Recombinant Human Tumor Necrosis Factor- alpha (rhTNF-α)
Catalog Number: 103-01

Description	Tumor necrosis factor alpha (TNF-α) 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 cross reactivity 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.
Synonyms	Cachectin, DIF, TNFA, TNFSF2, TNF-alpha, APC1 protein
AA Sequence	VRSSSRTPSD KPVAHVVANP QAEGQLQWLN RRANALLANG VELRDNQLV VPSEGLYLIYS QVLFKGQGCP STHVLLTHTI SRIAVSYQTK VNLLSAIKSP CQRETPEGAE AKPWYEPIYL GGVFQLEKGD RLSAEINRPD YLDFAESGQV YFGIIAL
Source	*Escherichia coli*
Molecular Weight	Approximately 17.5 kDa. The recombinant protein preparation is a mixture of a 158 amino acid residue form containing an N-terminal methionine and a 157 amino acid residue form with the sequence of mature human TNF-α.
Purity	>95% by SDS-PAGE and HPLC analyses.
Biological Activity	Fully biologically active. Specific activity $\geq 2 \times 10^7$ units/mg, as determined by murine L929 cell cytolysis in the presence of Actinomycin D.
Physical Appearance	White lyophilized powder.
Formulation	Lyophilized from a 0.2μm filtered concentrated (1mg/ml) solution in PBS, pH 7.0.
Endotoxin	< 1EU/μg of growth factor as determined by LAL method.
Reconstitution	Reconstitute in sterile distilled water containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL.
Storage	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.
Usage	This product is for research use only. It is not approved for use in humans, animals, or *in vitro* diagnostic procedures.