

TECHNICAL DATA SHEET

Recombinant Human TNF-beta (LT-alpha) (Carrier-free)

Catalog Number: 21-7071

RPx-Pro™ Recombinant Protein

PRODUCT INFORMATION

CONTENTS

Recombinant Human TNF-beta (LT-alpha) (Carrier-free)

DESCRIPTION

TNF-beta, also known as Lymphotoxin alpha (LT-a), is a member of the Tumor Necrosis Factor (TNF) superfamily. It binds the same cell surface receptors, TNF RI and TNF RII, as TNF-alpha. TNF-beta is produced by activated T and B lymphocytes and has similar, but not identical, activities to TNF-α. TNF-beta has cytotoxic effects on tumor cells and also involved in regulation and mediation of inflammation, immune function, cell proliferation and differentiation, apoptosis and neurotransmission. It has also been reported to play a role in autoimmune disease.

MOLECULAR MASS

Recombinant human TNF-beta is a secreted 172 amino acid protein (18.6 kDa) which forms an active non-disulfide linked homotrimer structure in solution.

AMINO ACID SEQUENCE

MLPGVGLTPS AAQARQHPK MHLAHLSTLKP AAHLIGDPSK QNSLLWRANT DRAFLQDGFS LSNNSLLVPT SGIYFVYSQV
VFSGKAYSPK ATSSPLYLAH EVQLFSSQYP FHVPLLSSQK MVYPGLQEPW LHSMYHGAAF QLTQGDQLST HTDGIPHLVL
SPSTVFFGAF AL

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

Mouse

BIOACTIVITY

The ED₅₀ as determined by the cytolysis of murine L929 cells in the presence of Actinomycin-D is ≤ 0.05 ng/ml, corresponding to a specific activity of ≥ 2 x 10⁷ units/mg.

RESEARCH AREAS

Angiogenesis/Cardiovascular; Apoptosis; Immune System; Lipid Metabolism; Neurobiology; TNF Superfamily; Allergy; Inflammation: Proliferation: Stem Cells & Differentiation

RECONSTITUTION

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

REFERENCES

Nedwin GE, Jarrett-Nedwin J, Smith DH, Naylor SL, Sakaguchi AY, Goeddel DV and Gray PW. 1985. J Cell Biochem. 29(3): 171-181. Warzocha K, Bienvu J, Coiffier B and Salles G. 1995. Eur Cytokine Netw. 6(2): 83-96. Drutskaya MS, Efimov GA, Kruglov AA, Kuprash DV and Nedospasov SA. 2010. IUBMB Life. 62(4): 283-289. Seleznik GM, Zoller J, O'Connor T, Graf R and Heikenwalder M. 2014. Cytokine Growth Factor Rev. 25(2): 125-137. Aggarwal BB, Vilcek J, eds. 1992. Tumor Necrosis Factors. Structure, Function and Mechanisms of Action. Marcel Dekker, Inc.

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