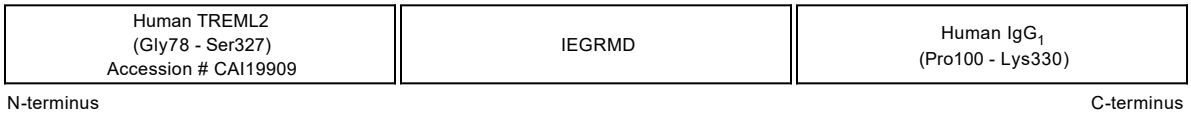
Recombinant Human TREML2/TLT-2 Fc Chimera

Catalog Number: 3259-TL

DESCRIPTION

Source

Mouse myeloma cell line, NS0-derived



N-terminal Sequence Analysis	Gly78
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	53.7 kDa (monomer)

SPECIFICATIONS

SDS-PAGE	75-100 kDa, reducing conditions
Activity	Measured by its ability to inhibit anti-CD3-induced proliferation of stimulated human T cells. Human PBMC cultured for 72 hours with PHA were incubated for an additional 3 days in 96 well plates coated with anti-CD3 and recombinant human TREML2/Fc Chimera. The ED_{50} for this effect is 0.45-1.8 µg/mL. **Optimal dilutions should be determined by each laboratory for each applications.**
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>90%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 200 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 3 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Trem-like transcript 2 protein (TLT-2; also TREML2) is a 33 kDa (unglycosylated) type I transmembrane cell surface receptor and member of the Trem family of receptor proteins. Human TLT-2 is synthesized as a 321 amino acid (aa) precursor that contains an 18 aa signal sequence, a 250 aa extracellular domain (ECD), a 21 aa transmembrane segment, and a 32 aa cytoplasmic tail (SwissProt # Q5T2D2). Within the ECD are an Ig-like V-type domain (aa 20 - 121) and one potential site of N-linked glycosylation. Mature human TLT-2 shares 49% aa sequence identity with mature mouse TLT-2. Cell surface expression of TLT-2 is seen for most of the B and myeloid cell lines (1 - 2). TLT-2 is also expressed constitutively on CD8+ T cells and induced on CD4+ T cells after activation (2). TLT-2 plays a role in the innate and adaptive immune responses. In 2008, Hashiguchi *et al.* discovered that the B7 family member B7-H3, which also plays important roles in immune responses, specifically bound to TLT-2. According to their research, stimulation with B7-H3 transfectants preferentially up-regulated the proliferation and IFN-γ production on CD8+ T cells (2). Also, transduction of TLT-2 into T cells resulted in enhanced IL-2 and IFN-γ production via interactions with B7-H3, and blockade of the B7-H3:TLT-2 pathway with mAb against B7-H3 or TLT-2 efficiently inhibited contact hypersensitivity responses (2). In 2009, however, Leitner *et al.* extensively analyzed interaction of B7-H3 with TLT-2 and found no evidence for such an interaction (3).

References:

1. King, R.G. *et al.* (2006) J. Immunol. **176**:6012.
2. Hashiguchi, M. *et al.* (2008) Proc. Natl. Acad. Sci. U.S.A. **105**:10495.
3. Leitner, J. *et al.* (2009) Eur. J. Immunol. **39**:1754.

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