Bioactive, Recombinant Mouse TIGIT Protein Dimer, Fc Tag
Product Code: CSP-25182-04
For Research Use Only (RUO)

Protein Name
TIGIT-hFc

Alternate Name(s)
VSIG9, VSTM3

Protein Construct
TIGIT dimer protein contains a TIGIT extracellular domain (UniProt# P86176) fused with a proprietary cis-dimer motif followed by a His tag at the C-terminus. Expressed in HEK293T cell line.

SDS-Page Molecular Weight
79 kDa. The migration range of the dimer protein with glycosylation under non-reduced condition is between 120 and 190 kDa on SDS PAGE.

Shipping Conditions
Frozen Dry Ice

Expression Host
HEK293T

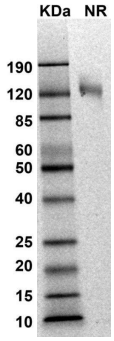
Purity
Greater than 90% dimer form as determined by SDS-PAGE under non-reducing condition

Amino Acid Range
T29-G148

Formulation
0.22μm filtered PBS, pH 7.4

Stability & Storage
-80^{0}C

SDS-PAGE



MW: Molecular Weight marker reduced condition
NR: TIGIT dimer under non-reduced condition

The migration range of the dimer protein with glycosylation under non-reduced condition is between 120 and 190 kDa on SDS PAGE.

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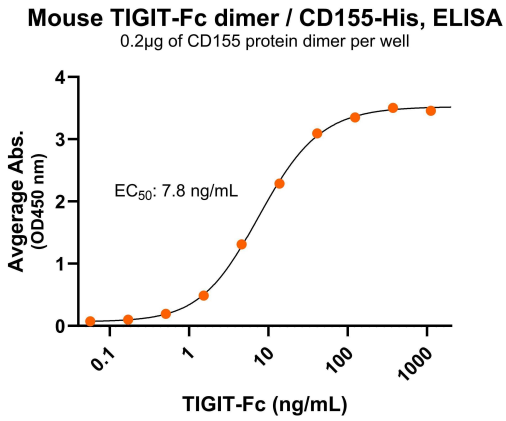
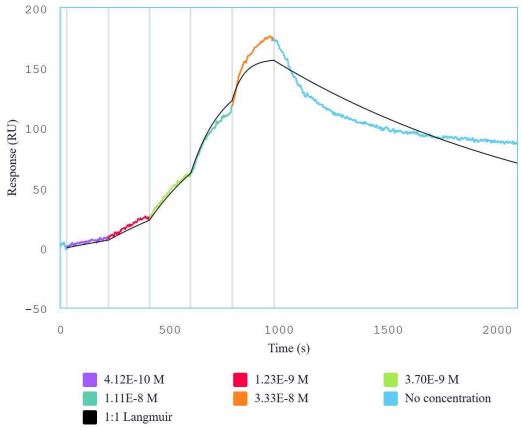
Bioactivity – Ligand Binding



Immobilized mouse CD155 dimer protein, His Tag (Cat. No. CSP-25184-01) at 2 μg/mL (100 μL/well) can bind mouse TIGIT dimer protein, Fc Tag (Cat. No. CSP-25182-04) with half maximal effective concentration (EC50) range of 3.9-15.6 ng/mL (QC tested).

Bioactivity – SPR



Immobilized mouse TIGIT protein dimer, human IgG1 Fc tag (CSP-25182-04) can bind mouse CD155 protein dimer, His tag (Cat. No. CSP-25184-01) with a KD of 0.7-2.6 nM as determined by SPR.

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Background

TIGIT (T-cell immunoreceptor with Ig and ITIM domains) is also known as VSIG9 (V-set and immunoglobulin domain-containing protein 9) and VSTM3 (V-set and transmembrane domain-containing protein 3). TIGIT is a Type I membrane protein containing an immunoglobulin variable (Ig-V) domain, a transmembrane domain and cytoplasmic domain. TIGIT is an immune receptor present on peripheral memory and regulatory CD4+ T cells and natural killer (NK) cells. TIGIT is a pivotal immune checkpoint receptor that fine-tunes T-cell and NK-cell responses. Its dual role in promoting tolerance (via Tregs) and suppressing antitumor immunity makes it a compelling therapeutic target. TIGIT binds to CD155 (the poliovirus receptor, PVR) with high affinity and binds to CD112 (PVRL2) with lower affinity. Nectin-4 is also a ligand for TIGIT. While structurally and functionally similar to human TIGIT, mouse TIGIT is a species-specific tool essential for translational research in cancer immunotherapy.