

## Active GMP Recombinant Human CD40LG protein

**Cat. No.** CD40LG-4349HG    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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| <b>Product Overview</b> | Recombinant Human CD40LG was produced in E. coli using non-animal reagents in an animal-free facility under cGMP guidelines.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Description</b>      | CD40 ligand is a 261 amino acid type II transmembrane glycoprotein belonging to the TNF family and can be cleaved into two chains: the CD40 ligand membrane form and CD40 ligand soluble form. It is primarily expressed on activated CD4+ T lymphocytes, and also found in other types of cells, like NK cells, mast cells, basophils and eosinophils. In total CD40 ligand has three binding partners: CD40, $\alpha 5\beta 1$ integrin and $\alpha 11\beta 3$ . It mediates a range of activities on B cells including induction of activation-associated surface antigen, entry into cell cycle, isotype switching and Ig secretion and memory generation. CD40-CD40L interaction also plays important roles in monocyte activation and dendritic cell maturation. |
| <b>Form</b>             | Lyophilized from a 0.2 $\mu$ m filtered concentrated solution in PBS, pH 7.0.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Bio-activity</b>     | Fully biologically active when compared to standard. The ED50 as determined by the dose-dependent stimulation of IL-8 production by human PBMC is less than 5-10 ng/ml.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Molecular Mass</b>   | Approximately 16.3 kDa, a single non-glycosylated polypeptide chain containing 149                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

 Tel: 1-631-559-9269    1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)     Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                          | amino acids.                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>AA Sequence</b>       | MQKGDQNPQIAAHVISEASSKTTSVLQWAEKGYTMSNNLVTLENGKQLTVKRQGL<br>YYIYAQVTFCSNREASSQAPFIASLWLKSPGRFERILLRAANTHSSAKPCGQQSIHLG<br>GVFELQPGASVFNVTDPQSQVSHGTGFTSFGLLKL                                                                                                                                                                                                                                                                        |
| <b>Endotoxin</b>         | Less than 1 EU/μg of rHusCD40L as determined by LAL method.                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Purity</b>            | > 95 % by SDS-PAGE and HPLC analyses.                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Storage</b>           | This lyophilized preparation is stable at 2-8 centigrade, but should be kept at -20 centigrade for long term storage, preferably des centigradecated. Upon reconstitution, the preparation is stable for up to one week at 2-8 centigrade. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20 centigrade to -70 centigrade. Avoid repeated freeze/thaw centigrade centigradeles. |
| <b>Reconstitution</b>    | Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 centigrade. Further dilutions should be made in appropriate buffered solutions.                                                                                                                                                 |
| <b>Quality Statement</b> | Our GMP proteins are produced according to relevant sections of the following documents: WHO TRS, No. 822, 1992 Annex 1, Good Manufacturing Practices for Biological Products; USP Chapter 1043, Ancillary Materials for Cell, Gene and Tissue-Engineered Products and USP Chapter 92, Growth Factors and Cytokines Used in Cell Therapy Manufacturing.                                                                             |
| <b>Shipping</b>          | The product is shipped at ambient temperature. Upon receipt, store it immediately at the recommended temperature.                                                                                                                                                                                                                                                                                                                   |

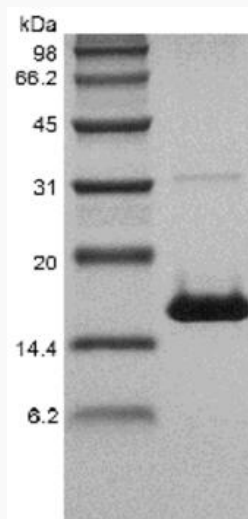
## GENE INFORMATION

|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | CD40LG CD40 ligand [ Homo sapiens ]                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Official Symbol</b> | CD40LG                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Synonyms</b>        | CD40LG; CD40 ligand; HIGM1, IMD3, TNFSF5, tumor necrosis factor (ligand) superfamily, member 5 (hyper IgM syndrome); CD40 antigen ligand; CD40L; CD154; gp39; hCD40L; hyper IgM syndrome; T B cell activating molecule; TNF related activation protein; TRAP; tumor necrosis factor (ligand) superfamily member 5; CD40-L; T-cell antigen Gp39; T-B cell-activating molecule; TNF-related activation protein; IGM; IMD3; HIGM1; T-BAM; TNFSF5; |
| <b>Gene ID</b>         | 959                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>mRNA Refseq</b>     | NM_000074                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Protein Refseq</b>  | NP_000065                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>MIM</b>             | 300386                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>UniProt ID</b>      | P29965                                                                                                                                                                                                                                                                                                                                                                                                                                         |

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