

GMP Recombinant Human TNF , His-tagged

Cat. No. TNF-150H **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Species Human

Source E.coli

Description

Tumor necrosis factor α (TNF- α), also called cachectin, is produced by neutrophils, activated lymphocytes, macrophages, NK cells, LAK cells, astrocytes endothelial cells, smooth muscle cells and some transformed cells. TNF- α occurs as a secreted, soluble form and as a membrane-anchored form, both of which are biologically active. The naturally-occurring form of TNF- α is glycosylated, but non-glycosylated recombinant TNF- α has comparable biological activity. The biologically active native form of TNF- α is reportedly a trimer. Human and murine TNF- α show approximately 79% homology at the amino acid level and crossreactivity between the two species. Two types of receptors for TNF- α have been described and virtually all cell types studied show the presence of one or both of these receptor types.

Form Lyophilized from a 0.2 μ m filtered concentrated solution in PBS, pH 7.0.

Bio-activity

The ED50 determined by a cytotoxicity assay using murine L929 cells is less than 0.05 ng/mL, corresponding to a specific activity of $>2.0 \times 10^7$ IU/mg in the presence of actinomycin D.

Molecular Mass

Approximately 18.3 kDa, a single, non-glycosylated polypeptide chain containing 157 amino acids with 6 $\times$ His at N-terminus.

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AA Sequence	MHHHHHHVRS SSRTPSDKPV AHVVANPQAE GQLQWLNRRRA NALLANGVEL RDNQLVVPSE GLYLIYSQVL FKGQGCPSTH VLLTHTISRI AVSYQTKVNL LSAIKSPCQR ETPEGAEAKP WYEPIYLGGV FQLEKGDRLS AEINRPDYLD FAESGQVYFG IIAL
Endotoxin	Less than 1 EU/μg of TNF-α; His as determined by LAL method.
Purity	>97% by SDS-PAGE and HPLC analyses.
Usage	This material is offered by Creatvie Biomart for research, laboratory or further evaluation purposes. FOR RESEARCH USE ONLY. NOT INTENDED FOR ANY ANIMAL OR HUMAN THERAP EUTIC OR DIAGNOSTIC USE.
Storage Buffer	This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8°C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to -70°C. Avoid repeated freeze/thaw cycles.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in 10 mM HAc to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at< -20°c="" further="" dilutions="" should="" be="" made="" in="" appropriate="" buffered="">

GENE INFORMATION

Gene Name	TNF tumor necrosis factor [Homo sapiens]
Official Symbol	TNF

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Synonyms	TNF; tumor necrosis factor; TNFA, tumor necrosis factor (TNF superfamily, member 2); DIF; TNF superfamily; member 2; TNF alpha; TNFSF2; TNF- α ; cachectin; APC1 protein; TNF, monocyte-derived; TNF, macrophage-derived; TNF superfamily, member 2; tumor necrosis factor alpha; tumor necrosis factor-alpha; tumor necrosis factor ligand superfamily member 2; TNFA; TNF-alpha;
Gene ID	7124
mRNA Refseq	NM_000594
Protein Refseq	NP_000585
MIM	191160
UniProt ID	P01375
Chromosome Location	6p21.3
Pathway	Adipocytokine signaling pathway, organism-specific biosystem; Adipocytokine signaling pathway, conserved biosystem; Adipogenesis, organism-specific biosystem; African trypanosomiasis, organism-specific biosystem; African trypanosomiasis, conserved biosystem; Allograft rejection, organism-specific biosystem; Allograft rejection, conserved biosystem;
Function	cytokine activity; identical protein binding; protease binding; protein binding; transcription regulatory region DNA binding; tumor necrosis factor receptor binding;