

Recombinant Rat Cd40lg, Fc-tagged

Cat. No. Cd40lg-8725R Lot. No. (See product label)

SPECIFICATION

Product Overview

A DNA sequence encoding the rat CD40LG (Gly115-Leu260) was expressed with Fc region of human IgG1 at the N-terminus.

Species

Rat

Source

Human Cells

ProteinLength

115-260 a.a.

Description

CD40 ligand, also known as CD40-L, T-cell antigen Gp39, TNF-related activation protein, Tumor necrosis factor ligand superfamily member 5, CD154, CD40L and TNFSF5, is a single-pass type II membrane protein which belongs to the tumor necrosis factor family. CD40L (CD154 / TNFSF5) is specifically expressed on activated CD4+ T-lymphocytes. The soluble form of CD40L (CD154 / TNFSF5) is derived from the membrane form by proteolytic processing. N-linked glycan is a mixture of high mannose and complex type. Glycan structure does not influence binding affinity to CD40. Release of soluble CD40L from platelets is partially regulated by GP IIb/IIIa, actin polymerization, and an matrix metalloproteinases (MMP) inhibitor-sensitive pathway. CD40L (CD154 / TNFSF5) mediates B-cell proliferation in the absence of co-stimulus as well as IgE production in the presence of IL-4. It is involved in immunoglobulin class switching. Defects in CD40L are the cause of X-linked immunodeficiency with hyper-IgM type 1 (HIGM1), also known as X-linked hyper IgM syndrome (XHIM). It is an immunoglobulin isotype switch defect characterized by elevated concentrations of serum IgM and decreased amounts of all other isotypes.

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|-----------------------------|--|
| Predicted N Terminal | Glu |
| Form | Lyophilized from sterile PBS, pH7.4. Normally 5 % - 8 % trehalose and mannitol are added as protectants before lyophilization. |
| Molecular Mass | The recombinant rat CD40LG comprises 406 amino acids and predicts a molecular mass of 44.4 kDa. The apparent molecular mass of the recombinant protein is approximately 53 kDa in SDS-PAGE under reducing conditions due to glycosylation. |
| Endotoxin | 1.0 eu/μg of the protein as determined by the lal |
| Purity | >80 % as determined by SDS-PAGE |
| Stability | Samples are stable for up to twelve months from date of receipt at -70°C |
| Storage | Store it under sterile conditions at -70°C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles. |

GENE INFORMATION

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|------------------------|---|
| Gene Name | Cd40lg CD40 ligand [Rattus norvegicus] |
| Official Symbol | Cd40lg |
| Synonyms | CD40LG; CD40 ligand; CD40-L; CD40 ligand CD154; tumor necrosis factor ligand superfamily member 5; tumor necrosis factor (ligand) superfamily, member 5; Cd40l; Tnfsf5; |
| Gene ID | 84349 |
| mRNA Refseq | NM_053353 |

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Protein Refseq

NP_445805

Pathway

Adaptive Immune System, organism-specific biosystem; Allograft rejection, organism-specific biosystem; Allograft rejection, conserved biosystem; Asthma, organism-specific biosystem; Asthma, conserved biosystem; Autoimmune thyroid disease, organism-specific biosystem; Autoimmune thyroid disease, conserved biosystem;

Function

CD40 receptor binding; CD40 receptor binding; CD40 receptor binding; cytokine activity; molecular_function; tumor necrosis factor receptor binding;

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