

TROMBOMODULIN

1:50

SEZ VL CE



**Monoclonal
Mouse Anti-
Thrombomodulin
Clone: 1009**

Synonyms: Fetomodulin (FM),¹ endothelial anticoagulant protein,¹ glycoprotein P112²
Immunogen: Truncated recombinant thrombomodulin comprised of the six repeated EGF domains, produced in insect cells
Isotype: IgG₁, kappa

Code M0617

Mouse IgG concentration mg/L: See label on vial.

Intended use For In Vitro Diagnostic Use.

Refer to the "General Instructions for Immunohistochemical Staining" or the Detection System "Instructions" of IHC procedures for: (1) Principle of Procedure, (2) Materials Required, Not Supplied, (3) Storage, (4) Specimen Preparation, (5) Staining Procedure, (6) Quality Control, (7) Troubleshooting, (8) Interpretation of Staining, (9) General Limitations.

Summary and explanation

Introduction

Thrombomodulin (TM) was recently reviewed and described to be a trans-membrane glycoprotein of MW 75 kD which contains six repeated domains homologous with epidermal growth factor (EGF) and an amino terminal domain homologous to lectin-like proteins.¹ Through its accelerated activation of protein C (which in turn acts as an anticoagulant by binding protein S and thrombin), synthesis of TM is one of several mechanisms important in maintaining thrombo-resistance and thus reducing clot formation on the surface of the endothelial cells. TM expression is up-regulated by agents which increase cAMP and down-regulated by interleukin I, TNF and certain endotoxins.

Specificity

TM 1009 binds with EGF domains 4-6, the smallest region shown to still bind thrombin, and this binding can interfere with the binding of thrombomodulin and thrombin.

Reagent provided

TM 1009 is a mouse monoclonal antibody supplied in liquid form as tissue culture supernatant (containing fetal bovine serum) dialyzed against 0.05 mol/L Tris-HCl, pH 7.2, 0.015 mol/L sodium azide.

TM 1009 may be used at a dilution of 1:50 in the LSAB method determined on formalin-fixed, paraffin-embedded tissue. These are guidelines only; optimal dilutions should be determined by the individual laboratory.

Materials required, but not supplied

Refer to the "General Instructions for Immunohistochemical Staining" and/or the Detection System Instructions."

Precautions

1. For professional users.
2. This product contains sodium azide (NaN₃), a chemical highly toxic in pure form. At product concentrations, though not classified as hazardous, build-ups of NaN₃ may react with lead and copper plumbing to form highly explosive metal azides. Upon disposal, flush with large volumes of water to prevent azide build-up in plumbing.⁴
3. Minimize microbial contamination of reagents or increase in nonspecific staining may occur.
4. As with any product derived from biological sources, proper handling procedures should be used.
5. Safety data sheet available for professional users on request.

Storage

Store at 2-8°C.

Specimen preparation

Paraffin Sections

TM 1009 can be used on formalin-fixed, paraffin-embedded tissue sections. Pretreatment of tissue with proteolytic enzymes is not required.

Cryostat Sections and Cell Smears

TM 1009 can also be used to label cryostat sections or cell smears.

Staining procedure

Follow the recommended procedure for the detection system selected.

Staining interpretation

The cellular staining pattern for anti-thrombomodulin is membranous and/or cytoplasmic.

Performance characteristics

Normal Cells

The normal distribution of TM includes the lining of blood and lymphatic vessels, mesothelial cells and some macrophages of the lung, meningeal lining cells, synovial cells, syncytiotrophoblasts, megakaryocytes and platelets.¹ The lung contains more TM than many other highly vascularized organs such as kidney and liver.² TM was also found to be present in a subset of cells in the islets of the pancreas and in peripheral nerves.










Tumor Cells

Immunohistochemical (IHC) staining of formalin-fixed tissue for TM has been used for the study of a variety of vascular tumors, meningiomas and choriocarcinomas.¹

In an effort to facilitate the differentiation of mesothelioma from pulmonary adenocarcinoma, TM expression was compared with that of CEA and Leu-M1 and found to stain all of 31 mesotheliomas but only four of 48 adenocarcinomas.³ Whereas all adenocarcinomas stained strongly for CEA and Leu-M1, only one mesothelioma showed weak reactivity for these markers.

References

1. Fink L, et al. Thrombomodulin activity and localization. Intl J Develop Biol 1993; 37:221
2. Ford VA, et al. Thrombomodulin is preferentially expressed in BALB/c lung microvessels. J Biol Chem 1992; 267:5446
3. Collins CL, et al. Thrombomodulin expression in malignant pleural mesothelioma and pulmonary adenocarcinoma. Amer J Pathol 1992; 141(4):827
4. Department of Health, Education and Welfare, National Institute for Occupational Safety and Health, Rockville, MD. "Procedures for the decontamination of plumbing systems containing copper and/or lead azides." DHHS (NIOSH) Publ. No. 78-127, Current 13. August 16, 1976

 Catalog / Code Number	 Temperature Limitations	 In Vitro Diagnostic Medical Device
 Manufacturer	 Batch Code	 Contains Sufficient for ≤ 2 Tests
 Use By	 Consult Instructions for Use	 Authorized Representative in the European Community


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