

## CD40L/CD154/TRAP Protein, Human

<b>Cat. No.:</b>	HY-P7144
<b>Synonyms:</b>	rHuCD40L; CD154; TRAP; TNFSF5; CD40LG; CD40-L
<b>Species:</b>	Human
<b>Source:</b>	E. coli
<b>Accession:</b>	P29965 (M113-L261)
<b>Gene ID:</b>	959
<b>Molecular Weight:</b>	Approximately 16.3 kDa

### PROPERTIES

<b>AA Sequence</b>	<p>M Q K G D Q N P Q I    A A H V I S E A S S    K T T S V L Q W A E    K G Y Y T M S N N L</p> <p>V T L E N G K Q L T    V K R Q G L Y Y I Y    A Q V T F C S N R E    A S S Q A P F I A S</p> <p>L C L K S P G R F E    R I L L R A A N T H    S S A K P C G Q Q S    I H L G G V F E L Q</p> <p>P G A S V F V N V T    D P S Q V S H G T G    F T S F G L L K L</p>
<b>Biological Activity</b>	The ED <sub>50</sub> is <10 ng/mL as measured by PMB (Peripheral Mononuclear) cells, corresponding to a specific activity of >1.0 × 10 <sup>5</sup> units/mg.
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized after extensive dialysis against 50 mM Tris-HCl, pH 8.0, 250 mM NaCl buffer.
<b>Endotoxin Level</b>	<1 EU/μg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH <sub>2</sub> O or PBS.
<b>Storage &amp; Stability</b>	Stored at -20°C. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer. It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

<b>Background</b>	<p>CD40, a member of the TNF receptor family of proteins, is a cell surface protein expressed on B lymphocytes, follicular dendritic cells, normal epithelium, and some epithelial carcinomas. Cells transfected with hCD40-L causes the proliferation of human tonsil B cells in the absence of costimuli and, in the presence of interleukin 4, induces immunoglobulin E secretion from purified human B cells<sup>[1]</sup>. The CD40 ligand interaction is initially described to play an essential role during membrane-membrane interactions between activated CD4<sup>+</sup> T lymphocytes and B cells, as well as between CD4<sup>+</sup> T cells and antigen-presenting cells. However, further studies show that soluble CD40 ligand (sCD40L) produced by T cells and platelets<sup>[2]</sup>.</p>
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## REFERENCES

- [1]. Spriggs MK, et al. Recombinant human CD40 ligand stimulates B cell proliferation and immunoglobulin E secretion. J Exp Med. 1992 Dec 1;176(6):1543-50.
- [2]. Cabral-Marques O, et al. Human CD40 ligand deficiency dysregulates the macrophage transcriptome causing functional defects that are improved by exogenous IFN- $\gamma$ . J Allergy Clin Immunol. 2017 Mar;139(3):900-912.e7.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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