

# Growth Factor Data Sheet

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Tumor necrosis factor (or TNF- $\alpha$ ), also called cachectin, is produced by neutrophils, activated lymphocytes, macrophages, NK-cells, LAK-cells, astrocyte endothelial cells, smooth muscle cells and some transformed cells. TNF occurs as a secreted, soluble form and as a membrane-anchored form, both of which are biologically active. The naturally occurring form of TNF is glycosylated, but nonglycosylated recombinant TNF has comparable biological activity. The biologically active native form of TNF is reportedly a trimer. Human and murine TNF has approximately 79% homology at the amino acid level and there is cross-reactivity between the two species. Two types of receptors for TNF, p55 and p75, have been described and virtually all cell types studied show the presence of one or both of these receptor types. TNF- $\alpha$ , His has an identical amino acid sequence to Human TNF- $\alpha$ , but with 6x-His at the N-terminus for protein purification.

<b>Catalog Number</b>	<b>1130-01H</b>
<b>Product Name</b>	<b>TNF-<math>\alpha</math> (His), Human</b> Recombinant Human Tumor Necrosis Factor, His TNF- $\alpha$ , TNF-alpha Cachectin, Cachexin
<b>Source</b>	<i>Escherichia coli</i>
<b>MW</b>	~18.3 kDa (157 amino acid plus 6x His at N-terminus)
<b>Sequence</b>	MHHHHHHVRS SSRTPSDKPV AHVVANPQAE GQLQWLNRRRA NALLANGVEL RDNQLVVPSE GLYLIYSQVL FKGQGCPSTH VLLTHTISRI AVSYQTKVNL LSAIKSPCQR ETPEGAEAKP WYEPIYLGGV FQLEKGDRLS AEINRPDYLD FAESGQVYFG IIAL
<b>Accession Number</b>	<a href="#">P01375</a>
<b>Purity</b>	>97% by SDS-PAGE and HPLC analyses
<b>Biological Activity</b>	Fully biologically active when compared to standard. The ED <sub>50</sub> as 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.
<b>Formulation</b>	Sterile filtered white lyophilized powder. Purified and tested for use in cell culture.
<b>Storage/Handling</b>	This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term storage. The reconstituted sample can be apportioned into working aliquots and stored at -80 °C for up to 6 months. Avoid repeated freeze/thaw cycles.
<b>Reconstitution</b>	The sample should be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in a siliconized tube using PBS that contains a 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Reconstituted solutions are stable for up to one week at 2-8°C. Stock solutions should be aliquoted and stored at -80°C. Further dilutions should be made in appropriate buffered solutions containing BSA or serum.