

# Human TNF alpha Protein (active trimer)

Cat. No. TNF-HM00A

## Description

<b>Source</b>	Recombinant Human TNF alpha Protein is expressed from HEK293 without tag. It contains Val77-Leu233.
<b>Accession</b>	P01375
<b>Molecular Weight</b>	The protein has a predicted MW of 17.35 kDa. Due to glycosylation, the protein migrates to 18-22 kDa based on Bis-Tris PAGE result.
<b>Endotoxin</b>	Less than 0.1 EU per µg by the LAL method.
<b>Purity</b>	> 95% as determined by Bis-Tris PAGE > 95% as determined by HPLC

## Formulation and Storage

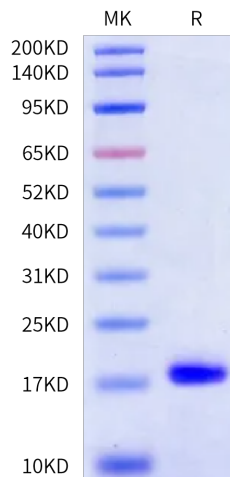
<b>Formulation</b>	Lyophilized from 0.22 µm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.
<b>Reconstitution</b>	Dissolve the lyophilized protein in distilled water. Please refer to the Certificate of Analysis for detailed instructions.
<b>Storage</b>	-20 to -80°C for 12 months as supplied from date of receipt. -80°C for 3 months after reconstitution. Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles.

## Background

Tumor necrosis factor alpha (TNF-alpha), also known as cachectin and TNFSF2, is the prototypic ligand of the TNF superfamily. It is a pleiotropic molecule that plays a central role in inflammation, immune system development, apoptosis, and lipid metabolism. 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.

## Assay Data

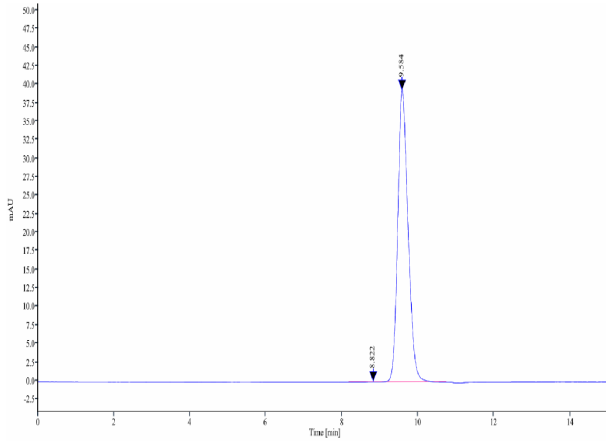
### Bis-Tris PAGE



Human TNF alpha on Bis-Tris PAGE under reduced condition. The purity is greater than 95%.

### SEC-HPLC

Assay Data



The purity of Human TNF alpha is greater than 95% as determined by SEC-HPLC.

# Human TNF alpha Protein (active trimer)

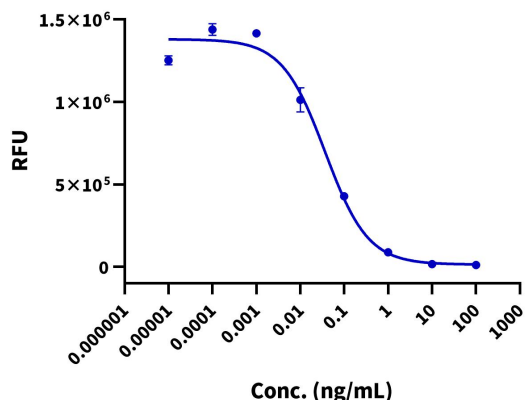
Cat. No. TNF-HM00A



## Assay Data

### Cell Based Assay

Recombinant Human TNF alpha Bioactivity

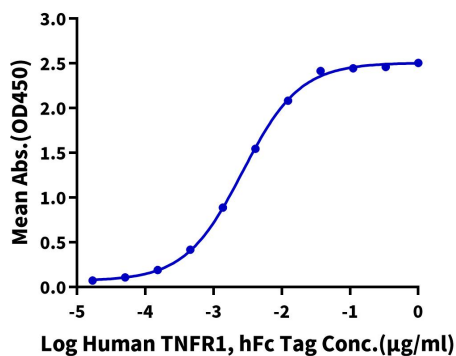


Measured in a cytotoxicity assay using L929 mouse fibroblast cells in the presence of the metabolic inhibitor actinomycin D. The ED50 for this effect is 25-100 pg/mL.

### ELISA Data

#### Human TNF alpha, No Tag ELISA

0.1µg Human TNF alpha, No Tag Per Well

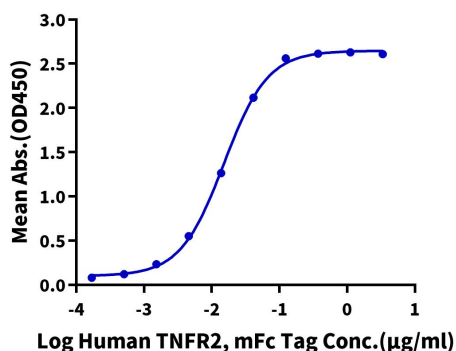


Immobilized Human TNF alpha, No Tag at 1µg/ml (100µl/well) on the plate. Dose response curve for Human TNFR1, hFc Tag (Cat. TNF-HM2R1) with the EC50 of 2.7ng/ml determined by ELISA.

### ELISA Data

#### Human TNF alpha, No Tag ELISA

0.1µg Human TNF alpha, No Tag Per Well



Immobilized Human TNF alpha, No Tag at 1µg/ml (100µl/well) on the plate. Dose response curve for Human TNFR2, mFc Tag (Cat. TNF-HM3R2) with the EC50 of 15.1ng/ml determined by ELISA.