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## **Recombinant Human sCD40 Ligand/TRAP**

**Description:** CD40, a member of the TNF receptor family, is a cell surface protein expressed on B cells, dendritic cells, monocytes, thymic epithelial cells and, at low levels, on T cells. Signaling through CD40 plays an important role in the proliferation and differentiation of B cells, and is critical for immunoglobulin (Ig) class switching. The membrane-anchored CD40-Ligand is expressed almost exclusively on activated CD4+ T lymphocytes. Failure to express CD40L leads to "immunodeficiency with hyper-IgM", a disease characterized by failure to produce IgG, IgA and IgE. The human CD40L gene codes for a 261 amino acid type II transmembrane protein, which contains a 22 amino acid cytoplasmic domain, a 24 amino acid transmembrane domain, and a 215 amino acid extracellular domain. The soluble form of CD40L is an 18 kDa protein comprising the entire TNF homologous region of CD40L and is generated *in vivo* by an intracellular proteolytic processing of the full length CD40L. Recombinant human soluble CD40 ligand is a 16.3 kDa protein containing 149 amino acid residues comprising the receptor binding TNF-like domain of CD40L.

<b>Source:</b>	E. coli
<b>Molecular Weight:</b>	16.3 kDa
<b>Purity:</b>	> 97 % (SDS-PAGE; HPLC)
<b>Endotoxin level:</b>	< 0.1 ng per µg of sCD40L/TRAP
<b>Stabilizer:</b>	none
<b>Formulation:</b>	lyophilized

### **Biological Activity:**

**Assay #1:** Determined by the stimulation of IL-12 induction by human PBMCs.

**Assay #2:** Determined by the dose-dependent stimulation of IL-8 production by human PBMC. The expected ED50 for this effect is 5-10 ng/ml. Note: Results may vary with PBMC donors.

**Stability:** The lyophilized protein is stable for at least 2 years from date of receipt at -20°C. Reconstituted sCD40L is stable for at least 3 months when stored in working aliquots with a carrier protein at -20°C. Avoid repeated freeze/thaw cycles.

**Avoid repeated freeze-thaw cycles.**

**Usage:** Human sCD40L/TRAP is offered for research use. Not for drug use. **Not for human use.**

**Catalogue number:** 100-115

**Size:** 10 µg

**Range:** 0.1-10.0 ng/ml

**\*\*please note: always centrifuge product before opening Vial\*\***