

# Recombinant Human TNF alpha

Catalog # FL147

## Product Specifications

Appearance	Sterile filtered White lyophilized (freeze-dried) powder.
Purity	> 97% by SDS-PAGE or HPLC.
Endotoxin	< 0.01 EU/ $\mu$ g of rHuTNF- $\alpha$ protein as determined by LAL method.
Expression System	Expressed in E. coli.
Species	Human
Tag	Tag free.
Activity	Fully biologically active when compared to standard. The ED50 as determined by a cytotoxicity assay using murine L929 cells is less than 0.05 ng/ml, corresponding to a specific activity of $\geq 2.0 \times 10^7$ IU/mg in the presence of actinomycin D.
Formulation	Lyophilized from a 0.2 $\mu$ m filtered concentrated solution in PBS, pH 7.4.
Reconstitution	Before use this product, please read the direction below carefully. This vial must be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in a sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/ml. Stock solutions should be apportioned into working aliquots and stored at $\leq -20^\circ\text{C}$ . Further dilutions should be made in appropriate buffered solutions.
Accession #	P01375 Val77-Leu233 with an N-terminal Met
Amino acid sequence	MVRSSSRTPSDKPVAVHVANPQAEGQLQWLNRRANALLANGVELRDNLVVPSEGLYLIYSQVLFKGGQCPSTHVLLTHTI SRIAVSYQTKVNLLSAIKSPCQRETPEGAEAKPWYEPIYLGGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIHAL
Molecular weight	Approximately 17.5 kDa, a polypeptide chain containing 158 amino acids. The native form of TNF- $\alpha$ is reportedly a trimer.
Stability & Storage	Shipped on wet ice. For long term storage, the product should be stored $\leq -20^\circ\text{C}$ . Please avoid repeated freeze-thaw cycles after reconstitution. 36 months from date of receipt, $-20$ to $-70^\circ\text{C}$ as supplied. 1 month, 2 to $8^\circ\text{C}$ under sterile conditions after reconstitution. 3 months, $-20$ to $-70^\circ\text{C}$ under sterile conditions after reconstitution.
Precautions	Recombinant Human TNF alpha is for research use only and not for use in diagnostic or therapeutic procedures.

## Background

Tumor necrosis factor alpha (TNF- $\alpha$ ), also called cachectin, is the best-known member of the TNF-family, which can cause cell death. This protein is produced by neutrophils, activated lymphocytes, macrophages, NK cells, LAK cells, astrocytes, endothelial cells, smooth muscle cells and some transformed cells. The naturally-occurring form of TNF- $\alpha$  is glycosylated, but non-glycosylated recombinant TNF- $\alpha$  has comparable biological activity. The recombinant TNF- $\alpha$  is a non-glycosylated polypeptide chain containing 158 amino acids. The native form of TNF- $\alpha$  is reportedly a trimer.

