



Tumor Necrosis Factor alpha, His Tag, human recombinant (rHuTNF-a-His)

Catalog No: 95026
Lot No: XXXX
Source: *E. coli*
Synonyms: TNF-alpha, Tumor necrosis factor ligand superfamily member 2, TNF-a, Cachectin, DIF, TNFA, TNFSF2

Background

Tumor necrosis factor is a cytokine involved in systemic inflammation and is a member of a group of cytokines that all stimulate the acute phase reaction. TNF is mainly secreted by macrophages. TNF causes apoptotic cell death, cellular proliferation, differentiation, inflammation, tumorigenesis and viral replication, TNF is also involved in lipid metabolism, and coagulation. TNF's primary role is in the regulation of immune cells. Dysregulation and, in particular, overproduction of TNF have been implicated in a variety of human diseases- autoimmune diseases, insulin resistance, and cancer.

Description

Tumor Necrosis Factor-a human recombinant produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 164 amino acids and having a molecular mass of 18.3 kDa with an N-terminal hexahistidine tag. TNF-alpha His is purified by standard chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized powder.

Formulation

Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.0.

Solubility

It is recommended to reconstitute the lyophilized TNF-a in sterile 18 MΩ-cm H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized Tumor Necrosis Factor-a, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution TNF-a should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Purity

Greater than 97.0% as determined by SDS-PAGE and HPLC.

Activity

The ED50 was determined in the presence of actinomycin D by cytotoxicity assay using murine L929 cells and found to be <0.05 ng/ml corresponding to a specific activity of >2.0 × 10⁷ IU/mg.

Usage

This product is offered by Biomol for research purposes only. Not for diagnostic purposes or human use. It may not be resold or used to manufacture commercial products without written approval of Biomol GmbH.

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