



**Recombinant Human TNF $\alpha$**   
(Tumor Necrosis Factor alpha)

Catalog Number: 100-III  
Accession Number: P01375

**Specifications and Uses:**

**Alternate Names:** TNFSF2, Cachectin, DIF, Necrosin, Cytotoxin, Cachexin, TNF

**Description:**

Tumor Necrosis Factor alpha (TNF $\alpha$ ) is an inflammatory cytokine secreted by macrophages, monocytes, neutrophils, T cells, NK-cells following their stimulation by bacterial LPS. TNF $\alpha$  activates signals through two receptors, TNFR1, which is expressed on most cell types, and TNFR2, which is expressed mainly on immune cells. TNF $\alpha$  can have many functions including, to stimulate of phagocytosis in macrophages, to chemoattract neutrophils, to increase insulin resistance and to induce fever. Recombinant human TNF- $\alpha$  is a non-glycosylated protein, containing 158 amino acids, with a molecular weight of 17.5 kDa.

**Source:** *E.coli*

**Physical Appearance:** Sterile filtered white lyophilized (freeze-dried) powder.

**Formulation and Stability:**

Recombinant human TNF $\alpha$  is lyophilized from a concentrated solution (1mg/mL) with 10 mM Na<sub>2</sub>PO<sub>4</sub>, pH 8.0 and 20 mM NaCl.

Lyophilized product is very stable at -20°C. Reconstituted material should be aliquoted and frozen at -20°C. It is recommended that a carrier protein (0.1% HSA or BSA) is added for long term storage.

**Reconstitution:**

Centrifuge vial before opening. When reconstituting the product, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution. It is recommended to reconstitute the lyophilized product with sterile water at a concentration of 0.1 mg/mL, which can be further diluted into other aqueous solutions.

**Protein Content and Purity (typically  $\geq$  98%) determined by:**

HPLC, Reducing and Non-reducing SDS-PAGE, UV spectroscopy at 280 nm

**Endotoxin Level:**

Measured by kinetic LAL analysis and is typically  $\leq$  1 EU/ $\mu$ g protein.

**Biological Activity:**

The activity is determined by the cytolysis of mouse L929 cells in the presence of Actinomycin D and is typically less than 0.05 ng/mL.

**AA Sequence:**

VRSSRTPSD KPVAVVAVNP QAEGQLQWLN RRANALLANG VELRDNQLVV PSEGLYLIYS QVLFGQGQCP  
STHVLLTHTI SRIAVSYQTK VNLLSAIKSP CQRETPEGAE AKPWYEPIYL GGVFQLEKGD RLSAEINRPD  
YLDFAESGQV YFGIHAL

**THIS PRODUCT IS FOR RESEARCH USE ONLY AND IS NOT FOR USE IN HUMANS!**

Gentauro Molecular Products  
Voortstraat 49  
1910 Kampenhout, Belgium