

TECHNICAL DATA SHEET

Recombinant Human sCD40 Ligand (Carrier-free)

Catalog Number: 21-7088

RPx-Pro™ Recombinant Protein

PRODUCT INFORMATION

CONTENTS

Recombinant Human sCD40 Ligand (Carrier-free)

DESCRIPTION

CD40 Ligand (CD40L, CD154, TRAP, TNFSF5, gp39) belongs to the TNF superfamily and in its soluble form, displays some cytokine-like properties. CD40L binds to its receptor, CD40, to mediate T cell-dependent B cell responses and contribute to monocyte activation and dendritic cell maturation. Membrane-bound CD40L is expressed mainly on activated T cells, a small population of CD8+ T cells, and has been demonstrated on mast cells, basophils, eosinophils, B cells, NK cells and monocytes/macrophages. Activated platelets express CD40L on their surface and constitute the major source of soluble CD40L (sCD40L). sCD40L is a shorter protein than the membrane-bound version and retains biologic activity and ability to form trimers. CD40L expression can be upregulated using mitogens like PMA or PHA, through anti-CD3 activation, or by thrombin in platelets.

MOLECULAR MASS

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.

AMINO ACID SEQUENCE

MQKGDQNPQI AAHVISEASS KTTSVLQWAE KGYTMSNNL VTLENGKQLT VKRQGLYYIY AQVTFCSNRE ASSQAPFIAS
LWLKSPGRFE RILLRAANTH SSAKPCGQQS IHLGGVFELQ PGASVFNVT DPSQVSHGTG FTSFGLLKL

SOURCE

E. coli

APPLICATIONS

Bioassay

PURITY

98 %

STORAGE

-20°C

PROTEIN CONTENT

Content Verified by UV Spectroscopy and/or SDS-PAGE

ENDOTOXIN LEVEL

Endotoxin level is <0.1 ng/µg of protein (<1 EU/µg).

AUTHENTICITY

Verified by N-terminal and Mass Spectrometry analyses (when applicable).

CROSS REACTIVITY

Monkey, Mouse

BIOACTIVITY

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.

RESEARCH AREAS

Angiogenesis/Cardiovascular; Apoptosis; Immune System; TNF Superfamily; Allergy; Transplantation; Inflammation; Proliferation

RECONSTITUTION

See Certificate of Analysis (COA) for lot specific reconstitution information.

REFERENCES

Armitage RJ, Maliszewski CR, Alderson MR, Grabstein KH, Spriggs MK and Fanslow WC. 1993. Semin Immunol. 5(6): 401-412. Matthies KM, Newman JL, Hodzic A and Wingett DG. 2006. Cell Immunol. 241(1): 47-58. Graf D, Karthauer U, Mages HW, Senger G and Kroczeck RA. 1992. Eur J Immunol. 22(12): 3191-3194. van Kooten C and Banchereau J. 2000. J Leukoc Biol. 67(1): 2-17. Grewal IS and Flavell RA. 1996. Immunol Rev. 153: 85-106.

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