



## Synonym

CD40LG, CD154, CD40L, HIGM1, IGM, IMD3, T-BAM, TNFSF5, TRAP, gp39

## Source

Mouse CD40 Ligand, Fc Tag(CDL-M526x) is expressed from human 293 cells (HEK293). It contains AA Gly 115 - Leu 260 (Accession # [P27548-1](#)).

## Molecular Characterization

Fc(Thr 106 - Lys 330)	CD40 Ligand(Gly 115 - Leu 260)
P01857	P27548-1

This protein carries a human IgG1 Fc tag at the N-terminus.

The protein has a calculated MW of 42.9 kDa. The protein migrates as 52 kDa under reducing (R) condition, and 90-116 kDa under non-reducing (NR) condition (SDS-PAGE) due to glycosylation.

## Endotoxin

Less than 1.0 EU per  $\mu$ g by the LAL method / rFC method.

## Purity

>95% as determined by SDS-PAGE.

## Formulation

Lyophilized from 0.22  $\mu$ m filtered solution in Tris with Glycine, Arginine and NaCl, pH7.5 with trehalose as protectant.

Contact us for customized product form or formulation.

## Reconstitution

Please see Certificate of Analysis for specific instructions.

*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.*

## Storage

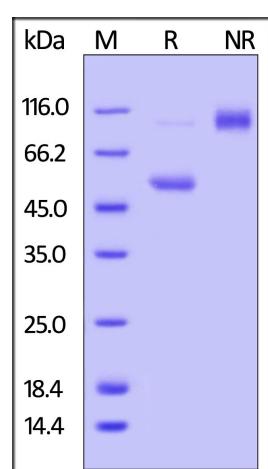
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

## SDS-PAGE



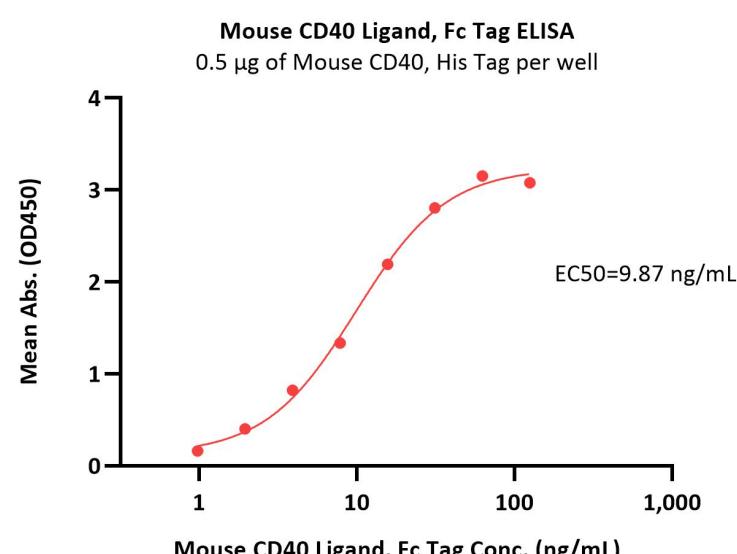
Mouse CD40 Ligand, Fc Tag on SDS-PAGE under reducing (R) and non-reducing (NR) conditions. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

## Bioactivity-ELISA

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Immobilized Mouse CD40, His Tag (Cat. No. TN5-M52H8) at 5 µg/mL (100 µL/well) can bind Mouse CD40 Ligand, Fc Tag (Cat. No. CDL-M526x) with a linear range of 1-16 ng/mL (QC tested).

## Background

CD40 ligand is also known as CD40L, CD154, TNFSF5 and T-cell antigen Gp39, is a single-pass type I I membrane protein which belongs to the TNF superfamily of molecules. CD40 ligand is expressed predominantly on activated CD4+ T lymphocytes, and also found in other types of cells, including platelets, mast cells, macrophages, basophils, NK cells, B lymphocytes, as well as non-haematopoietic cells (smooth muscle cells, endothelial cells, and epithelial cells). Although all monomeric, dimeric and trimeric forms of soluble CD40 ligand can bind to CD40, the trimeric form of soluble CD40 ligand has the most potent biological activity through oligomerization of cell surface CD40, a common feature of TNF receptor family members.

CD40 ligand binds to CD40 on antigen-presenting cells (APC), which leads to many effects depending on the target cell type. In general, CD40 ligand plays the role of a costimulatory molecule and induces activation in APC in association with T cell receptor stimulation by MHC molecules on the APC. In total CD40 ligand has three binding partners: CD40,  $\alpha 5\beta 1$  integrin and  $\alpha IIb\beta 3$ . CD40 ligand regulates B cell function by engaging CD40 on the B cell surface. A defect in this gene results in an inability to undergo immunoglobulin class switch and is associated with hyper IgM syndrome.

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