

TECHNICAL DATA SHEET

Recombinant Human TNF- α (Carrier-free)

Catalog Number: 21-8329

RPx-Pro™ Recombinant Protein

PRODUCT INFORMATION

CONTENTS

Recombinant Human TNF- α (Carrier-free)

DESCRIPTION

TNF-alpha is a clinically important cytokine with strong pro-inflammatory activities. TNF-alpha is secreted by a variety of immune and non-immune cells including adipocytes, activated monocytes, macrophages, B cells, T cells and fibroblasts. TNF-alpha signals through two receptors, TNFR1 and TNFR2. TNF-alpha has strong cytolytic activities against a wide variety of tumor cells and is critically important in combat against bacterial infections. The inflammatory effects of TNF-alpha are also deleterious in causation of septic shock, and autoimmune diseases including rheumatoid arthritis, inflammation, and diabetes.

MOLECULAR MASS

Recombinant Human TNF alpha is a soluble 157 amino acid protein of 17.4 kDa which corresponds to C-terminal extracellular domain of the full length transmembrane protein.

AMINO ACID SEQUENCE

VRSSSRTPS DKPVAHVVAN PQAEGQLQWL NRRANALLAN GVLELRDNLV VPSEGLYLIY SQVLFKGGGC PSTHLLTHT ISRIAVSYQT KVNLLSAIKS PCQRETPEGA EAKPWYEPIY LGGVFQLEKG DRLSAEINRP DYLDFAESGQ VYFGIIAL

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

Cow, Monkey, Mouse, Rat, Sheep

BIOACTIVITY

ED₅₀ is determined by the cytolysis of mouse 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

AIDS/HIV; Angiogenesis/Cardiovascular; Apoptosis; Cancer; Diabetes / Weight Regulation; Immune System; Inflammation; Neurobiology; Stem Cells & Differentiation; TNF Superfamily; Allergy; Transplantation

RECONSTITUTION

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

REFERENCES

Feldmann M and RN Maini 2010 J Immunol 185: 791-794. Palladino MA, FR Bahjat, EA Theodorakis and LL Moldawer 2003 Nat Rev Drug Discov 2: 736-46. Swardfager W, K Lancôt, L Rothenburg, A Wong, J Cappell and N Herrmann 2010 Biol Psychiatry 68: 930-941. Locksley RM, N Killeen and MJ Lenardo 2001 Cell 104: 487-501. Kolb WP and GA Granger Proc Natl Acad Sci USA 61(4): 1250-1255. Ruddle NH and BH Waksman 1968 J Exp Med 128(6): 1267-1279. Carswell EA, LJ Old, RL Kassel, S Green, N Fiore and B Williamson 1975 Proc Natl Acad Sci USA 72: 3666-3670.

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