

## TIGIT active protein

TIGIT Protein, Mouse, Recombinant (ECD, His Tag)

CATALOG #  
**AAA258212**

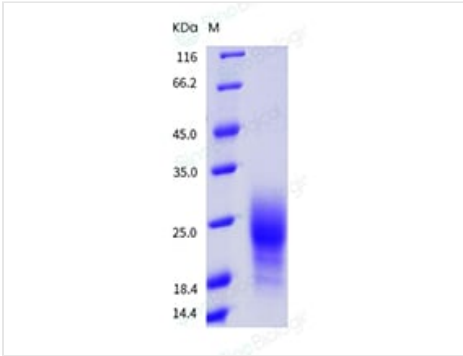
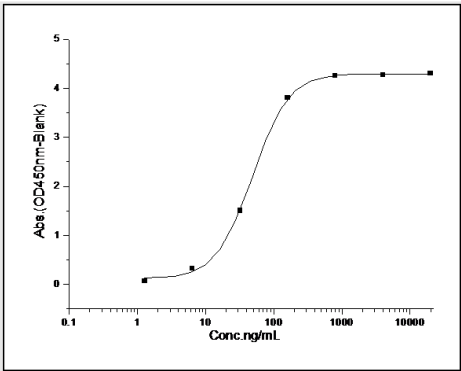
HOST  
**HEK293 Cells**

### PRODUCT SYNONYMS

TIGIT; TIGIT Protein; Mouse; Recombinant (ECD; His Tag); Mouse TIGIT/VSTM3 Protein (ECD; ENSMUSG00000071552 Protein; Vstm3 Protein; T cell immunoreceptor with Ig and ITIM domains; TIGIT active protein

### PRODUCT SPECIFICATIONS

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Host                    | HEK293 Cells                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Purity/Purification     | >90% as determined by SDS-PAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Form/Format             | Lyophilized from sterile PBS, pH7.4. Normally 5%-8% trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the hard copy of CoA.                                                                                                                                                                                                                                                                                                      |
| Sequence                | Met1-Gly14 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Species                 | Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Endotoxin               | <1.0EU per ug of the protein as determined by the LAL method                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Predicted N Terminal    | Gly 26                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Tag                     | C-His                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Protein Construction    | A DNA sequence encoding the extracellular domain of mouse TIGIT (NP_001139797.1)(Met 1-Gly 141) was expressed, with a C-terminal polyhistidine tag.                                                                                                                                                                                                                                                                                                                                                                     |
| Reconstitution          | A hardcopy of COA with reconstitution instruction is sent along with the products. Please refer to it for detailed information.                                                                                                                                                                                                                                                                                                                                                                                         |
| Activity                | Immobilized mouse TIGIT-His at 10ug/ml (100uL/well) can bind mouse PVR-Fch. The EC50 of mouse PVR-Fch is 0.31-0.73ug/ml.                                                                                                                                                                                                                                                                                                                                                                                                |
| Preparation and Storage | <p>Samples are stable for up to twelve months from date of receipt at -20 degree C to -80 degree C. Store it under sterile conditions at -20 degree C to -80 degree C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.</p> <p>In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid.</p> <p>They are shipped out with blue ice.</p> |



SDS-PAGE

**Application Data**  
Immobilized mouse TIGIT-His at 10 ug/ml (100 ul/well) can bind mouse PVR-Fch, The EC50 of mouse PVR-Fch is 0.31-0.73 ug/ml.

ADDITIONAL INFORMATION

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|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Product Information for TIGIT active protein | Background: 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-1 and diminished the production of IL-12p4. Also, 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. |
| Product Categories/Family for TIGIT active protein   | <a href="#">ITIM/ITAM Immunoreceptors and Related Molecules Cancer Drug Targets</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| References                                           | Ota T., et al.,(2004), Complete sequencing and characterization of 21,243 full-length human cDNAs. Nat. Genet. 36:40-45.Bechtels S., et al., (2007), The full-ORF clone resource of the German cDNA consortium.BMC Genomics 8:399-399.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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

NCBI AND UNIPROT INFORMATION

|                                  |                                                |
|----------------------------------|------------------------------------------------|
| NCBI GI #                        | <a href="#">226423924</a>                      |
| NCBI GeneID                      | <a href="#">100043314</a>                      |
| NCBI Accession #                 | <a href="#">NP_001139797.1</a>                 |
| NCBI GenBank Nucleotide #        | <a href="#">NM_001146325.1</a>                 |
| Molecular Weight                 | 26,959 Da                                      |
| NCBI Official Full Name          | T-cell immunoreceptor with Ig and ITIM domains |
| NCBI Official Synonym Full Names | T cell immunoreceptor with Ig and ITIM domains |
| NCBI Official Symbol             | Tigit                                          |
| NCBI Official Synonym Symbols    | Vstm3                                          |
| NCBI Protein Information         | T-cell immunoreceptor with Ig and ITIM domains |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

