

Overview

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- γ , TNF- α , 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 <i>E. coli</i> is a non-glycosylated, polypeptide chain containing 149 amino acids and having a molecular mass of 16,308 Da.
Species Source	Human <i>E. coli</i>
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 1.0×10^5 IU/mg.

Properties

Measured Molecular Weight	16,308 Da
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.
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 Ω -cm H ₂ O not less than 100 μ g/ml, which can then be further diluted to other aqueous solutions.
Endotoxin Level	Less than 0.1 ng/ μ g (1 EU/ μ g) of recombinant human CD40 Ligand (CD40L) as determined by LAL test.
Sequence Analysis	The sequence of the first five N-terminal amino acids was determined and was found to be Met-Gln-Lys-Gly-Asp.
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).

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