free (ab271880)

Immunohistochemical analysis of paraffin embedded normal Human spleen tissue using unpurified **ab109189** showing +ve staining.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab109189**).

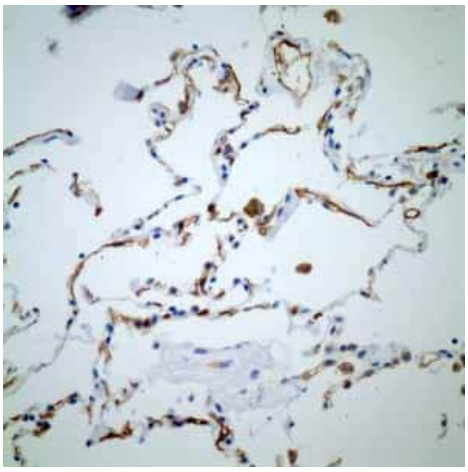


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Thrombomodulin antibody [EPR4051] - BSA and Azide free (ab271880)

Immunohistochemical analysis of paraffin embedded normal Human tonsil tissue using unpurified **ab109189** showing +ve staining.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab109189**).

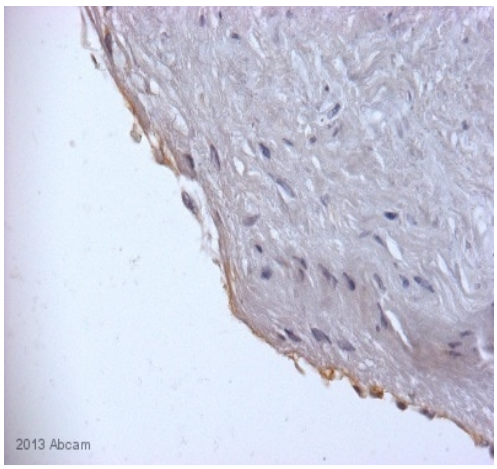


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Thrombomodulin antibody [EPR4051] - BSA and Azide free (ab271880)

Immunohistochemical analysis of paraffin embedded normal Human lung tissue using unpurified **ab109189** showing +ve staining.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

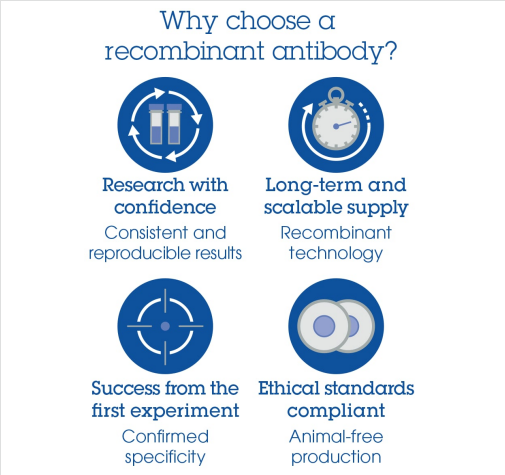
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab109189**).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Thrombomodulin antibody [EPR4051] - BSA and Azide free (ab271880)

Unpurified **ab109189** staining Thrombomodulin in Human artery tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 20% serum for 60 minutes at 21°C; antigen retrieval was by heat mediation in a citrate buffer. Samples were incubated with primary antibody (1/200) for 16 hours at 4°C. A Biotin-conjugated Goatanti-rabbit polyclonal (1/200) was used as the secondary antibody.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab109189**).



Anti-Thrombomodulin antibody [EPR4051] - BSA and Azide free (ab271880)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.com/abpromise** or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors