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TIGIT

Catalog # PVGS1620

Product Information

Primary Accession	Q495A1
Species	Human
Sequence	Met22-Pro141
Purity	> 90% as analyzed by SDS-PAGE
Endotoxin Level	
Biological Activity	This proten can bind with CHO-K1/aAPC/CD155 Clone by FACS analysis.
Expression System	HEK 293+J15
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS.
Reconstitution	It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in ddH_2O or PBS up to 100 μg/ml.
Storage & Stability	Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

Additional Information

Gene ID	201633
Other Names	T-cell immunoreceptor with Ig and ITIM domains, V-set and immunoglobulin domain-containing protein 9, V-set and transmembrane domain-containing protein 3, TIGIT, VSIG9, VSTM3
Target Background	T cell immunoreceptor with Ig and ITIM domains (TIGIT) is an immune receptor present on some T cells and natural killer cells (NK). This protein could bind to CD155 (PVR) with high affinity, which causes increased secretion of IL-10 and decreased secretion of IL-12B and suppresses T-cell activation by promoting the generation of mature immunoregulatory dendritic cells. TIGIT could also bind to CD112 (PVRL2) with lower affinity. TIGIT's inhibition of NK cytotoxicity can be blocked by antibodies against its interaction with PVR and the activity is directed through its ITIM domain.

Protein Information

Name	TIGIT
Synonyms	VSIG9, VSTM3
Function	Inhibitory receptor that plays a role in the modulation of immune responses. Suppresses T-cell activation by promoting the generation of mature immunoregulatory dendritic cells (PubMed:19011627). Upon binding to its ligands PVR/CD155 or NECTIN2/CD112, which are expressed on antigen-presenting cells, sends inhibitory signals to the T-cell or NK cell. Mechanistically, interaction with ligand leads to phosphorylation of the cytoplasmic tail by Src family tyrosine kinases such as FYN or LCK, allowing subsequent binding to adapter GRB2 and SHIP1/INPP5D. In turn, inhibits PI3K and MAPK signaling cascades (PubMed:23154388). In addition, associates with beta-arrestin-2/ARRB2 to recruit SHIP1/INPP5D that suppresses autoubiquitination of TRAF6 and subsequently inhibits NF- kappa-B signaling pathway (PubMed:24817116). Also acts as a receptor for NECTIN4 to inhibit NK cell cytotoxicity (PubMed:32503945).
Cellular Location	Cell membrane; Single-pass type I membrane protein. Note=Clustered to the immunological synapse where it disrupts granule polarization and cytotoxicity of NK cells once engaged with PVR.
Tissue Location	Expressed at low levels on peripheral memory and regulatory CD4+ T-cells and NK cells and is up-regulated following activation of these cells (at protein level)