

# Active Recombinant Human CD40 Ligand

**Cat. No.** CD40LG-4737H    **Lot. No.** (See product label)

## SPECIFICATION

|                            |                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b>    | CD40L or CD154 is a membrane glycoprotein and differentiation antigen expressed on the surface of T-cells. The CD40 ligand stimulates B-cell proliferation and secretion of all immunoglobulin isotypes in the presence of cytokines. Recombinant Human CD40L produced in E.Coli is a non-glycosylated, Polypeptide chain containing 149 amino acids and having a molecular mass of 16308 Dalton. |
| <b>Species</b>             | Human                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Source</b>              | E.coli                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Description</b>         | CD154, also called CD40 ligand or CD40L, is a protein that is primarily expressed on activated T cells and is a member of the TNF superfamily of molecules. In general, CD40L 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.                                                               |
| <b>Form</b>                | CD40L is lyophilized from 10mM Sodium Phosphate pH=7.5.                                                                                                                                                                                                                                                                                                                                           |
| <b>Purity</b>              | Purity Greater than 98% as determined by: Analysis by RP-HPLC. Reducing and non-reducing SDS-PAGE.                                                                                                                                                                                                                                                                                                |
| <b>Bio-activity</b>        | H-CD40L is fully biologically active when compared to standard. The ED50 as determined using T-47D cells is <0.04 ug/ml.                                                                                                                                                                                                                                                                          |
| <b>Physical Appearance</b> | Sterile Filtered white lyophilized (freeze-dried) powder.                                                                                                                                                                                                                                                                                                                                         |

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|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Solubility</b>                               | Centrifuge vial before opening. When reconstituting the product, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution. It is recommended to reconstitute the lyophilized product with sterile water at a concentration of 0.1 mg/ml which can be further diluted into other aqueous solutions. |
| <b>Purity Greater than 98% as determined by</b> | Analysis by RP-HPLC. Reducing and non-reducing SDS-PAGE.                                                                                                                                                                                                                                                                                        |
| <b>Protein Content determined by</b>            | UV spectroscopy at 280 nm. Analysis by RP-HPLC calibrated against a known standard. Quantitation on SDS-PAGE against a known standard.                                                                                                                                                                                                          |
| <b>Endotoxin Level</b>                          | Endotoxin level as measured by LAL is <0.01ng/ug or <0.1EU/ug.                                                                                                                                                                                                                                                                                  |
| <b>Amino acid sequence</b>                      | MQKGDQNPQI AAHVISEASS KTTSVLQWAE KGYTMSNNL VTLENGKQLT<br>VKRQGLYYIY AQVTFCNRE ASSQAPFIAS LWLKSPGRFE RILLRAANTH<br>SSAKPCGQQS IHLGGVFELQ PGASVFNVT DPSQVSHGTG FTSFGLLKL                                                                                                                                                                          |
| <b>Storage</b>                                  | Lyophilized product is very stable at -20°C. Reconstituted material should be aliquoted and frozen at -20°C. It is recommended to add a carrier protein (0.1% HSA or BSA) for long term storage.                                                                                                                                                |

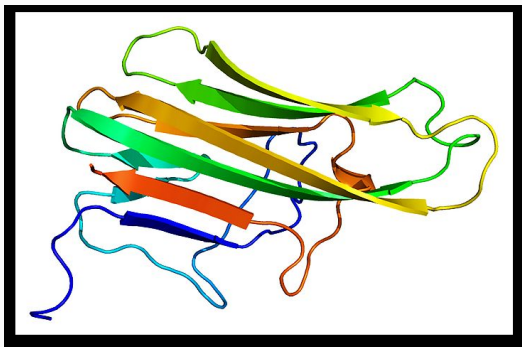
## GENE INFORMATION

|                        |                                                                                                                                                                                                                                              |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | CD40LG CD40 ligand [ Homo sapiens ]                                                                                                                                                                                                          |
| <b>Official Symbol</b> | CD40LG                                                                                                                                                                                                                                       |
| <b>Synonyms</b>        | CD40LG; CD40 ligand; IGM; IMD3; TRAP; gp39; CD154; CD40L; HIGM1; T-BAM; TNFSF5; hCD40L; CD40 ligand; T-cell antigen Gp39; T-B cell-activating molecule; tumor necrosis factor (ligand) superfamily member 5; TNF-related activation protein; |

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|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CD40 antigen ligand; CD40-L  |                                                                                                                                                                                                                                                                                               |
| Gene ID                      | 959                                                                                                                                                                                                                                                                                           |
| mRNA Refseq                  | NM_000074                                                                                                                                                                                                                                                                                     |
| Protein Refseq               | NP_000065                                                                                                                                                                                                                                                                                     |
| MIM                          | 300386                                                                                                                                                                                                                                                                                        |
| UniProt ID                   | P29965                                                                                                                                                                                                                                                                                        |
| Chromosome Location          | Xq26                                                                                                                                                                                                                                                                                          |
| Pathway                      | Allograft rejection; Asthma; Autoimmune thyroid disease; Cell adhesion molecules (CAMs); Cytokine-cytokine receptor interaction; Intestinal immune network for IgA production; Systemic lupus erythematosus; T cell receptor signaling pathway; Viral myocarditis; Signaling in Immune system |
| Function                     | CD40 receptor binding; cytokine activity; tumor necrosis factor receptor binding                                                                                                                                                                                                              |
| PDB rendering based on 1aly. |                                                                                                                                                                                                           |