Data Sheet (Cat.No.TMPY-01840)

TargetMol

TLT-1/TREML1 Protein, Human, Recombinant (His)

General Information

Synonyms:	PRO3438;TLT-1;triggering receptor expressed on myeloid cells like 1;UNQ1825/PRO3438; GLTL1825;dJ238O23.3;MGC119173;TLT1
Protein Construction:	A DNA sequence encoding the human TREML1 isoform 1 (Q86YW5-1) extracellular domain (Met 1-Pro 162) was expressed, with a polyhistidine tag at the C-terminus. Predicted N terminal: Gln 16
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q86YW5-1
Molecular Weight:	17.3 kDa (predicted); 24 kDa (reducing conditions)

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

Trem-like transcript 1 protein, also known as Triggering receptor expressed on myeloid cells-like protein 1, TREML1 and TLT-1, is a cytoplasm and single-pass type I membrane protein. TREML1 / TLT-1 is expressed exclusively in platelets and megakaryocytes (MKs) and that its expression is up-regulated dramatically upon platelet activation.

It is a receptor that may play a role in the innate and adaptive immune response. TREML1 / TLT-1 contains the characteristic single V-set immunoglobulin (Ig) domain, its longer cytoplasmic tail is composed of both a proline-rich region and an immune receptor tyrosine-based inhibitory motif, the latter known to be used for interactions with protein tyrosine phosphatases. The triggering receptors expressed on myeloid cells (TREMs) have drawn considerable attention due to their ability to activate multiple cell types within the innate immune system, including neutrophils, monocyte / macrophages, and dendritic cells, via their association with DAP12. TREML1 / TLT-1 is prepackaged, along with CD62P, into both MK and platelet alpha-granules. Differences in thrombin-induced redistribution of CD62P and TREML1 indicate that TREML1 is not simply cargo of alpha-granules but may instead regulate granule construction or dispersal. TREML1 / TLT-1 does not function to inhibit members of the TREM family but instead may play a role in maintaining vascular hemostasis and regulating coagulation and inflammation at sites of injury.

Reference

Washington A.V., et al., 2002, Blood 100:3822-4.
Allcock R.J.N., et al., 2003, Eur. J. Immunol. 33:567-77.
Washington A.V., et al., 2004, Blood 104:1042-7.
Barrow A.D., et al., 2004, J. Immunol. 172:5838-42.Gattis J.L., et al., 2006,J. Biol. Chem. 281:13396-403.

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