

## CD40L/CD154/TRAP, Human

**Cat. No.:** Z02022-1

**Size:** 1.0 mg

**Synonyms:** CD40 Ligand, CD154, TRAP, TNFSF5, gp39

**Description:**

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.

Recombinant Human CD40 Ligand (CD40L/CD154/TRAP) produced in *E. coli* is a non-glycosylated, polypeptide chain containing 149 amino acids and having a molecular mass of 16,308 Da.

**Source:** *E. coli*

**Species:** Human

**Biological Activity:** Recombinant human CD40 Ligand (CD40L/CD154/TRAP) is fully biologically active when compared to standard. The ED50 as determined by the dose-dependant stimulation of IL-12 & IL-8 induction by PMB (Peripheral Mononuclear) cells was found to be 5-10 ng/ml, corresponding to a Specific Activity of  $1.0 \times 10^5$  IU/mg.

**Molecular Weight:** 16,308 Da

**Sequence Analysis:** The sequence of the first five N-terminal amino acids was determined and was found to be Met-Gln-Lys-Gly-Asp.

**Formulation:** The protein was lyophilized after extensive dialysis against 50mM Tris-HCl, pH8.0, 250mM NaCl buffer.

**Reconstitution:** It is recommended to reconstitute the lyophilized recombinant human CD40 Ligand (CD40L/CD154/TRAP) in sterile 18 M $\Omega$ -cm H<sub>2</sub>O not less than 100  $\mu$ g/ml, which can then be further diluted to other aqueous solutions.

**Purity:** Greater than 95.0% as determined by:

1. Analysis by RP-HPLC.
2. Anion-exchange FPLC.
3. Analysis by reducing and non-reducing SDS-PAGE Silver Stained gel.

**Endotoxin Level:** Less than 0.1 ng/ $\mu$ g (1 EU/ $\mu$ g) of recombinant human CD40 Ligand (CD40L) as determined by LAL test.

**Storage:** Lyophilized recombinant human CD40 Ligand (CD40L/CD154/TRAP) although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution CD40L should be stored at 4°C between 2-7 days and for future use below -18°C. For long-term storage it is recommended to add a carrier protein (0.1% HSA or BSA).