

Active Native Rabbit Lung Thrombomodulin

Cat. No. THBD-306R **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Species Rabbit

Source Endothelial Cell Membrane

Description

Thrombomodulin (TM) is an integral membrane glycoprotein expressed on the surface of endothelial cells. Its discovery by Esmon and Owen has focused attention on the importance of the protein C anticoagulant pathway. TM serves as a cofactor for protein C activation by forming a 1:1 stoichiometric complex with thrombin ($K_d=10^{-10}M$), which accelerates the rate of protein C activation by 1000-fold relative to the rate with thrombin alone. In addition to facilitating protein C activation, the binding of thrombin to TM drastically alters the procoagulant activity of thrombin. When bound to TM, thrombin no longer clots fibrinogen, activates factor V, inactivates protein S or triggers platelet aggregation. TM is a single chain protein composed of 5 distinct domains. The domain structure of TM is similar to the low density lipoprotein (LDL) receptor. A short cytoplasmic domain containing a free cysteine is located at the COOH-terminal end and is joined by a membrane spanning region to an O-glycosylation rich domain. The latter is followed by an epidermal growth factor (EGF) homology region and the NH₂-terminal hydrophobic domain. The EGF homology region contains 6 EGF-like domains and contains the binding sites for both thrombin and protein C.

Form 20 mM Tris, 150 mM NaCl, 0.05% PDOC, pH 7.4

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Bio-activity	Protein C activation assay
Molecular Mass	74000
Purity	>95% by SDS-PAGE. NOT tissue/cell culture grade. Not tested for endotoxin.
Characteristic	Extinction coefficient:8.8, Isoelectric point:2.5, Structure:Single chain, NH2-terminal hydrophobic domain, six EGF domains, one O-glycosylation rich domain, one transmembrane domain, COOH-terminal cytoplasmic domain
Storage	-80°C
GENE INFORMATION	
Gene Name	THBD thrombomodulin [<i>Oryctolagus cuniculus</i>]
Official Symbol	THBD
Synonyms	thrombomodulin
Gene ID	100008887
mRNA Refseq	NM_001082144
Protein Refseq	NP_001075613
Chromosome Location	chromosome: 4

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