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sCD40L

Catalog # PVGS1071

Product Information

Primary Accession	P29965
Species	Human
Sequence	Met113-Leu261
Purity	> 95% as analyzed by SDS-PAGE > 95% as analyzed by HPLC
Endotoxin Level	
Biological Activity	Fully biologically active when compared to standard. The ED_{50} as determined by the dose-dependent stimulation of IL-8 production by human PBMC is less than 5.0-10.0 ng/ml.
Expression System	E. coli
Theoretical Molecular Weight	16.3 kDa
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS, pH 7.0.
Reconstitution	It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/ml.
Storage & Stability	Upon receiving, this product remains stable for up to 6 months at -70°C or -20°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. Avoid repeated freeze-thaw cycles.

Additional Information

Gene ID	959
Other Names	CD40 ligand, CD40-L, T-cell antigen Gp39, TNF-related activation protein, TRAP, Tumor necrosis factor ligand superfamily member 5, CD154, CD40 ligand, membrane form, CD40 ligand, soluble form, sCD40L, CD40LG, CD40L, TNFSF5, TRAP
Target Background	CD40 ligand, CD40L (also known as CD154, TRAP or gp39), is a 261 amino acid type II transmembrane glycoprotein belonging to the TNF family, CD40L is expressed predominantly on activated $CD4^+$ T lymphocytes, and also found in other types of cells, like NK cells, mast cells, basophils and eosinophils. Human CD40L shares 78% amino acid identity with its mouse counterpart. The receptor of CD40L is CD40, a type I transmembrane glycoprotein belonging to the TNF receptor family. CD40 is expressed on B lymphocytes, monocytes, dendritic cells and thymic epithelium. Although all monomeric,

dimeric and trimeric forms of soluble CD40L can bind to CD40, the trimeric form of soluble CD40L has the most potent biological activity through oligomerization of cell surface CD40, a common feature of TNF receptor family members. CD40L mediates a range of activities on B cells including induction of activation-associated surface antigen, entry into cell cycle, isotype switching and Ig secretion and memory generation. CD40-CD40L interaction also plays important roles in monocyte activation and dendritic cell maturation.

Protein Information

Name	CD40LG
Synonyms	CD40L, TNFSF5, TRAP
Function	Cytokine that acts as a ligand to CD40/TNFRSF5 (PubMed: 1280226, PubMed:31331973). Costimulates T-cell proliferation and cytokine production (PubMed:8617933). Its cross-linking on T-cells generates a costimulatory signal which enhances the production of IL4 and IL10 in conjunction with the TCR/CD3 ligation and CD28 costimulation (PubMed:8617933). Induces the activation of NF-kappa-B (PubMed:15067037, PubMed:31331973). Induces the activation of kinases MAPK8 and PAK2 in T-cells (PubMed:15067037). Induces tyrosine phosphorylation of isoform 3 of CD28 (PubMed:15067037). Mediates B-cell proliferation in the absence of co-stimulus as well as IgE production in the presence of IL4 (By similarity). Involved in immunoglobulin class switching (By similarity).
Cellular Location	Cell membrane; Single-pass type II membrane protein. Cell surface
Tissue Location	Specifically expressed on activated CD4+ T- lymphocytes

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.