

Recombinant Rat TNF-alpha Protein

Catalog No.: RP01322 **Recombinant**

Sequence Information

Species	Gene ID	Swiss Prot
Rat	24835	P16599

Tags

C-His

Synonyms

DIF;TNF-alpha;TNFA;TNFSF2;cachexin;cachectin;TNF α ;TNFA

Product Information

Source	Purification
HEK293 cells	> 95% by SDS-PAGE.

Calculated MW	Observed MW
18.91 kDa	18 kDa

Endotoxin

< 0.1 EU/ μ g of the protein by LAL method.

Formulation

Lyophilized from a 0.22 μ m filtered solution of PBS, pH 7.4.

Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

Background

Tumor necrosis factor alpha is a cytokine produced primarily by monocytes and macrophages. It is found in synovial cells and macrophages in the tissues. The primary role of TNF α is in the regulation of immune cells. TNF α is able to induce apoptotic cell death, to induce inflammation, and to inhibit tumorigenesis and viral replication. Dysregulation of TNF α production has been implicated in a variety of human diseases, including major depression, Alzheimer's disease and cancer. Recombinant TNF α is used as an immunostimulant under the INN tasonermin. TNF-alpha is involved in fighting against the tumorigenesis, thus, is regarded as a molecular insight in cancer treatment.

Basic Information

Description

Recombinant Rat TNF-alpha Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Leu80-Leu235) of Rat TNFA (Accession #NP_036807.1) fused with an 6 \times His tag at the C-terminus.

Bio-Activity

Recombinant Rat TNF-alpha induces cytotoxicity in the L-929 Mouse fibroblast cells in the presence of the metabolic inhibitor actinomycin D. The ED₅₀ for this effect is typically 3.37-13.48 μ g/mL, corresponding to a specific activity of 7.42 \times 10⁷~2.97 \times 10⁸ units/mg.

Storage

Store at -20 $^{\circ}$ C. Store the lyophilized protein at -20 $^{\circ}$ C to -80 $^{\circ}$ C up to 1 year from the date of receipt.

After reconstitution, the protein solution is stable at -20 $^{\circ}$ C for 3 months, at 2-8 $^{\circ}$ C for up to 1 week.

Avoid repeated freeze/thaw cycles.

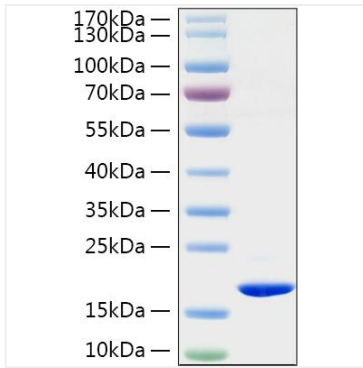
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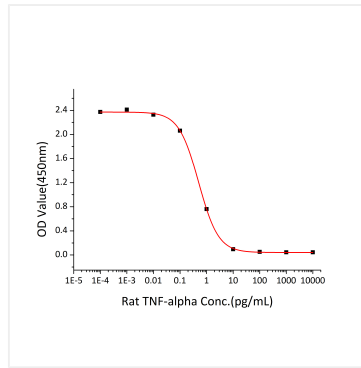
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Validation Data



Recombinant Rat TNF-alpha Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 18kDa.



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