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## Recombinant Human soluble CD40 (CD154) Ligand/TRAP

(Cat. No.: C011)

### Background:

CD40L or CD 154 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. CD40 ligand has been shown to induce cytokine production and tumoricidal activity in peripheral blood monocytes. It also costimulates proliferation of activated T-cells and this is accompanied by the production of IFN-gamma, TNF-alpha, and IL2.

### Description :

Recombinant Human CD40L produced in *E. coli* is a non-glycosylated, polypeptide chain containing 149 amino acids and having a molecular mass of 16308 Dalton.

### Quality Control:

**Biological Activity:** CD40L 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.

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

- (a) Analysis by RP-HPLC.
- (b) Anion-exchange FPLC.
- (c) Analysis by reducing and non-reducing SDS-PAGE Silver Stained

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

**Endotoxin:** Less than 0.1 ng/ $\mu$ g (1 IEU/ $\mu$ g) of soluble CD40L.

**Formulation:** CD40L is lyophilized from a sterile concentrated solution (1mg/ml) with 20mM phosphate buffer at pH7.4.

**Storage:** Lyophilized CD40L 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).

**Please avoid freeze-thaw cycles. For laboratory in vitro research use only.**

**Reconstitution:** It is recommended to reconstitute the lyophilized CD40L in sterile 1 8M $\Omega$ -cm H<sub>2</sub>O not less than 100 $\mu$ g/ml, which can then be further diluted to other aqueous solutions.