

# Active Recombinant Mouse TNFRSF14 Protein, Fc-tagged

**Cat. No.** TNFRSF14-12M    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Active Recombinant Mouse TNFRSF14 Protein, Fc-tagged, was expressed in Chinese Hamster Ovary cell line.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Species</b>          | Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Source</b>           | CHO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>ProteinLength</b>    | Gln39-Val207aa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Description</b>      | <p>HVEM (herpesvirus entry mediator), also known as TNFRSF14 and CD270, is a type I membrane protein in the TNF receptor superfamily, and it can both promote and inhibit T cell activity (1). Mature mouse HVEM consists of a 170 amino acid (aa) extracellular domain (ECD) with three cysteine-rich domains (CRD), a 24 aa transmembrane segment, and a 45 aa cytoplasmic tail with a TRAF interaction domain (2). Within the ECD, mouse HVEM shares 55% and 89% aa sequence identity with human and rat HVEM, respectively. HVEM is highly expressed on naïve CD4+ T cells, CD8+ T memory cells, regulatory T cells, dendritic cells, monocytes, and neutrophils (3-7). Its expression declines during effector T cell activation but is upregulated during Treg activation (3, 4). HVEM functions as a receptor for BTLA, CD160, LIGHT/TNFSF14, and Lymphotoxin-alpha (3, 8-11). Ligation of HVEM by LIGHT triggers T cell, monocyte, and neutrophil activation (7, 9) and contributes to Th1 inflammation and cardiac allograft rejection (12, 13). In contrast, HVEM binding to CD160 or BTLA suppresses T cell and dendritic cell activation (3, 6, 8, 9) and dampens intestinal inflammation (14). HVEM enhances the development of CD8+ T</p> |

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cell memory and Treg function (4, 5). It is additionally expressed on intestinal epithelial cells, where its binding by intraepithelial lymphocyte (IEL) expressed CD160 promotes epithelial integrity and host defense (15). The herpesvirus envelope glycoprotein gD, which binds HVEM to initiate membrane fusion, can antagonize both BTLA and LIGHT binding (Montgomery, 8, 10, 16).

|                                     |                                                                                                                                                                                                                                                                                                |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Tag</b>                          | Fc                                                                                                                                                                                                                                                                                             |
| <b>Bio-activity</b>                 | Measured by its binding ability in a functional ELISA. When Recombinant Mouse (rm) HVEM Fc Chimera is immobilized at 100 ng/ mL, 100 µL/well, the concentration of biotinylated rmBTLA Fc Chimera that produces 50% of the optimal binding response is found to be approximately 30-120 ng/mL. |
| <b>Molecular Mass</b>               | 45.6 kDa                                                                                                                                                                                                                                                                                       |
| <b>Purity</b>                       | >95%, by SDS-PAGE under reducing conditions and visualized by silver stain.                                                                                                                                                                                                                    |
| <b>N-terminal Sequence Analysis</b> | Gln39                                                                                                                                                                                                                                                                                          |
| <b>Stability</b>                    | Use a manual defrost freezer and avoid repeated freeze-thaw cycles.<br>12 months from date of receipt, -20 to -70 °C as supplied.<br>1 month, 2 to 8 °C under sterile conditions after reconstitution.<br>3 months, -20 to -70 °C under sterile conditions after reconstitution.               |
| <b>Storage Buffer</b>               | Lyophilized from a 0.2 µm filtered solution in PBS.                                                                                                                                                                                                                                            |
| <b>Shipping</b>                     | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.                                                                                                                                                                        |
| <b>Reconstitution</b>               | Reconstitute at 1 mg/mL in PBS.                                                                                                                                                                                                                                                                |

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**GeneID** [230979](#)

## References

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## GENE INFORMATION

|                        |                                                                                                                                            |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | <a href="#">Tnfrsf14 tumor necrosis factor receptor superfamily, member 14 (herpesvirus entry mediator) [ Mus musculus (house mouse) ]</a> |
| <b>Official Symbol</b> | <a href="#">Tnfrsf14</a>                                                                                                                   |
| <b>Synonyms</b>        | TR2,Atar,HveA,Hvem,Tnfrs14,TNFRSF14                                                                                                        |
| <b>mRNA Refseq</b>     | <a href="#">NM_178931</a>                                                                                                                  |

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|----------------|-----------|
| Protein Refseq | NP_849262 |
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| UniProt ID | Q80WM9 |
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