



Rec.Hum.Tumor Necrosis Factor alpha

50µg : Quantity
rHuTNFalpha-50µg : Code
C008 : Batch
15 dec 2014 : Exp.Date
-20°C : Storage

CERTIFICATE OF ANALYSIS

Background:

TNF alpha is a homotrimer with a subunit molecular mass of 17 kDa and that it plays a major role in growth regulation, differentiation, inflammation, viral replication, tumorigenesis, and autoimmune diseases; and in viral, bacterial, fungal, and parasitic infections. Besides inducing hemorrhagic necrosis of tumors, TNF was found to be involved in tumorigenesis, tumor metastasis, viral replication, septic shock, fever, inflammation, and autoimmune diseases including Crohn's disease, and rheumatoid arthritis as well as graft-versus-host disease.

Description:

Tumor necrosis factor alpha-1a or TNFalpha-1a is a non-glycosylated cytokine produced from E. coli using rDNA technology. The protein consists of three identical polypeptide chains of 158 amino acids combined to form a compact, bell-shaped homotrimer. The individual subunits have a relative molecular mass each of 17,484 Daltons. TNF alpha-1a is a potent lymphoid factor that exerts cytotoxic effects on a wide range of tumor cells and certain other target cells.

Quality Control:

Biological activity: The ED50 as determined by the cytolysis of murine L929 cells in the presence of Actinomycin D is less than 0.03 ng/ml, corresponding to a Specific Activity of 3.0×10^7 IU/ mg.

Purity: Greater than 95% as determined by

(a) Analysis by SEC-HPLC.

(b) Analysis by reducing and non-reducing SDS-PAGE Silver Stained gel.

Molecular weight: 17.3 KD \pm 10% determined by reduced SDS-PAGE.

Isoelectric Point: the main zone between 4.0~5.0 analysis by IEF.

Amino-Acid Sequence: The sequence of the first five N-terminal amino acids was determined and was found to be Met-Val-Arg-Ser-Ser.

Endotoxin: Less than 0.01 ng/µg (1 IEU/µg) determined by LAL test.

Formulation: The protein was lyophilized after extensive dialysis against PBS, pH7.3.

Storage: Lyophilized samples are stable for up to twelve months from date of receipt at -20°C to -70°C.

Please avoid freeze-thaw cycles. For laboratory in vitro research use only.

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

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