

Recombinant Human soluble CD40(CD154) Ligand/TRAP

Certificate of Analysis and Data Sheet

➤ Source: E.Coli	➤ Catalog No. CTK-245
----------------------------	---------------------------------

➤ **Background:**

CD40L or CD154 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 co-stimulates 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.

Recombinant CD40L is purified by proprietary chromatographic techniques.

➤ **Physical Appearance:**

Sterile Filtered White lyophilized (freeze-dried) powder.

➤ **Formulation:**

CD40L is lyophilized from a sterile concentrated solution (1mg/ml) with 10mM Sodium Phosphate pH=7.5.

➤ **Solubility:**

It is recommended to reconstitute the lyophilized CD40L in sterile 18MΩ-cm H₂O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

➤ **Stability:**

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 prevent freeze-thaw cycles.

➤ **Purity:**

Greater than 98.0% 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.

➤ **Dimers and aggregates:**

Less than 1% as determined by silver-stained SDS-PAGE gel analysis.

➤ **Biological Activity:**

This CD40L is fully biologically active when compared to standard. The ED50 as determined by the dose-dependent stimulation of IL-12 & IL-8 induction by PMB (Peripheral Mononuclear) cells was found to be 5-10 ng/ml.

➤ **Endotoxin:**

Less than 0.1 ng/μg (IEU/μg) of soluble CD40L.

➤ **Protein content:**

Protein quantitation was carried out by two independent methods:

1. UV spectroscopy at 280 nm using the absorbency value of 1.1 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics).
2. Analysis by RP-HPLC, using a standard solution of soluble CD40L as a Reference Standard.

➤ **Usage:**

This material is offered for research, laboratory or further evaluation purposes.