

**CD40L/CD154/TRAP**  
**Catalog # PVGS1012****Specification**

---

**CD40L/CD154/TRAP - Product Information**

Primary Accession [P29965](#)  
**Species**  
Human

**Sequence**  
Met113-Leu261

**Purity**  
> 95% as analyzed by SDS-PAGE  
> 95% as analyzed by RP-HPLC  
> 95% as analyzed by Anion-exchange FPLC

**Endotoxin Level**  
< 1 EU/ µg of protein by LAL method

**Biological Activity**  
Recombinant human CD40 Ligand (CD40L/CD154/TRAP) is fully biologically active when compared to standard. The ED<sub>50</sub> as determined by the dose-dependant stimulation of IL-12 & IL-8 induction by PMB (Peripheral Mononuclear) cells was found to be 5.0-10.0 ng/ml, corresponding to a Specific Activity of 1.0 x 10<sup>5</sup> IU/mg.

**Expression System**  
E. coli

**Theoretical Molecular Weight**  
16.3 kDa

Formulation **Lyophilized after extensive dialysis against 50 mM Tris-HCl, pH 8.0, 250 mM NaCl buffer.**

**Reconstitution**  
It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in sterile 18 MΩ-cm H<sub>2</sub>O up to 100 µg/ml.

**Storage & Stability**  
Upon receiving, this product remains stable for up to 6 months at -70°C or -20°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. Avoid repeated freeze-thaw cycles.

**CD40L/CD154/TRAP - Additional Information**

**Gene ID** 959

**Other Names**  
CD40 ligand, CD40-L, T-cell antigen Gp39, TNF-related activation protein, TRAP, Tumor necrosis

factor ligand superfamily member 5, CD154, CD40 ligand, membrane form, CD40 ligand, soluble form, sCD40L, CD40LG, CD40L, TNFSF5, TRAP

### Target Background

CD40 Ligand (CD40L/CD154/TRAP) 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. It also costimulates proliferation of activated T-cell and this is accompanied by the production of IFN- $\gamma$ , TNF- $\alpha$ , and IL2. CD40 ligand has been shown to induce cytokine production and tumoricidal activity in peripheral blood monocytes.

### CD40L/CD154/TRAP - Protein Information

**Name** CD40LG

**Synonyms** CD40L, TNFSF5, TRAP

### Function

Cytokine that acts as a ligand to CD40/TNFRSF5 (PubMed:<a href="http://www.uniprot.org/citations/1280226" target="\_blank">1280226</a>, PubMed:<a href="http://www.uniprot.org/citations/31331973" target="\_blank">31331973</a>). Costimulates T-cell proliferation and cytokine production (PubMed:<a href="http://www.uniprot.org/citations/8617933" target="\_blank">8617933</a>). Its cross-linking on T-cells generates a costimulatory signal which enhances the production of IL4 and IL10 in conjunction with the TCR/CD3 ligation and CD28 costimulation (PubMed:<a href="http://www.uniprot.org/citations/8617933" target="\_blank">8617933</a>). Induces the activation of NF-kappa-B (PubMed:<a href="http://www.uniprot.org/citations/15067037" target="\_blank">15067037</a>, PubMed:<a href="http://www.uniprot.org/citations/31331973" target="\_blank">31331973</a>). Induces the activation of kinases MAPK8 and PAK2 in T-cells (PubMed:<a href="http://www.uniprot.org/citations/15067037" target="\_blank">15067037</a>). Induces tyrosine phosphorylation of isoform 3 of CD28 (PubMed:<a href="http://www.uniprot.org/citations/15067037" target="\_blank">15067037</a>). Mediates B-cell proliferation in the absence of co-stimulus as well as IgE production in the presence of IL4 (By similarity). Involved in immunoglobulin class switching (By similarity).

### Cellular Location

Cell membrane; Single-pass type II membrane protein. Cell surface

### Tissue Location

Specifically expressed on activated CD4+ T- lymphocytes

### CD40L/CD154/TRAP - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## **CD40L/CD154/TRAP - Images**