

# Recombinant Rat TNF-alpha Protein

Catalog No.: RP01908 **Recombinant**

## Sequence Information

Species	Gene ID	Swiss Prot
Rat	24835	P16599

**Tags**  
NO-tag

### Synonyms

Tnf; Tnfa; Tnfsf2; Tumor necrosis factor; Cachectin; TNF-alpha; Tumor necrosis factor ligand superfamily member 2; TNF-a; Cleaved into: Tumor necrosis factor; membrane form; N-terminal fragment; NTF; Intracellular domain 1; ICD1; Intracellular domain 2; ICD2; C-domain 1; C-domain 2; Tumor necrosis factor; soluble form

## Product Information

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

Calculated MW	Observed MW
17.23 kDa	15-20 kDa

**Endotoxin**  
< 1 EU/μg of the protein by LAL method

### Formulation

Lyophilized from 0.22 μm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.

### 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.

## Contact

 | 400-999-6126

## Background

Tumor necrosis factor alpha (TNF-alpha), also known as TNF, TNFA or TNFSF2, Cytokine that binds to TNFRSF1A/TNFR1 and TNFRSF1B/TNFR. It is mainly secreted by macrophages and can induce cell death of certain tumor cell lines. It is potent pyrogen causing fever by direct action or by stimulation of interleukin-1 secretion and is implicated in the induction of cachexia. Under certain conditions it can stimulate cell proliferation and induce cell differentiation. Induces insulin resistance in adipocytes via inhibition of insulin-induced IRS1 tyrosine phosphorylation and insulin-induced glucose uptake. Induces GKAP42 protein degradation in adipocytes which is partially responsible for TNF-induced insulin resistance. Plays a role in angiogenesis by inducing VEGF production synergistically with IL1B and IL6. Promotes osteoclastogenesis and therefore mediates bone resorption (By similarity). By Similarity The TNF intracellular domain (ICD) form induces IL12 production in dendritic cells.

## Basic Information

### Description

Recombinant Recombinant Rat TNF-alpha Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Leu80-Leu235) of Rat TNF-alpha (Accession #NP\_036807.1) fused with no tag.

### Bio-Activity

### Storage

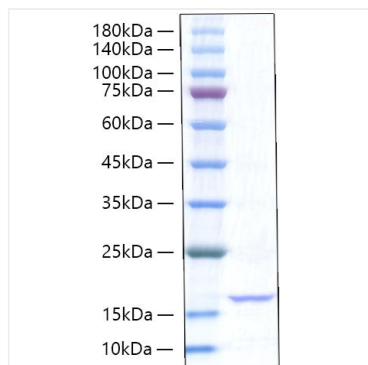
Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt. After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week. Avoid repeated freeze/thaw cycles.

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## Validation Data

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Recombinant Rat TNF-alpha Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 15-20 kDa.