

# 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- $\alpha$  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:** > 95 % as determined by SDS-PAGE

### Bio Activity:

Measured in a cytotoxicity assay using L929 mouse fibrosarcoma cells in the presence of the metabolic inhibitor actinomycin D. The  $ED_{50}$  for this effect is typically 5-50pg/mL. The specific activity of Recombinant Human TNF-alpha is approximately 52000 IU/ $\mu$ g, which is calibrated against human TNF-alpha WHO International Standard (NIBSC code: 12/154).

### Endotoxin:

< 0.01 EU per  $\mu$ g of the protein as determined by the LAL method

### Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

**Predicted N terminal:** Met

### Molecular Mass:

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

### Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## Usage Guide

### Storage:

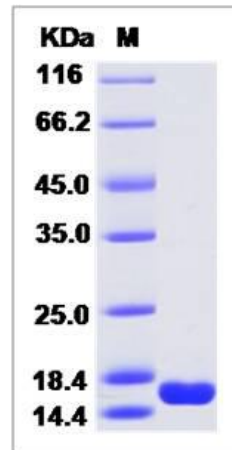
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**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; CD12a; p55/6) and TNF-R2 (TNF receptor type 2; CD12b; p75/8), 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.

## References

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