Human / Rhesus macaque CD40 Ligand / TNFSF5 Protein, Mouse IgG2a Fc Tag, low endotoxin

Catalog # CDL-H5256

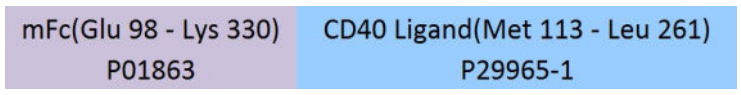
Synonym

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

Source

Human / Rhesus macaque CD40 Ligand, Mouse IgG2a Fc Tag, low endotoxin (CDL-H5256) is expressed from human 293 cells (HEK293). It contains AA Met 113 - Leu 261 (Accession # P29965-1). In the region Met 113 - Leu 261, the AA sequence of Human and Rhesus macaque CD40 Ligand are homologus.
Predicted N-terminus: Glu

Molecular Characterization



This protein carries a mouse IgG2a Fc tag at the N-terminus.

The protein has a calculated MW of 43.1 kDa. The protein migrates as 45-50 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 0.01 EU per μg by the LAL method / rFC method.

Purity

>95% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 μm filtered solution in PBS, pH7.4 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

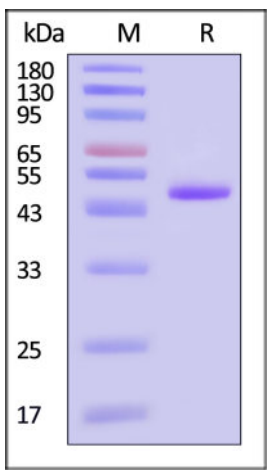
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

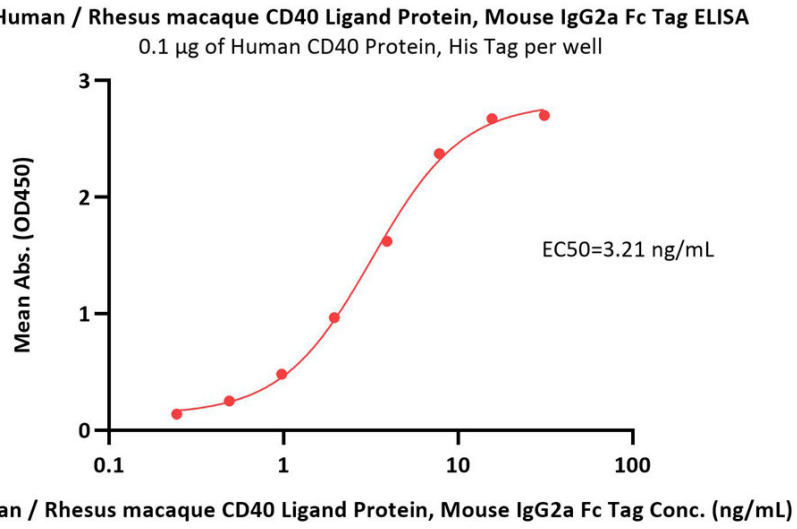
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE

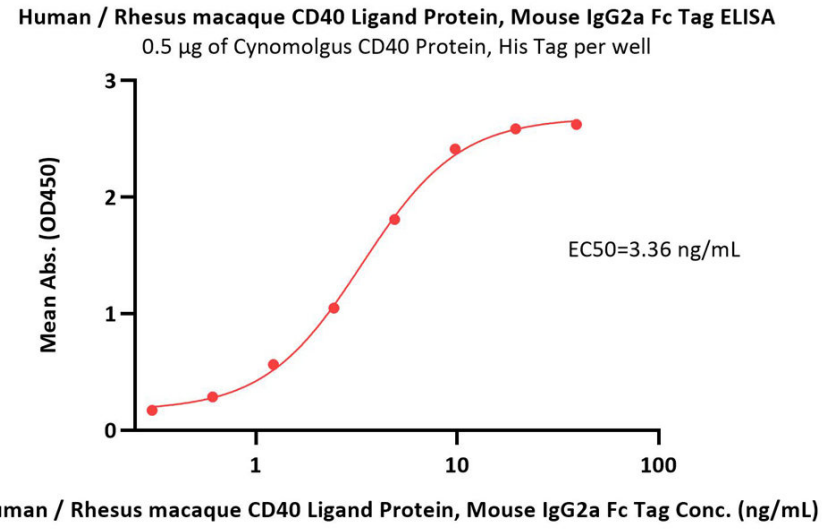


Human / Rhesus macaque CD40 Ligand Protein, Mouse IgG2a Fc Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With Star Ribbon Pre-stained Protein Marker).

Bioactivity-ELISA



Immobilized Human CD40 Protein, His Tag (Cat. No. CD0-H5228) at 1 μg/mL (100 μL/well) can bind Human / Rhesus macaque CD40 Ligand Protein, Mouse IgG2a Fc Tag (Cat. No. CDL-H5256) with a linear range of 0.1-4 ng/mL (QC tested).



Immobilized Cynomolgus CD40 Protein, His Tag (Cat. No. CD0-C52H6) at 5 μg/mL (100 μL/well) can bind Human / Rhesus macaque CD40 Ligand Protein, Mouse IgG2a Fc Tag (Cat. No. CDL-H5256) with a linear range of 0.3-5 ng/mL (Routinely 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, α5β1 integrin and αIIbβ3. 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.