# Recombinant Human OLT-2/TARM1 Fc Chimera

Catalog Number: 10059-TA

## DESCRIPTION

**Source**

Chinese Hamster Ovary cell line, CHO-derived human OLT-2/TARM1 protein

| Human OLT-2/TARM1 (Gln17-Val235) Accession # NP_001129158.2 | IEGRMD | Human $IgG_1$ (Pro100-Lys330) |
|---|---|---|

N-terminus C-terminus

| | |
|---|---|
| **N-terminal Sequence Analysis** | No results obtained. Gln17 inferred from enzymatic pyroglutamate treatment revealing Gly18. |
| **Structure / Form** | Disulfide-linked homodimer |
| **Predicted Molecular Mass** | 50 kDa |

## SPECIFICATIONS

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|---|---|
| **SDS-PAGE** | 64-74 kDa, reducing conditions |
| **Activity** | Measured by its ability to inhibit anti-CD3 antibody induced IFN-gamma secretion by human peripheral blood mononuclear cells (PBMC). The $ED_{50}$ for this effect is 2-10 µg/mL. |
| **Endotoxin Level** | <0.10 EU per 1 µg of the protein by the LAL method. |
| **Purity** | >95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining. |
| **Formulation** | Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details. |

## PREPARATION AND STORAGE

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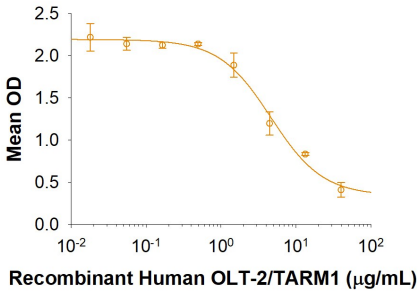
| **Reconstitution** | Reconstitute at 500 µg/mL in PBS. |
| **Shipping** | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. |
| **Stability & Storage** | **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**<br>• 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 °C under sterile conditions after reconstitution. |

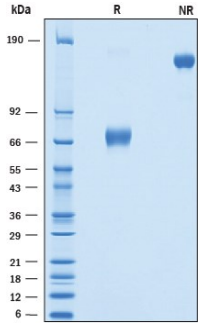
## DATA

**Bioactivity**




Recombinant Human OLT-2/TARM1 Fc Chimera (Catalog # 10059-TA) inhibits IFNγ secretion by human peripheral blood mononuclear cells in the presence of anti-CD3 antibody. The $ED_{50}$ for this effect is 2-10 µg/mL.

**SDS-PAGE**




2 µg/lane of Recombinant Human OLT-2/TARM1 Fc Chimera was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 64-74 kDa and 130- 150 kDa, respectively.

## BACKGROUND

T cell interacting, activating receptor on myeloid cells-1 (TARM-1), also known as OSCAR-like transcript-2 protein (OLT-2) is a type 1 membrane protein expressed by neutrophils, inflammatory monocytes, macrophages, and dendritic cells. Mature mouse OLT-2/TARM-1 contains a 242 aa long extracellular domain with two Ig-like C2 domains, a 21 aa long transmembrane domain and a 9 aa long cytoplasmic domain. The extracellular domain of human OLT-2/TARM-1 shares 48% and 49% amino acid (aa) identity with mouse and rat OLT-2/TARM-1 respectively. OLT-2/TARM-1 associates with the ITAM bearing adaptor FcR γ, but not with DAP10 or DAP12.OLT-2/TARM1 expression is also up-regulated by bone marrow-derived macrophages and dendritic cells following stimulation with TLR agonists *in vitro*. OLT-2/TARM-1 receptor stimulation on macrophages and neutrophils co-stimulate the secretion of proinflammatory cytokines induced by TLR ligands, such as LPS. OLT-2/TARM-1 Fc fusion protein inhibits anti-CD3 induced $CD4^+$ cell activation, suggesting that OLT-2/TARM-1 ectodomain interacts with an unidentified receptor on T cells to inhibit T cell activation (1).

**References:**


1. Radjabova, V., et al. (2015) J Immunol. **195**:3149.





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