Data Sheet (Cat.No.TMPY-05829)

TargetMol

Thrombomodulin Protein, Human, Recombinant (His)

General Information

Synonyms:	thrombomodulin;THPH12;CD141;TM;AHUS6;BDCA3;THRM
Protein Construction:	A DNA sequence encoding the human THBD (NP_000352.1) (Met1-Ser515) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Ala 19
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P07204
Molecular Weight:	53.54 kDa (predicted)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90 % as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Thrombomodulin, also known as THBD (CD141), is an integral membrane protein that reduces blood coagulation by converting thrombin to an anticoagulant enzyme from a procoagulant enzyme. Thrombomodulin is expressed on the surface of endothelial cells and serves as a cofactor for thrombin. It is also expressed on human mesothelial cell, monocyte and a dendritic cell subset. Thrombomodulin functions as a cofactor in the thrombin-induced activation of protein C in the anticoagulant pathway by forming a 1:1 stoichiometric complex with

thrombin. Thrombomodulin also regulates C3b inactivation by factor I. Mutations in the thrombomodulin gene have also been reported to be associated with atypical hemolytic-uremic syndrome.

Reference

Dzionek A, et al. (2002) Plasmacytoid dendritic cells: from specific surface markers to specific cellular functions. Hum Immunol. 63(12):1133-48.

Dzionek A, et al. (2000) BDCA-2, BDCA-3, and BDCA-4: three markers for distinct subsets of dendritic cells in human peripheral blood. J Immunol. 165(11):6037-46.

Wen DZ, et al. (1987) Human thrombomodulin: complete cDNA sequence and chromosome localization of the gene. Biochemistry. 26(14):4350-7.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481