



11 Park Drive, Suite 12
Boston, MA 02215

Rat Tumor Necrosis Factor-Alpha (TNF-a)

ORDERING INFORMATION

Catalog No: rAP-0161;

Size: 5 µg; 20 µg

Storage: <- 20° C

Synonyms:

TNF-alpha, Tumor necrosis factor ligand superfamily member 2, TNF-a, Cachectin, DIF, TNFA, TNFSF2.

Introduction:

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 Rat Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 157 amino acids and having a molecular mass of 17339.44 Dalton.

The TNF-alpha is purified by standard chromatographic techniques.

Source:

Escherichia Coli.

Physical Appearance:

Sterile Filtered White Lyophilized (freeze-dried) powder.

Formulation:

The protein was lyophilized with no additives.

Solubility:

It is recommended to reconstitute the lyophilized Tumor Necrosis Factor-alpha in sterile 18MΩ-cm H₂O not less than 100µg/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:

(a) Analysis by RP-HPLC.

(b) Analysis by SDS-PAGE.

Amino acid sequence:

The sequence of the first five N-terminal amino acids was determined and was found to be Met-Leu-Arg-Ser-Ser.

Contact & Ordering Information: Angio-Proteomie, 11 Park Drive, Suite 12, Boston, MA 02215, USA. Fax: (480) 247-4337, angioproteomie@gmail.com



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Biological Activity:

The ED50 as determined by the cytolysis of murine L929 cells in the presence of Actinomycin D is < 0.05ng/ml, corresponding to a Specific Activity of 5×10^7 IU/mg.

Protein content:

Protein quantitation was carried out by two independent methods:

1. UV spectroscopy at 280 nm using the absorbency value of 1.25 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics).
2. Analysis by RP-HPLC, using a calibrated solution of TNF-a as a Reference Standard.

Usage:

Angio-Proteomie's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.