

Mouse TIGIT / VSTM3 Protein (Fc Tag)

Catalog Number: 50939-M02H



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

VSIG9; VSTM3; WUCAM; ENSMUSG00000071552; Vstm3

Protein Construction:

A DNA sequence encoding the mouse TIGIT (PP86176) (Met1-Gly141) was expressed, fused with the Fc region of human IgG1 at the C-terminus.

Source: Mouse

Expression Host: Human Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Bio Activity:

Immobilized mouse PVR-His (Cat:50259-M08H) at 10 µg/ml (100 µl/well) can bind mouse TIGIT-Fc, The EC₅₀ of mouse TIGIT-Fc is 0.25-0.55 µg/ml.

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Gly 26

Molecular Mass:

The recombinant mouse TIGIT /Fc is a disulfide-linked homodimer. The reduced monomer comprises 357 amino acids and has a predicted molecular mass of 39.8 kDa. The apparent molecular mass of the protein is approximately 52 kDa in SDS-PAGE under reducing conditions due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

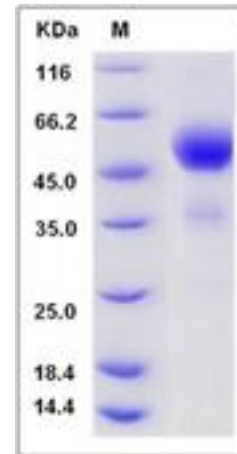
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

TIGIT, also known as V-set and transmembrane domain-containing protein 3 (VSTM3) or V-set and immunoglobulin domain-containing protein 9 (VSIG9) is a new surface protein containing an immunoglobulin variable domain, a transmembrane domain and an immunoreceptor tyrosine-based inhibitory motif (ITIM). TIGIT is expressed on regulatory, memory, activated T cells and NK cells. It binds PVR with high affinity, and PVRL2 with lower affinity, but not PVRL3. Knockdown of TIGIT with siRNA in human memory T cells did not affect T cell responses, however, TIGIT inhibits NK cytotoxicity directly through its ITIM. TIGIT suppresses T cell activation by promoting the generation of mature immunoregulatory dendritic cells. The binding of PVR to TIGIT on human dendritic cells enhanced the production of IL-10 and diminished the production of IL-12p40. In addition, TIGIT counter inhibits the NK-mediated killing of tumor cells and protects normal cells from NK-mediated cytotoxicity thus providing an "alternative self" mechanism for MHC class I inhibition.

References

- 1.Ota T., *et al.*,(2004), Complete sequencing and characterization of 21,243 full-length human cDNAs. *Nat. Genet.* 36:40-45.
- 2.Bechtel S., *et al.*, (2007), The full-ORF clone resource of the German cDNA consortium.*BMC Genomics* 8:399-399.
- 3.Yu X., Harden K., *et al.*,(2009), The surface protein TIGIT suppresses T cell activation by promoting the generation of mature immunoregulatory dendritic cells. *Nat. Immunol.* 10:48-57.

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