Thrombomodulin (EP175)

Rabbit anti-human Thrombomodulin Monoclonal Antibody (Clone EP175)

REFERENCES AND PRESENTATIONS[1]

- **ready-to-use (manual or LabVision AutoStainer)**
  MAD-000660QD–3
  MAD-000660QD–7
  MAD-000660QD–12
- **Ready-to-use (MD-Stainer)**[2]
  MAD-000660QD-3/V
  MAD-000660QD/V
- **concentrated**
  MAD-000660Q - 1:50 recommended dilution

COMPOSITION
Anti-human Thrombomodulin rabbit monoclonal antibody purified from serum and prepared in 10mM PBS, pH 7.4, with 0.2% BSA and 0.09% sodium azide
INTENDED USE IVD: Immunohistochemistry (IHC) on paraffin embedded tissues. Not tested on frozen tissues or Western-Blotting
CLONE: EP175[3]
Ig ISOTYPE: Rabbit IgG
IMMUNOGEN: A synthetic peptide corresponding to residues at the C-terminus of human thrombomodulin protein.
SPECIES REACTIVITY: In vitro diagnostics in humans. Not tested in other species
DESCRIPTION AND APPLICATIONS: Thrombomodulin (TM) is a transmembrane glycoprotein of 75 kDa molecular mass with six repeated domains homologous to the epidermal growth factor and a terminal domain homologous to the lectin-like proteins.
Thrombomodulin activate anticoagulant proteins derived from vitamin K synthesized in the liver (proteins C and S) which bind to thrombin in order to prevent thrombus formation on the endothelial surface of the vessel. TM expression is upregulated by agents that increase cAMP and downregulated through the interleukin I, tumor necrosis factor (TNF) and some endotoxins. The TM, binds to domains 4 and 6 of the epidermal growth factor, the smallest region which binds to thrombin. This binding may interfere with the binding between thrombin and thrombomodulin.
This antibody produced immunostaining in a variety of normal cells: endothelial lining blood vessels and lymphatics cells, mesothelial cells, normal urothelium, some pulmonary alveolar macrophages, coating meningeal cells, synoviocytes, syncytiotrophoblasts, megakaryocytes and platelets. Thrombomodulin is also found in some cell subtype of pancreatic islets and in peripheral nerves. It is diagnostically useful in neoplastic cells of vascular tumors, urothelial carcinomas, meningiomas, adenomatoid tumor, choriocarcinoma and pleural tumors. TM can be used for differential diagnosis between mesothelioma (positive) and lung adenocarcinoma (consistently negative). Weak expression of TM was demonstrated in two thirds of the cases examined, while a strong TM staining was revealed in one third of colon cancers.

IHC POSITIVE CONTROL: Normal urothelium
VISUALIZATION: Cell membrane and cytoplasm

IHC RECOMMENDED PROCEDURE:
- 4µm thick section should be taken on charged slides; dry overnight at 60ºC
- Deparaffinise, rehydrate and HIER (heat induced epitope retrieval) – boil tissue in the Pt Module using Vitro S.A EDTA buffer pH8[4] for 20 min at 95ºC. Upon completion rinse with 3-5 changes of distilled or deionised water followed by cooling at RT for 20 min
- Endogenous peroxidase block - Blocking for 10 minutes at room temperature using peroxidase solution (ref. MAD-021540Q-125)
- Primary antibody: incubate for 10 minutes [The antibody dilution (when concentrated) and protocol may vary depending on the specimen preparation and specific application. Optimal conditions should be determined by the individual laboratory]

[1] These references are for presentation in vials of Low Density Polyethylene (LDPE) dropper. In case the products are used in automated stainers, a special reference is assigned as follows:
- / L: Cylindrical screw-cap vials (QD-3 / L, QD-7 / L, QD-12 / L).
- / N: Polygonal screw-cap vials (QD-3 / N, QD-7 / N, QD-12 / N).
For different presentations (references / volumes) please contact the supplier.
2 For Technical specifications for MD-Stainer, please contact your distributor.
[3] Thrombomodulin bearing EP Clone 175 is manufactured using Epitomics's RabMAb® technology under U.S. Patent Nos. 5,675,063 and 7,402,409

[4] Ref: MAD-004072R/D

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- For detection use Master Polymer Plus Detection System (HRP) (DAB included; ref. MAD-000237QK)
- Counterstaining with haematoxylin and final mounting of the slide

STORAGE AND STABILITY: Stored at 2-8ºC. Do not freeze. Once the packaging has been opened it can be stored until the expiration date of the reagent indicated on the label. If the reagent has been stored under other conditions to those indicated in this document, the user must first check its correct performance taking into account the product warranty is no longer valid.

WARNINGS AND PRECAUTIONS:

1. Avoid contact of reagents with eyes and mucous membranes. If reagents come into contact with sensitive areas, wash with copious amounts of water.
2. This product is harmful if swallowed.
3. Consult local or state authorities with regard to recommended method of disposal.
4. Avoid microbial contamination of reagents.

SAFETY RECOMMENDATIONS

This product is intended for laboratory professional use only. The product is NOT intended to be used as a drug or for domestic purposes. The current version of the Safety Data Sheet for this product can be downloaded by searching the reference number at www.vitro.bio or can be requested at regulatory@vitro.bio.

BIBLIOGRAPHY

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2. Collins CL, Ordonez NG, Schaefer R, Cook CD, Xie SS, Granger J, Hsu PL, Fink L, Hsu SM. Thrombomodulin expression in malignant pleural mesothelioma and pulmonary adenocarcinoma. Am J Pathol; 141(4): 827-833. 1992.
3. Ordóñez NG. The immunohistochemical diagnosis of mesothelioma: a comparative study of epithelioid mesothelioma and lungadenocarcinoma. Am J Surg Pathol; 27(8): 1031-1051. 2003.
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5. Minato H, Nojima T, Kurose N, Kinoshita E. Adenomatoid tumor of the pleura. Pathol Int; 59(8): 567-571. 2009.
6. Sierko E, Wojtukiewicz MZ, Zawadzki R, Zimnoch L, Kisiel W. Expression of protein C (PC), protein S (PS) and thrombomodulin (TM) in human colorectal cancer. Thromb Res; 125(3): e71-75. 2010.

LABEL AND BOX SYMBOLS

Explanation of the symbols of the product label and box:

	Expiration date
	Temperature limit
	Manufacturer
	Sufficient content for <n> assays
REF	Catalog number
LOT	Lot code
	Refer to the instructions of use
IVD	Medical product for *in vitro* diagnosis.
e-SDS	Material safety data sheet

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CE IVD