

Recombinant Human Tumor Necrosis Factor, HQ-tagged

Cat. No. TNF-1914H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant humanTNF-alpha protein contains 158 amino acid residues and a 16 aa HQ tag. Totallength is 174 aa.
Species	Human
Source	Hordeum Vulgare
Description	Tumor necrosis factor-alpha is the best-known member of this class, and sometimes referred to when the term tumor necrosis factor is used. TNF is a monocyte-derived cytotoxin that has been implicated in tumour regression, septic shock and cachexia.
Form	Lyophilized from a 0.2 µm sterile filtered solution of PBS, pH 7.2.
Purity	>98% by SDS-PAGE. Purified product carries no pyrogenic or pro-inflammatory contaminants, as assayed with monocyte activation test using custom human Multiplex Cytokine Assay measuring IL-6, TNF-alpha and IL-1beta induction.
Molecular Weight	Projected MW 19.6kDa. The recombinant protein migrates as two bands with an apparent MW 21 and 23 kDa in SDS-PAGE.
Endotoxin Level	< 0.005 ng per µg of product (0.05 EU/µg) as measured by turbidimetric kinetic assay.
Reconstitution	Centrifuge vial prior to opening. First add sterile distilled water to the vial to fully solubilize the protein to a concentration not less than 100 µg/ml. After complete solubilization of the protein, it can be further diluted to other aqueous solutions.

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Biological Activity	The ED50 is determined by the Cytotoxicity Assay for the human-TNF-alpha for dose-dependent cytolytic effects of serial dilutions of h-TNF-alpha on the fibrosarcoma L-929 cells. The ED50 for a typical batch of recombinant human TNF-alpha is 40 ng/ml.
Storage	The lyophilized protein, though stable at room temperature for two weeks, is best stored at -20°C. Reconstituted protein should be used immediately or stored in working aliquots at -20°C. Avoid repeated freeze-thaw cycles.
Official Symbol	TNF
Pathways	Adipocytokine signaling pathway; Adipogenesis; African trypanosomiasis; Allograft rejection; Alzheimer's disease; Amoebiasis; Amyotrophic lateral sclerosis (ALS); Angiopoietin receptor Tie2-mediated signaling; Antigen processing and presentation; Apoptosis; Asthma; Calcineurin-regulated NFAT-dependent transcription in lymphocytes; Canonical NF-kappaB pathway; Caspase cascade in apoptosis; Cellular roles of Anthrax toxin; Ceramide signaling pathway

GENE INFORMATION

Gene Name	TNF tumor necrosis factor [Homo sapiens]
Synonyms	TNF; tumor necrosis factor; DIF; TNFA; TNFSF2; TNF-alpha; TNF-a; cachectin; APC1 protein; OTTHUMP00000029281; 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; Tumor necrosis factor; Cachectin
Gene ID	7124
mRNA Refseq	NM_000594

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Protein Refseq	NP_000585
MIM	191160
UniProt ID	P01375
Chromosome Location	6p21.3
Function	cytokine activity; identicalprotein binding; protease binding; protein binding; transcription regulatoryregion DNA binding; tumor necrosis factor receptor binding
PDB structure	2TNF.

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