Mouse Thrombomodulin/BDCA-3 Alexa Fluor® 405-conjugated Antibody

Monoclonal Rat IgG_{2B} Clone # 461714

Catalog Number: FAB3894V

100 µg

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Thrombomodulin/BDCA-3 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human (rh) Thrombomodulin is observed.
Source	Monoclonal Rat IgG_{2B} Clone # 461714
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Thrombomodulin/BDCA-3 Leu17-Ser517 Accession # P15306
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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
Flow Cytometry	0.25-1 µg/10^6 cells	bEnd.3 mouse endothelioma cell line

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Protect from light. Do not freeze.** ● 12 months from date of receipt, 2 to 8 °C as supplied.

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 rmTHBD 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.

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