

Human TNF-alpha / TNFA Protein

Catalog Number: GMP-10602-HNAE



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

DIF; TNF-alpha; TNFA; TNFSF2

Protein Construction:

A DNA sequence encoding the human TNF- α soluble form (NP_000585.2) (Val77-Leu233) was expressed with an initial Met at the N-terminus.

Source: Human

Expression Host: E. coli

QC Testing

Purity: $\geq 95\%$ as determined by SDS-PAGE. $\geq 95\%$ as determined by SEC-HPLC.

Bio Activity:

1. Measured in a cytotoxicity assay using L929 mouse fibrosarcoma cells in the presence of the metabolic inhibitor actinomycin D. The ED₅₀ for this effect is typically 3-30 pg/mL. The specific activity of recombinant human TNF-alpha is $>36,000\text{IU}/\mu\text{g}$, which is calibrated against the human TNF-alpha WHO International Standard (NIBSC code: 12/154).

2. Dendritic Cells (DCs) generation and maturation.

CD14⁺ monocytes were differentiated into immature DCs by GM-CSF (Cat#GMP-10015-HNAH) and IL4 (Cat#GMP-11846-HNAE) for 6 days.

DCs were matured by TNF (Cat#GMP-10602-HNAE) for 2 days. (Routinely tested)

Endotoxin:

$< 5\text{ EU per mg}$ of the protein.

Predicted N terminal: Met

Molecular Mass:

The recombinant human TNF- α consists of 158 amino acids and has a predicted molecular mass of 17.5 kDa.

Formulation:

Supplied as sterile PBS, pH 7.4

Usage Guide

Stability & Storage:

Samples are stable for twelve months from date of receipt at -20°C to -80°C .

Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Tumor necrosis factor alpha (TNF-alpha), also known as TNF, TNFA or TNFSF2, is the prototypic cytokine of the TNF superfamily, and is a multifunctional molecule involved in the regulation of a wide spectrum of biological processes including cell proliferation, differentiation, apoptosis, lipid metabolism, and coagulation. Two receptors, TNF-R1 (TNF receptor type 1; CD120a; p55/60) and TNF-R2 (TNF receptor type 2; CD120b; p75/80), bind to TNF-alpha. TNF-alpha protein is produced mainly by macrophages, and large amounts of this cytokine are released in response to lipopolysaccharide, other bacterial products, and Interleukin-1 (IL-1). TNF-alpha is involved in fighting against the tumorigenesis, thus, is regarded as a molecular insight in cancer treatment. TNF-alpha Protein & Antibody

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