

CD40 Ligand Protein, Mouse, Recombinant (His)

General Information

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| Synonyms: | IGM;IMD3;TRAP;Ly62;CD40-L;Tnfsf5;CD154;T-BAM;Ly-62;Cd40l;HIGM1;gp39;CD40 ligand |
| Protein Construction: | A DNA sequence encoding the Mouse CD40LG (P27548) (Gly115-Leu260) was expressed, with a polyhistidine tag at the N-terminus. Predicted N terminal: His |
| Species: | Mouse |
| Expression Host: | HEK293 Cells |
| Accession: | P27548 |
| Molecular Weight: | 17.37 kDa (predicted); 22.13 kDa and 19.90 kDa (reducing conditions) |

QC Testing

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| Biological Activity: | Immobilized Recombinant Mouse CD40 / TNFRSF5 Protein (Fc Tag) at 2µg/mL (100µL/well) can bind Recombinant Mouse CD40 Ligand Protein (ECD, His Tag), the EC50 is 14-36 ng/mL. |
| Purity: | ≥ 95 % as determined by SDS-PAGE. |
| Endotoxin: | < 1.0 EU/µg of the protein as determined by the LAL method. |
| Formulation: | Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization. |

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

The cluster of differentiation (CD) system is commonly used as cell markers in immunophenotyping. Different kinds of cells in the immune system can be identified through the surface CD molecules which associating with the immune function of the cell. There are more than 320 CD unique clusters and subclusters have been identified. Some of the CD molecules serve as receptors or ligands important to the cell through initiating a signal cascade which then alter the behavior of the cell. Some CD proteins do not take part in cell signal process but have other

functions such as cell adhesion. CD154, also known as CD40 ligand or CD40L, is a member of the TNF superfamily. While CD154 was originally found on T cell surface, its expression has since been found on a wide variety of cells, including platelets, mast cells, macrophages and NK cells. CD154's ability is achieved through binding to the CD40 on antigen-presenting cells (APC). In the macrophage cells, the primary signal for activation is IFN- γ from Th1 type CD4 T cells. The secondary signal is CD40L on the T cell, which interacting with the CD40 molecules, helping increase the level of activation. Cancer Immunotherapy Co-stimulatory Immune Checkpoint Targets Immune Checkpoint Detection: Antibodies Immune Checkpoint Detection: ELISA Antibodies Immune Checkpoint Detection: WB Antibodies Immune Checkpoint Proteins Immune Checkpoint Targets Immunotherapy Targeted Therapy

Reference

- Zola H, et al. (2007) CD molecules 2006-human cell differentiation molecules. *J Immunol Methods*. 318 (1-2): 1-5.
- Ho IC, et al. (2009) GATA3 and the T-cell lineage: essential functions before and after T-helper-2-cell differentiation. *Nat Rev Immunol*. 9 (2): 125-35.
- Matesanz-Isabel J, et al. (2011) New B-cell CD molecules. *Immunology Letters*. 134 (2): 104-12.
- Grewal IS, et al. (1998) CD40 and CD154 in cell-mediated immunity. *Annual Review of Immunology*. 16: 111-35.

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