

CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	Thrombomodulin, Human, clone RTM98		
Catalog number	HM2147-100UG		
Lot number	-	Expiry date	-
Volume	1 ml	Amount	100 µg
Formulation	0.2 µm filtered in PBS+0.1%BSA+0.02%Na ₃	Concentration	100 µg/ml
Host Species	Rat IgG2a	Conjugate	None
Endotoxin	N.A.	Purification	Protein G
Storage	4°C		

Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #								
Yes				•				•
No					•			
N.D.	•	•	•			•	•	

N.D.= Not Determined; IHC = Immuno histochemistry; F = Frozen sections; P = Paraffin sections; IF = Immuno Fluorescence; FC = Flow Cytometry; FS = Functional Studies; IA = Immuno Assays; IP = Immuno Precipitation; W = Western blot

Dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:10.

- FS: Antibody RTM98 is not useful for inhibition of biological activity.

General Information

Description Monoclonal antibody RTM98 recognizes thrombomodulin (a C-type lectin also known as CD141), a complex molecule located on the endothelium and a key feature in the protein C pathway. The protein C anticoagulant pathway serves as a major system for controlling coagulation and limiting inflammatory responses, and potentially decreasing endothelial cell apoptosis in response to inflammatory cytokines and ischemia. The essential components of the pathway involve thrombin, thrombomodulin, the endothelial cell protein C receptor (EPCR), protein C and protein S. Thrombomodulin binds thrombin, directly inhibiting its clotting and cell activation potential while at the same time augmenting protein C. The endothelial cell protein C receptor (EPCR) augments protein C activation by the thrombin-TM complex more than 10-fold. TM also accelerates thrombin activation of a plasma procarboxypeptidase B, named thrombin activatable fibrinolysis inhibitor or TAFI resulting in slowing clot lysis. The inhibited thrombin rapidly dissociates from thrombomodulin, regenerating the anticoagulant surface. Thrombomodulin also has direct anti-inflammatory activity, minimizing cytokine formation in the endothelium and decreasing leukocyte-endothelial cell adhesion. Thrombomodulin inhibits leukocyte binding to activated endothelium. TM has been detected in a variety of cells and tissues in adults and during development, including astrocytes in the brain, keratinocytes, endothelial cells, mesothelial cells of the peritoneum, and circulating neutrophils, monocytes, and platelets. During fetal development, TM plays a central role in controlling the growth and survival of trophoblast cells in the placenta, a function essential for the maintenance of pregnancy. Thrombin binding to thrombomodulin involves anion binding exosite 1 on thrombin and epidermal growth factor (EGF) domains 4 to 6 on thrombomodulin. The monoclonal antibody RTM98 reacts with the EGF6 domain.

Aliases CD141

- References**
1. Domotor, E et al; Activated protein C alters cytosolic calcium flux in human brain endothelium via binding to endothelial protein C receptor and activation of protease activated receptor-1. *Blood* 2003, *101*: 4797
 2. Sturm, D et al; Expression and function of the endothelial protein C receptor in human neutrophils. *Blood* 2003, *102*: 1499
 3. Esmon, C. et al; The protein C pathway. *Chest* 2003, *124*: 26S
 4. Wouwer, M van de et al; Novel functions of thrombomodulin in inflammation. *Crit Care Med* 2004, *5*: 254.

Storage&stability Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least one year.

Precautions

For research use only. Not for use in or on humans or animals or for diagnostics. It is the responsibility of the user to comply with all local/state and federal rules in the use of this product. Hycult Biotech is not responsible for any patent infringements that might result from the use or derivation of this product.

We hereby certify that the above-stated information is correct and that this product has been successfully tested by the Quality Control Department. This product was released for sale according to the existing specifications. This document has been produced electronically and is valid without a signature.

Approved by Manager of QC
Brenda Teunissen

Date
02/12/2019

Do you have any questions or comments regarding this product? Please contact us via support@hycultbiotech.com.