

**Catalog No.:** RP00993    **Recombinant**    **3 Publications**

Species	Gene ID	Swiss Prot
Human	7124	P01375

C-His

TNF; DIF; TNF-alpha; TNFA; TNFSF2; TNLG1F; tumor necrosis factor; TNF- $\alpha$ ; DIF; TNF-alpha; TNFA; TNFSF2; TNLG1F; TNF alpha

<b>Source</b>	<b>Purification</b>
HEK293 cells	≥ 95 % as determined by SDS-PAGE

Calculated MW	Observed MW
18.19 kDa	18 kDa

< 0.1 EU/μg of the protein by LAL method.

Lyophilized from a 0.22  $\mu\text{m}$  filtered solution of PBS, pH 7.4. Contact us for customized product form or formulation.

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 freeze-thaw cycles.

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Tumor necrosis factor alpha (TNF-alpha), also known as TNF, TNFA or TNFSF2, is the prototypic cytokine of the TNF superfamily. This cytokine is mainly secreted by macrophages. It can bind to, and thus functions through its receptors TNFRSF1A/TNFR1 and TNFRSF1B/TNFR. This cytokine is involved in the regulation of a wide spectrum of biological processes including cell proliferation, differentiation, apoptosis, lipid metabolism, and coagulation. This cytokine has been implicated in a variety of diseases, including autoimmune diseases, insulin resistance, and cancer. Knockout studies in mice also suggested the neuroprotective function of this cytokine.

Recombinant Human TNF- $\alpha$  Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Val 77 - Leu 233 ) of human TNF- $\alpha$  (Accession #NP\_000585.2) fused with a 6xHis tag at the C-terminus.

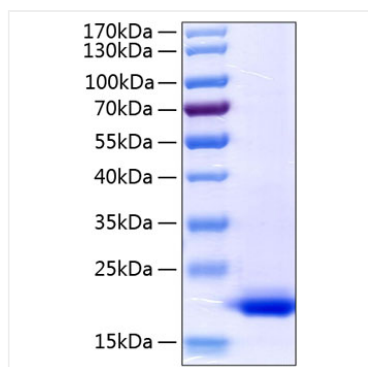
1. Measured in a cytotoxicity assay using L-929 mouse fibrosarcoma cells in the presence of the metabolic inhibitor actinomycin D. The ED<sub>50</sub> for this effect is typically 3.46-13.84 pg/mL, corresponding to a specific activity of 7.23×10<sup>7</sup>~2.89×10<sup>8</sup> units/mg.

Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.

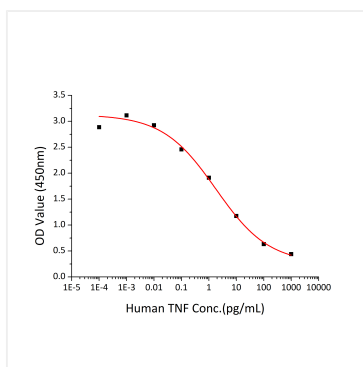
After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

Avoid repeated freeze/thaw cycles.

## Validation Data



Recombinant Human TNF-alpha Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.



Recombinant Human TNF-alpha induces cytotoxicity in the L-929 mouse fibroblast cells in the presence of the metabolic inhibitor actinomycin D. The ED<sub>50</sub> for this effect is 0.90-3.60 ng/mL, corresponding to a specific activity of  $2.78 \times 10^5 \sim 1.11 \times 10^6$  units/mg.