Tumor Necrosis Factor alpha

Human, Recombinant (rHuTNFα)

Expressed in *E. coli*
Cat. No. CRP0806
Lot. No. (See product label)

PRODUCT INFORMATION

Description: 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.

Amino-Acid Sequence: 158 aa(The sequence of the first fifteen N-terminal amino acids was determined and was found to be Met-Val-Arg-Ser-Ser-Ser-Arg-Thr-Pro-Ser-Asp-Lys-Pro-Val-Ala), non- glycosylated

M. W. : 17,484 Da

Recombinant: Expressed in *E. coli*

Purity: >95% as determined by SDS-PAGE and SEC-HPLC .

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

UV scan: The maximal absorption wave is 275+/-3nm.

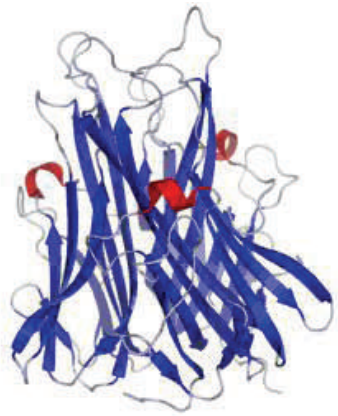
Formulation: Lyophilized from a 0.2 μm filtered solution in PBS.

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

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

Reconstitution: It is recommended to reconstitute the lyophilized TNF alpha-1a in sterile 18MΩ-cm H_2O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.

Storage: Lyophilized samples are stable for up to twelve months from date of receipt at -20°C to -70°C.
Aliquot to avoid repeated freeze-thaw cycles.



PDB rendering based on 1TNF.

GENE INFORMATION

Gene Name: TNF
Gene Alias: DIF; TNFA; TNFSF2; TNF-alpha
Gene Type: protein coding
mRNA Refseq: NM_000594.2
Protein Refseq: NP_000585.2
MIM: 191160
GeneID: 7124
Chromosome Location: 6p21.3
Function: cytokine activity, identical protein binding, tumor necrosis factor receptor binding

REFERENCES

1.Gaur U, Aggarwal BB (2003).Regulation of proliferation, survival and apoptosis by members of the TNF superfamily. Biochem. Pharmacol. 66 (8): 1403–1408

2.Wajant H, Pfizenmaier K, Scheurich P (2003). Tumor necrosis factor signaling. Cell Death Differ. 10 (1): 45–65

3.Tang P, Hung M-C, Klostergaard J (1996). Human pro-tumor necrosis factor is a homotrimer. Biochemistry 35 (25): 8216–8225

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