

#### CD40L/CD154/TRAP

Catalog # PVGS1012

### **Specification**

### CD40L/CD154/TRAP - Product Information

Primary Accession **Species** 

P29965

Sequence

Human

Met113-Leu261

# **Purity**

>95% as analyzed by SDS-PAGE<br/> < 95% as analyzed by RP-HPLC<br/> < 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 M $\Omega$ -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

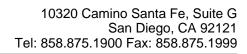
### **Tissue Location**

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 Cytomety
- Cell Culture





CD40L/CD154/TRAP - Images