

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived mouse TREML4/TLT-4 protein		
	Mouse TREML4/TLT-4 (Ser29-Leu197) Accession # Q3LRV9	IEGRMD	Human IgG ₁ (Pro100-Lys330)
	N-terminus		C-terminus
N-terminal Sequence	Ser29		
Analysis			
Structure / Form	Disulfide-linked homodimer		
Predicted Molecular Mass	45 kDa		

SPECIFICATIONS

SDS-PAGE	64-72 kDa, under reducing conditions
Activity	Measured by its ability to bind apoptotic EL-4 mouse lymphoblasts in a flow cytometry assay. The ED ₅₀ for this effect is 0.45-4.5 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Supplied as a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Shipping	The product is shipped with dry ice or equivalent. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after opening. • 3 months, -20 to -70 °C under sterile conditions after opening.

DATA

<p>Binding Activity</p> <p>Recombinant Mouse TREML4/TLT-4 Fc Chimera (Catalog # 10172-TL) binds to apoptotic EL-4 mouse lymphoblasts in a flow cytometry assay. The ED₅₀ for this effect is 0.45-4.5 µg/mL.</p>	<p>SDS-PAGE</p> <p>2 µg/lane of Recombinant Mouse TREML4/TLT-4 Fc Chimera (Catalog # 10172-TL) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 64-72 kDa and 120-150 kDa, respectively.</p>
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BACKGROUND

TREML4 (Triggering Receptor Expressed on Myeloid cells-like 4), also known as TLT-4, is a type I transmembrane member of the TREM family and Ig superfamily (1, 2). Mature mouse TREML4 consists of a 172 amino acid (aa) extracellular domain (ECD) with one Ig-like domain, a 21 aa transmembrane segment, and a 42 aa cytoplasmic domain (1, 2). Within the ECD, mouse TREML4 shares 51% and 76% aa sequence identity with human and rat TREM-2, respectively. TREML4 is expressed in the spleen, CD8α⁺ dendritic cells, and macrophages, and it is capable of recognizing necrotic cells by different phagocytes within the spleen (1). TREML4 is characterized by its Ig-like extracellular domain and short cytoplasmic tail that associates with adaptor DAP12 (2). TREML4 has been shown to play a role in coronary calcification and artery disease (3), and it is also a positive regulator of TLR7 signaling in autoimmunity and antiviral responses (4).

References:

1. Hemmi, H. *et al.* (2009) *J. Immunol.* **182**:1278.
2. Hemmi, H. *et al.* (2012) *J. Immunol.* **188**:1147.
3. Sen, S.K. *et al.* (2014) *Am. J. Hum. Genet.* **95**:66.
4. Ramirez-Ortiz, Z. G. *et al.* (2015) *Nat. Immunol.* **16**:495.