Technical Data Sheet

Recombinant Human Tumor Necrosis Factor-alpha, His (rHu TNF-α-His)

Human Tumor Necrosis Factor-alpha, His

Tumor necrosis factor alpha (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 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.

Catalog Number:	RC214-12H
Source:	*Escherichia coli.*
Molecular Weight:	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.
Quantity:	10ug/50ug/1000μg
Purity:	>95% by SDS-PAGE and HPLC analyses.
Biological Activity:	Fully biologically active when compared to standard. The Specific Activity is ⩾2.0 × 10^7 IU/mg as determined by the cytolysis of murine L929 cells in the presence of Actinomycin D.
Physical Appearance:	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation:	Lyophilized from a 0.2μm filtered concentrated (1mg/ml) solution in PBS, pH 7.0.
AA Sequence:	MHHHHHHVRS SSRTPSDKPV AHVVANPQAE GQLQWLNRRA NALLANGVEL RDNQLVVPSE GLYLIYSQVL FKGQGCPSTH VLLTHTISRI AVSYQTKVNL LSAIKSPCQR ETPEGAEAKP WYEPIYLGGV FQLEKGDRLS AEINRPDYLD FAESGQVYFG IIAL
Endotoxin:	Less than 1EU/μg of rHuTNF-α-his as determined by LAL method.

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Reconstitution:	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA 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 solutions.
Storage:	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.
Usage:	This material is offered Bio Basic Inc for research, laboratory or further evaluation purposes. NOT FOR HUMAN USE.

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