

## BACKGROUND

CD40 Ligand (CD40-L), or CD154, is a membrane glycoprotein and differentiation antigen expressed on the surface of T cells. The CD40-L stimulates B-cell proliferation and secretion of all immunoglobulin isotypes in the presence of cytokines. CD40-L has been shown to induce cytokine production and tumoricidal activity in peripheral blood monocytes. CD40-L also co-stimulates proliferation of activated T-cells and this is accompanied by the production of IFN- $\gamma$ , TNF- $\alpha$ , and IL-2.

Recombinant mouse sCD40 Ligand is a non-glycosylated protein, containing 149 amino acids and having a molecular mass of 16.4 kDa.

### Alternative Names:

TNFSF5, TRAP, CD154, gp39, T-BAM

### Amino Acid Sequence:

MQRGDEDPQI AAHVSEANS NAASVLQWAK KGYTMSNL  
VLENGKQLT VKREGLYVYV TQVTFCSNRE PSSQRPFIIVG  
LWLKPSGSE RILLKAANTH SSSQLCEQQS VHLGGVFELQ  
AGASVFNVT EASQVIHRVG FSSFGLLKL

## TECHNICAL INFORMATION

**Source:** *E.coli*

### Physical Appearance:

Sterile Filtered white lyophilized (freeze-dried) powder.

### Formulation:

Recombinant mouse CD40 Ligand is lyophilized from a sterile concentrated solution (1mg/ml) with 10mM Na<sub>2</sub>PO<sub>4</sub>, pH 7.5.

### Stability:

Lyophilized product is very stable at -20°C. Reconstituted material should be aliquoted and frozen at -20°C. It is recommended that a carrier protein (0.1% HSA or BSA) is added for long term storage.

### Reconstitution:

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.

### Protein Content and Purity determined by:

- UV spectroscopy at 280 nm
- RP-HPLC calibrated against a known standard
- Quantitation against a known standard via reducing and non-reducing SDS-PAGE gels.

### Endotoxin Level:

Endotoxin level, as measured by LAL analysis, is <0.01ng/ug or <0.1EU/ug.

### Biological Activity:

The activity is determined by the dose production of IL-8 by human PBMCs in the presence of and is typically 5-10 ng/mL.

*Products are for research use only. They are not intended for human, animal, or diagnostic applications.*

