# Recombinant Human CD99-L2 Fc Chimera

Catalog Number: 5185-CD

## DESCRIPTION

**Source**

Chinese Hamster Ovary cell line, CHO-derived


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|---|---|
| **N-terminal Sequence Analysis** | Val20 |
| **Structure / Form** | Disulfide-linked homodimer |
| **Predicted Molecular Mass** | 44.5 kDa (monomer) |

## SPECIFICATIONS

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| **SDS-PAGE** | 65-75 kDa, reducing conditions |
| **Activity** | Measured by its ability to bind biotinylated rmCD99-L2 in a functional ELISA. |
| **Endotoxin Level** | <1.0 EU per 1 µg of the protein by the LAL method. |
| **Purity** | >95%, by SDS-PAGE under reducing conditions and visualized by silver stain. |
| **Formulation** | Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details. |

## PREPARATION AND STORAGE

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| **Reconstitution** | Reconstitute at 100 µg/mL in sterile PBS. |
| **Shipping** | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. |
| **Stability & Storage** | **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. |

## BACKGROUND

CD99 antigen-like 2 (CD99-L2) is a 45 kDa type I transmembrane glycoprotein in the CD99 family of molecules (1 - 3). The major form of human CD99-L2 cDNA encodes a 262 amino acid (aa) precursor with a 25 aa predicted signal sequence, a 160 aa extracellular domain (ECD), a 21 aa transmembrane (TM) segment, and a 56 aa cytoplasmic region (4). This form is called the long form, or isoform E3'-E4'-E3-E4. Other isoforms include the muscle E3-E4, missing aa 45 - 93, and E4, a short form missing aa 45 - 116 (1, 4). E3-E4 and E3'-E3-E4 forms are the major isoforms in mouse and rat, respectively (1). Human forms that diverge at Pro 45 (145 aa precursor) or Met 180 (173 aa precursor) have been sequenced, and would be predicted to lack a TM segment (4, 5). None of the forms contain predicted N-linked glycosylation sites within the ECD, but O-linked glycosylation is likely (1, 2). The ECD of the human CD99-L2 isoform E3-E4 shares 85%, 75% and 70% aa identity with the corresponding forms of mouse, rat, and bovine CD99-L2, respectively. The human CD99 and CD99-L2 ECDs share only about 35% aa identity, but both contain three conserved acidic motifs and are thought to originate from the same ancestral gene (1, 2). The nearly ubiquitous expression of CD99-L2 is similar to that of CD99. Human CD99-L2 cDNA is detected in most organs, but not in thymus (1). In the mouse, protein is detectable in lung, thymocytes, mouse leukocytes and vascular endothelial cells (1, 3, 6). The endothelial cell CD99-L2 is reported to mediate cell aggregation and neutrophil or monocyte, but not lymphocyte, extravasation to inflamed tissue *in vivo* (3, 6).

**References:**


1. Suh, Y.H. *et al.* (2003) Gene **307**:63.
2. Park, S.H. *et al.* (2005) Gene **353**:177.
3. Schenkel, A.R. *et al.* (2007) Cell Commun. Adhes. **14**:227.
4. Swissprot Accession # Q8TCZ2.
5. Entrez Accession # EAW99391.
6. Bixel, G. *et al.* (2007) Blood **109**:5327.




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