

## HVEM-Fc, Human

**Cat. No.:** Z03224-1

**Size:** 1.0 mg

**Synonyms:** TNFRSF14, TR2

### Description:

Herpes Virus Entry Mediator (HVEM) is a transmembrane protein that is the receptor for TNFSF14 (also known as LIGHT) and is therefore referred to as TNFRSF14. 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- $\gamma$  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.

Recombinant human HVEM-Fc (rhHVEM-Fc) produced in *Sf9 insect cells* is a single glycosylated polypeptide chain containing 376 amino acids. A fully biologically active molecule, rhHVEM-Fc has a molecular mass of around 45 kDa analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques at GenScript.

### Amino Acid Sequence:

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00001 LPSCKEDEYP VGSECCPKCS PGYRVKEACG ELTGTVCEPC
00041 PPGTYIAHLN GLSKCLQCQM CDPAMGLRAS RNCSTENAV
00081 CGCSPGHFCI VQDGDHCAAC RAYATSSPGQ RVQKGGTESQ
00121 DTLQCNCPPG TFSPNGTLEE CQHQTKRSCD KTHTCPPCA
00161 PELLGGPSVF LFPPKPKDIL MISRTPEVTC VVVDVSHEDP
00201 EVKFNWYVDG VEVHNAKTKP REEQYNSTYR VVSVLTVLHQ
00241 DWLNGKEYKC KVSNKALPAP IEKTISKAKG QPREPQVYTL
00281 PPSRDELTKN QVSLTCLVKG FYPSDIAVEW ESNQPMENNY
00321 KTTTPVLDSD GSFFLYSKLT VDKSRWQQGN VFSCSVMHEA
00361 LHNHYTQKSL SLSPGK
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**Source:** *Sf9 insect cells*

**Species:** Human

**Biological Activity:** Activity 1: ED50 < 0.1  $\mu\text{g}/\text{mL}$ , measured by the neutralization assay using 929 cells in presence of 0.25 ng/mL of human TNF-beta, corresponding to a specific activity of >  $1 \times 10^4$  units/mg. Activity 2  $\square$  Immobilized HVEM-Fc, Human at 2  $\mu\text{g}/\text{mL}$  (100  $\mu\text{L}/\text{well}$ ) can bind biotinylated BTLA Fc Chimera, Human (Cat.No.Z03441) with a linear range of 0.39–3.13  $\mu\text{g}/\text{mL}$ .

Activity 3  $\square$  Immobilized HVEM-Fc, Human at 2  $\mu\text{g}/\text{mL}$  (100  $\mu\text{L}/\text{well}$ ) can bind biotinylated CD160 Fc Chimera, Human (Cat.No.Z03449) with a linear range of 0.39–3.13  $\mu\text{g}/\text{mL}$ .

**Molecular Weight:** 45 kDa, observed by reducing SDS-PAGE.

**Formulation:** Lyophilized after extensive dialysis against PBS.

**Reconstitution:** Reconstituted in ddH<sub>2</sub>O at 100  $\mu\text{g}/\text{mL}$ .

**Purity:** > 95% by SDS-PAGE and HPLC analyses.

**Endotoxin Level:** < 0.2 EU/ $\mu\text{g}$ , determined by LAL method.

**Storage:** Lyophilized recombinant human HVEM-Fc (rhHVEM-Fc) remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, rhHVEM-Fc remains stable up to 2 weeks at 4°C or up to 3 months at -20°C.