Mouse Thrombomodulin/BDCA-3 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF3894

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Thrombomodulin/BDCA-3 in direct ELISAs and Western blots. In direct ELISAs and Western blots, less than 2% cross-reactivity with recombinant human Thrombomodulin is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Thrombomodulin/BDCA-3 Leu17-Ser517 Accession # P15306
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

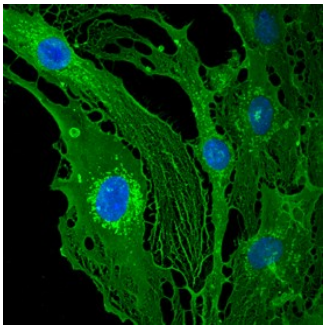
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Mouse Thrombomodulin/BDCA-3 (Catalog # 3894-PA)
Flow Cytometry	2.5 µg/10^6 cells	bEnd.3 mouse endothelioma cell line
Immunocytochemistry	5-15 µg/mL	See Below
Immunohistochemistry	1-15 µg/mL	See Below
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Mouse Thrombomodulin/BDCA-3 (Catalog # 3894-PA), see our available Western blot detection antibodies
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

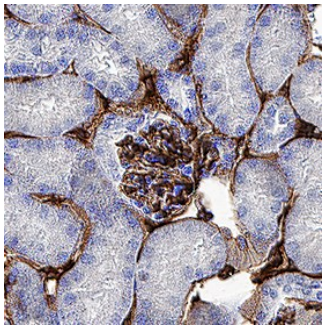
DATA

Immunocytochemistry



Thrombomodulin/BDCA-3 in bEnd.3 Mouse Cell Line. Thrombomodulin/BDCA-3 was detected in immersion fixed bEnd.3 mouse endothelioma cell line using Goat Anti-Mouse Thrombomodulin/BDCA-3 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3894) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 493-conjugated Anti-Goat IgG Secondary Antibody (green; Catalog # Catalog # NL003) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

Immunohistochemistry



Thrombomodulin/BDCA-3 in Human Kidney Tissue. Thrombomodulin/BDCA-3 was detected in immersion fixed paraffin-embedded sections of human kidney tissue using Goat Anti-Mouse Thrombomodulin/BDCA-3 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3894) at 1 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Goat IgG VisUCyte™ HRP Polymer Antibody (Catalog # Catalog # VC004). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # Catalog # CTS013). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to cell surface on endothelial cells. View our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449

Mouse Thrombomodulin/BDCA-3 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF3894

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Encoded by the THBD gene, Thrombomodulin is also known as CD141 antigen. The deduced amino acid sequence of mouse THBD predicts a signal peptide (aa 1 to 16) and a mature chain (aa 17 to 577) that consists of the following domains: C-type lectin (aa 31 to 167), EGF-like (aa 240 to 280, aa 283 to 323, aa 324 to 362, aa 364 to 404, aa 405 to 439, and aa 440 to 480), transmembrane (aa 518 to 541) and cytoplasmic (aa 542 to 577) (1). The R&D Systems recombinant mouse THBD consists of aa 17 to 517, corresponding to the extracellular portion of the type I membrane protein.

Predominantly synthesized by vascular endothelial cells, THBD inhibits coagulation and fibrinolysis (2-4). It functions as a cell surface receptor and an essential cofactor for active thrombin, which in turn activates protein C and thrombin-activatable fibrinolysis inhibitor (TAFI), also known as carboxypeptidase B2 (CPB2). Activated protein C (APC), facilitated by protein S, degrades coagulation factors Va and VIIIa, which are required for thrombin activation. Activated CPB2 cleaves basic C-terminal amino acid residues of its substrates, including fibrin, preventing the conversion of plasminogen to plasmin. In addition, THBD gene polymorphisims are associated with human disease and THBD plays a role in thrombosis, stroke, arteriosclerosis, and cancer (5). For example, increased serum levels of THBD, due to protease cleavage, have been associated with smoking, cardiac surgery, atherosclerosis, liver cirrhosis, diabetes mellitus, cerebral and myocardial infarction, and multiple sclerosis (6).

References:

1. Dittman, W.A. and P.W. Majerus (1989) Nucleic Acids Res. **17**:802.
2. Van de Wouwer, M. *et al.* (2004) Arterioscler. Thromb. Vasc. **24**:1374.
3. Wu, K.K. *et al.* (2000) Ann Med. **32**:73.
4. Li, Y.H. *et al.* (2006) Cardiovasc. Hematol. Agents Med. Chem. **4**:183.
5. Weiler, H. and B.H. Isermann (2003) J. Thromb. Haemost. **1**:1515.
6. Califano, F. *et al.* (2000) Eur. Rev. Med. Pharmacol. Sci. **4**:59.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 **Canada** TEL 855 668 8722 **China** TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449