

## Mouse CD154 (CD40 Ligand) Recombinant Protein

Catalog Number: 14-8512

Also Known As: CD40L, CD40-L

RUO: For Research Use Only

### Product Information

Contents: Mouse CD154 (CD40 Ligand) Recombinant Protein

 Catalog Number: 14-8512

Handling Conditions: For best recovery, quick-spin vial prior to opening. Use in a sterile environment

Source: *E. coli*-expressed amino acids Gln103 – Leu250 (Accession # P27548)

Molecular Mass: 16 kDa

Purity: Greater than 98%, as determined by SDS-PAGE

Endotoxin Level: Less than 0.01 ng/ug cytokine as determined by the LAL assay.

Bioactivity: The ED<sub>50</sub> measured in a T-47D cell line proliferation assay is typically 1.5 ug/ml, corresponding to a specific activity of approximately 7.5 x10<sup>2</sup> Units/mg.

Formulation: Sterile liquid; phosphate buffered saline, pH 7.2, 1.0% BSA. 0.22 µm filtered.



Temperature Limitation: Store at less than or equal to -70°C.



Batch Code: Refer to Vial



Use By: Refer to Vial

### Description

CD40 ligand (CD40L, also known as CD154, TRAP or gp39) is a membrane glycoprotein expressed on activated CD4+ T-cells, NK cells, mast cells, basophils and eosinophils. The CD40-CD40L interaction stimulates B cell immune responses including cell surface antigen expression, cell cycle activation, Ig isotype switching, Ig secretion and memory generation. The CD40-CD40L interaction also plays important roles in monocyte and dendritic cell activation, T-cell co-stimulation and cytokine production. It has been reported that the CD40-CD40L interaction is involved in the pathogenesis of amyloid pathology in Alzheimer disease. *E. coli*-produced recombinant mouse CD40L is a non-glycosylated polypeptide of 149 amino acids comprising the soluble extracellular domain of CD40L.

### Applications Reported

Recombinant mouse CD40L is biologically active and can promote proliferation of T-47D cells in culture.

### Applications Tested

This reagent has been tested in bioassays using the cell line T-47D. The ED<sub>50</sub> measured in a T-47D cell proliferation assay is typically 1.5 ug/ml, corresponding to a specific activity of approximately 7.5 x10<sup>2</sup> Units/mg.

### References

Johnson S, Zhan Y, Sutherland RM, Mount AM, Bedoui S, Brady JL, Carrington EM, Brown LE, Belz GT, Heath WR, Lew AM. Selected Toll-like receptor ligands and viruses promote helper-independent cytotoxic T cell priming by upregulating CD40L on dendritic cells. *Immunity*. 2009 Feb;30(2):218-27.

Heeschen, C. Dimmeler, S. Hamm, C. W. van den Brand, M. J. Boersma, E. Zeiher, A. M. Simoons, M. L. Soluble CD40 ligand in acute coronary syndromes. *New Eng. J. Med*. 2003: 348: 1104-1111.

Straw, A. D. MacDonald, A. S. Denkers, E. Y. Pearce, E. J. CD154 plays a central role in regulating dendritic cell activation during infections that induce Th1 or Th2 responses. *J. Immun*. 2003: 170: 727-734.

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### Related Products

14-8502 Human CD154 (CD40 Ligand) Recombinant Protein