

Human TNF-alpha, cct-premium (Yeast)

Synonyms: Human Tumor Necrosis Factor-alpha, recombinant

PLEASE NOTE: ALWAYS CENTRIFUGE VIAL BEFORE OPENING

Size	Order #	Lot #	Expiry Date
10 µg	1960.953.010		
50 µg	1960.953.050		
100 µg	1960.953.100		
1 mg	1960.953.199		

Please enquire for bulk quantities and other vial sizes

Description

Recombinant human Tumor Necrosis Factor-alpha (TNF-a) is a soluble 17.4 kDa protein containing 157 amino acid residues which corresponds to C-terminal extracellular domain of the full length transmembrane protein. TNF-a is a pleiotrophic pro-inflammatory cytokine secreted by various cells including adipocytes, activated monocytes, macrophages, B cells, T cells and fibroblasts. It belongs to the TNF family of ligands and signals through two receptors, TNFR1 and TNFR2. TNF-alpha is cytotoxic to a wide variety of tumor cells and is an essential factor in mediating the immune response against bacterial infections. TNF-alpha also plays a role in the induction of septic shock, auto immune diseases, rheumatoid arthritis, inflammation and diabetes.

• Biological Activity	≥ 4 x 10 ⁷ IU/mg
• Source	Yeast
• Purity	≥ 97 % (SDS-PAGE)
• Endotoxin level	≤ 0.1 ng/µg TNF-alpha (≤ 1EU/µg), (Limulus Amebocyte Lysate assay)
• Stabilizer	Mannitol 50 µg/µg TNF-alpha
• Buffer	None*
• Physical state	Sterile filtered (0.2 µm), lyophilized

Biological Activity

The ED₅₀ of ≤ 0.025 ng/ml was determined after lyophilization in direct comparison to the WHO Standards (NIBSC code 88/786) by a standard cell cytotoxicity assay using the TNF-alpha susceptible mouse cell line L929 in the presence of 1 µg/ml Actinomycin D.¹⁾ It corresponds to a specific activity of ≥ 4.0 x 10⁷ IU/mg.

¹⁾ Baarsch, M.J. et al. (1991) Detection of tumor necrosis factor alpha from porcine alveolar macrophages using an L929 fibroblast bioassay. J. Immunol. Methods 140:15-22.

Reconstitution

We recommend a quick spin followed by reconstitution in sterile-filtered water to a concentration not less than 100 µg/ml. Do not vortex. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1 % BSA or HSA).

Stability

The lyophilized protein is stable at room temperature for a few weeks, but best stored at -20°C. Reconstituted Human TNF-alpha should be used immediately or divided into aliquots and stored at -20°C for future use. For long term storage it is recommended to add a carrier protein (0.1 % HSA or BSA). **Please avoid repeated freeze-thaw cycles.**

Usage: For research use only. Not for use in diagnostic or therapeutic procedures. Not for human use.

*The Buffer may vary depending on the Lot #. Please contact our technical support if you have specific requirements.

ORDERING

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TECHNICAL SUPPORT

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