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HVEM

Catalog # PVGS1408

Product Information

Primary Accession	Q92956
Species	Human
Sequence	Leu39-Lys184
Purity	> 95% as analyzed by SDS-PAGE > 95% as analyzed by HPLC
Endotoxin Level	
Expression System	Sf9 insect cells
Formulation	Lyophilized after extensive dialysis against 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 up to 100 g/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	8764
Other Names	Tumor necrosis factor receptor superfamily member 14, Herpes virus entry mediator A, Herpesvirus entry mediator A, HveA, Tumor necrosis factor receptor-like 2, TR2, CD270, TNFRSF14 (HGNC:11912)
Target Background	Herpes Virus Entry Mediator (HVEM) is a transmembrane protein that is the receptor for TNFSF14 (also known as LIGHT) and is therefore referred to asTNFRSF14. HVEM is expressed broadly on immune cells such as T cells, natural killer (NK) cells and monocytes. The interaction of 3 molecules of LIGHT with three molecules of HVEM forms a hexameric complex that leads to the recruitment and retention of effector cells and activates NK cells to produce large amounts of IFN-γ and GM-CSF. In addition to the canonical binding partner LIGHT, HVEM can also bind to the inhibitory signaling protein, B- and T- lymphocyte attenuator (BTLA), which suppresses immune responses. Therefore, the HVEM network plays an important role in regulating immunity and the behavior of lymphocytes.

Protein Information

Name	TNFRSF14 (HGNC:11912)
Function	Receptor for four distinct ligands: The TNF superfamily members TNFSF14/LIGHT and homotrimeric LTA/lymphotoxin-alpha and the immunoglobulin superfamily members BTLA and CD160, altogether defining a complex stimulatory and inhibitory signaling network (PubMed:10754304, PubMed:18193050, PubMed:23761635, PubMed:9462508). Signals via the TRAF2-TRAF3 E3 ligase pathway to promote immune cell survival and differentiation (PubMed:19915044, PubMed:9153189, PubMed:9162022). Participates in bidirectional cell-cell contact signaling between antigen presenting cells and lymphocytes. In response to ligation of TNFSF14/LIGHT, delivers costimulatory signals to T cells, promoting cell proliferation and effector functions (PubMed:10754304). Interacts with CD160 on NK cells, enhancing IFNG production and anti-tumor immune response (PubMed:23761635). In the context of bacterial infection, acts as a signaling receptor on epithelial cells for CD160 from intraepithelial lymphocytes, triggering the production of antimicrobial proteins and pro-inflammatory cytokines (By similarity). Upon binding to CD160 on activated CD4+ T cells, down- regulates CD28 costimulatory signaling, restricting memory and alloantigen-specific immune response (PubMed:18193050). May interact in cis (on the same cell) or in trans (on other cells) with BTLA (By similarity) (PubMed:19915044). In cis interactions, appears to play an immune regulatory role inhibiting in trans interactions in naive T cells to maintain a resting state. In trans interactions, can predominate during adaptive immune response to provide survival signals to effector T cells (By similarity) (PubMed:19915044).
Cellular Location	Cell membrane; Single-pass type I membrane protein
Tissue Location	Widely expressed, with the highest expression in lung, spleen and thymus. Expressed in a subpopulation of B cells and monocytes (PubMed:18193050). Expressed in naive T cells (PubMed:19915044).