# Recombinant Mouse IGSF2/CD101 Fc Chimera

Catalog Number: 3368-CD

## DESCRIPTION

**Source**

Mouse myeloma cell line, NS0-derived mouse IGSF2/CD101 protein

| Mouse CD101 (Gln21-Phe974) Accession # A8E0Y8 | IEGRMDP | Mouse $IgG_{2a}$ (Glu98-Lys330) |
|---|---|---|

N-terminus C-terminus

| | |
|---|---|
| **N-terminal Sequence Analysis** | No results obtained. Gln21 inferred from enzymatic pyroglutamate treatment revealing Arg22. |
| **Structure / Form** | Disulfide-linked homodimer |
| **Predicted Molecular Mass** | 133 kDa |

## SPECIFICATIONS

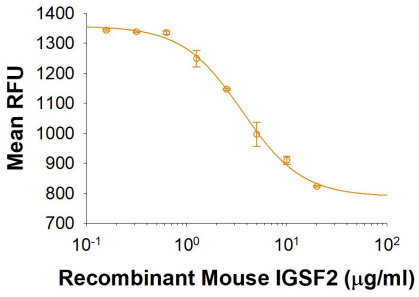
| | |
|---|---|
| **SDS-PAGE** | 121-150 kDa, reducing conditions |
| **Activity** | Measured by its ability to inhibit anti-CD3-induced proliferation of stimulated human T cells. The $ED_{50}$ for this effect is 1.4-8.4 µg/mL. |
| **Endotoxin Level** | <0.10 EU per 1 µg of the protein by the LAL method. |
| **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

| | |
|---|---|
| **Reconstitution** | Reconstitute at 400 µg/mL in PBS. |
| **Shipping** | The product is shipped with polar packs. 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. |

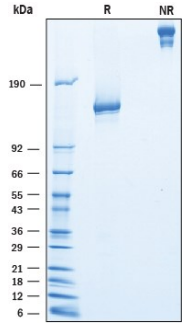
## DATA

**Bioactivity**




Recombinant Mouse IGSF2/CD101 Fc Chimera (Catalog # 3368-CD) inhibits anti-CD3 antibody induced human T cell proliferation. The $ED_{50}$ for this effect is 1.4-8.4 µg/mL.

**SDS-PAGE**




2 µg/lane of Recombinant Mouse IGSF2/CD101 was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 121-150 kDa and 240-280 kDa, respectively.



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# Recombinant Mouse IGSF2/CD101 Fc Chimera

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## BACKGROUND

CD101, also known as Immunoglobulin Superfamily member 2 (IGSF2) or cell surface glycoprotein V7 (V7), is a 130-145 kDa type 1 transmembrane glycoprotein within the very large Ig superfamily (1). Ig superfamily members participate in diverse functions including cell-cell recognition and adhesion, soluble molecules and specific antigen recognition, and are grouped based on the presence of a characteristic Ig domain fold. Mature mouse CD101 consists of a large extracellular domain (ECD) containing a Glu-Trp-Ile (EWI) motif and 7 Ig-like V-type domains, a single transmembrane domain, and a short cytoplasmic domain (1, 2). The mouse CD101 ECD shares 71% and 87% amino acid sequence identity with human and rat CD101 ECD, respectively. The exact biological functions, interacting ligands and mode of signal transduction for CD101 currently remain unclear. CD101 expression has been found on dermal dendritic cells (DCs), granulocytes, monocytes, activated T cells, and $CD4^+$ $CD25^+$ $FoxP3^+$ T regulatory cells (Tregs) (2-5). CD101 expression has been linked to immune suppression by Tregs in humans (6), with ligation of CD101 on DCs inducing IL-10 expression (2) and ligation on activated T cells blocking IL-2 expression (7). Both of these effects down-regulate T cell activity. Notably, in mice, CD101 expression on $CD62L^{++}$ Tregs identifies a population of cells that have potent suppressor activity (5). In humans, reduced CD101 expression on mucosal $CD8^+$ T cells has been linked to increased tissue inflammation in both intestinal (8) and pulmonary mucosa (9). In both mouse and human, mutations in CD101 have been associated with increased susceptibility for diabetes (10, 11). CD101 expression may act as a potential biomarker for $CD4^+$ $CD56^+$ blastic tumors (12) and inflammatory bowel disease activity (13), and missense variants of its gene have been associated with increased risk of HIV-1 acquisition (14).

**References:**

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