Recombinant Human HVEM-Fc Chimera (carrier-free)

Catalog# / Size	596504 / 20 µg 596506 / 100 µg
Regulatory Status	RUO
Other Names	Herpes virus entry mediator (HVEM), TNFRSF14, ATAR, TR2, CD270
Description	Herpes virus entry mediator (HVEM), a member of the tumor necrosis factor (TNF) receptor family, mediates herpes virus entry into cells during infection. Upon overexpression, HVEM activates NF-kappaB and AP-1 through a TNF receptor-associated factor (TRAF)-mediated mechanism. HVEM ligands belong to two distinct families: the TNF-related cytokines LIGHT and lymphotoxin-α, and the Ig-related membrane proteins BTLA and CD160. HVEM and its ligands have been involved in the pathogenesis of various autoimmune and inflammatory diseases, tumor progression and resistance to immune response. It has been demonstrated that HVEM induces a novel signaling pathway downstream leading to signal transduction and activation of STAT3 in epithelial cells. Since STAT3 regulates the expression of genes important for host defense in epithelial cells, as well as the differentiation of retinoid-related orphan receptor RORγt+, Th17, and innate lymphoid cells. This finding suggests that HVEM may play an important role in mucosal host defense.

Product Details

Source	Human HVEM, amino acids (Leu39-Lys184) (Accession# NP_003811.2) with a human IgG1-Fc tag, was expressed in insect cells.
Molecular Mass	The 376 amino acid recombinant protein consists of an N-terminal domain corresponding to the extracellular domain of HVEM and C-terminal portion corresponding to amino acid 102 to 330 of human IgG1. The protein has a predicted molecular mass of approximately 45 kD. The predicted N-terminal amino acid is Leu.
Purity	>98%, as determined by Coomassie stained SDS-PAGE.
Formulation	Lyophilized
Endotoxin Level	Less than 0.1 ng per µg of protein.
Storage & Handling	Unopened vial can be stored at -20°C or -70°C. For maximum results, quick spin vial prior to opening. Reconstitute in water to a concentration of 0.1-1.0 mg/ml. Do not vortex. It is recommended to further dilute in a buffer containing a carrier protein such as 0.1% BSA and store in working aliquots at -20°C to -80°C. **Avoid repeated freeze/thaw cycles.**
Activity	Human HVEM-Fc is able to neutralize 0.25 ng/ml of human TNF-β induced cytotoxicity on murine L929 cells. The ED_{50} is 1.3 - 1.9 µg/ml, corresponding to a specific activity of 5.26 x 10^2 - 7.69 x 10^2 units/mg.
Application	Bioassay
Application Notes	This product is reactive with human and mouse.

Antigen Details

Structure	Cytokine
Distribution	Spleen, thymus, lung, macrophages, B cells and T cells.
Function	HVEM plays a role in mucosal host defense, autoimmune and inflammatory diseases, and tumor progression.
Ligand/Receptor	LIGHT, lymphotoxin-alpha.
Bioactivity	Neutralize TNFβ induced cytotoxicity on murine L929 cells.
Cell Type	Tregs

Biology Area	Cell Adhesion, Cell Biology, Immunology, Signal Transduction
Molecular Family	Adhesion Molecules, CD Molecules, Immune Checkpoint Receptors
Antigen References	1. Pasero C. *et al.* 2012. *Curr. Opin. Pharmacol.* 12:478. 2. Hsu H. *et al.* 1997. *J. Biol. Chem.* 272:13471. 3. Mauri DN. *et al.* 1998. *Immunity.* 8:21. 4. Montgomery R.I. *et al.* 1996 *Cell.* 87:427. 5. Shui J.W. *et al.* 2012. *Nature.* 488:222.
Gene ID	8764

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