

**Recombinant Human Tumor Necrosis Factor- alpha, His  
(rhTNF- $\alpha$ , His)  
Catalog Number: 103-01H**

<b>Description</b>	Tumor necrosis factor alpha (TNF- $\alpha$ ) is produced by neutrophils, activated lymphocytes, macrophages, NK cells, LAK cells, astrocytes endothelial cells, smooth muscle cells and some transformed cells. TNF- $\alpha$ occurs as a secreted, soluble form and as a membrane-anchored form, both of which are biologically active. The naturally-occurring form of TNF- $\alpha$ is glycosylated, but non-glycosylated recombinant TNF- $\alpha$ has comparable biological activity. The biologically active native form of TNF- $\alpha$ is reportedly a trimer. Human and murine TNF- $\alpha$ show approximately 79% homology at the amino acid level and cross reactivity between the two species.
<b>Synonyms</b>	Cachectin, DIF, TNFA, TNFSF2, TNF-alpha, APC1 protein
<b>AA Sequence</b>	MHHHHHHVRS SSRTPSDKPV AHVVANPQAE GQLQWLNRRRA NALLANGVEL RDNQLVVPSE GLYLIYSQVL FKGQGCPSTH VLLTHTISRI AVSYQTKVNL LSAIKSPCQR ETPEGAEAKP WYEPIYLGGV FQLEKGDRLS AEINRPDYLD FAESGQVYFG IIAL
<b>Source</b>	<i>Escherichia coli</i>
<b>Molecular Weight</b>	Approximately 17.5 kDa. a single, non-glycosylated, polypeptide chain containing 157 amino acids fragment (77-233) and having a molecular mass of 21.85 kDa with an amino-terminal hexahistidine tag.
<b>Purity</b>	>95% by SDS-PAGE and HPLC analyses.
<b>Biological Activity</b>	Fully biologically active. Specific activity $\geq 2 \times 10^7$ units/mg, as determined by murine L929 cell cytotoxicity in the presence of Actinomycin D.
<b>Physical Appearance</b>	White lyophilized powder.
<b>Formulation</b>	Lyophilized from a 0.2 $\mu$ m filtered concentrated (1mg/ml) solution in PBS, pH 7.0.
<b>Endotoxin</b>	< 1EU/ $\mu$ g of growth factor as determined by LAL method.
<b>Reconstitution</b>	Reconstitute in sterile distilled water containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL.
<b>Storage</b>	Store at -20°C after receiving. Upon reconstitution, store at 2-8°C for up to one week. For maximal stability, aliquot and store at -20°C. Avoid repeated freeze/ thaw cycles.
<b>Usage</b>	This product is for research use only. It is not approved for use in humans, animals, or <i>in vitro</i> diagnostic procedures.