

CD40 Ligand Protein, Human, Recombinant (His)

General Information

Synonyms:	IMD3;hCD40L;CD40L;TRAP;TNFSF5;IGM;HIGM1;gp39;CD154;T-BAM;CD40 Ligand
Protein Construction:	Gln114-Leu261
Species:	Human
Expression Host:	E. coli
Accession:	P29965
Molecular Weight:	17.15 kDa (Predicted and reducing conditions)

QC Testing

Biological Activity:	Immobilized Human CD40 Ligand, His Tag at 5 µg/ml (100 µl/well) on the plate. Dose response curve for Human CD40, hFc Tag with the EC50 of 0.7 µg/ml determined by ELISA.
Purity:	> 95% as determined by Tris-Bis PAGE
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Supplied as 0.22 µm filtered solution in PBS, 10% glycerol (pH 7.4).

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:

Proteins are shipped with blue ice.

Protein Background

CD40 ligand or CD40L, also called CD154, is a protein that is primarily expressed on activated T cells and is a member of the TNF superfamily of molecules. It binds to CD40 (protein) on antigen-presenting cells (APC), which leads to many effects depending on the target cell type. In total CD40L has three binding partners: CD40, $\alpha 5\beta 1$ integrin and $\alpha 11\beta 3$. CD154 acts as a costimulatory molecule and is particularly important on a subset of T cells called T follicular helper cells.

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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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481