

Synonym

DIF,TNF-alpha,TNFA,TNFSF2,cachexin,cachectin,TNFα

Source

Human TNF-alpha Protein, His Tag(TNA-H5228) is expressed from human 293 cells (HEK293). It contains AA Val 77 - Leu 233 (Accession # [NP_000585.2](#)).

Predicted N-terminus: Val 77

Molecular Characterization

TNF-alpha(Val 77 - Leu 233)
NP_000585.2

Poly-his

This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 18.3 kDa. The protein migrates as 17-19 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per µg by the LAL method / rFC method.

Purity

>95% as determined by SDS-PAGE.

>95% as determined by SEC-MALS.

Formulation

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

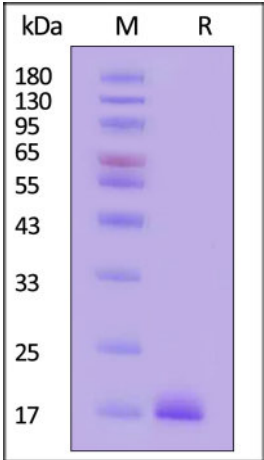
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

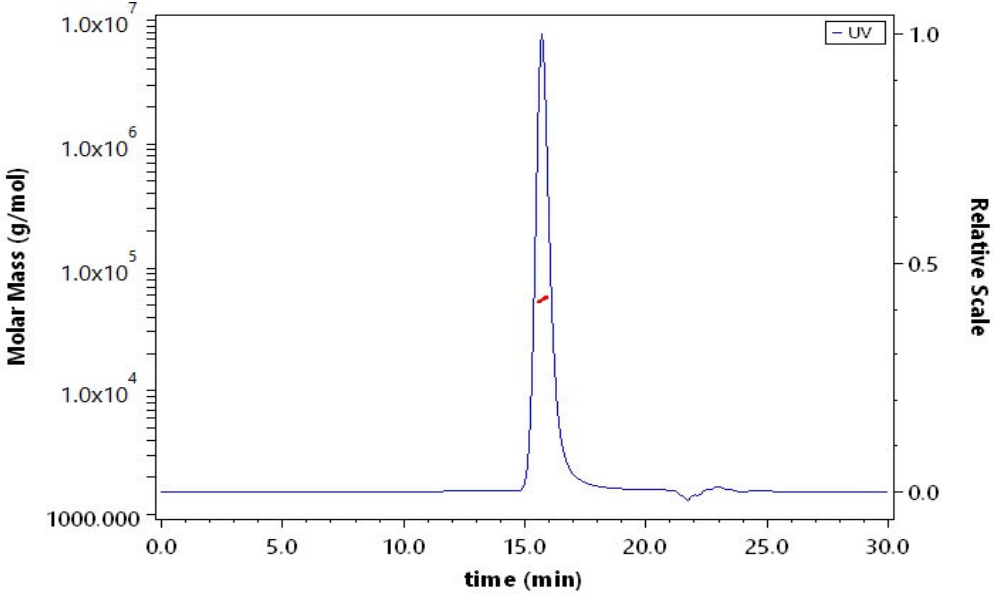
- 20°C to -70°C for 12 months in lyophilized state;
- 70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



Human TNF-alpha Protein, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With [Star Ribbon Pre-stained Protein Marker](#)).

SEC-MALS



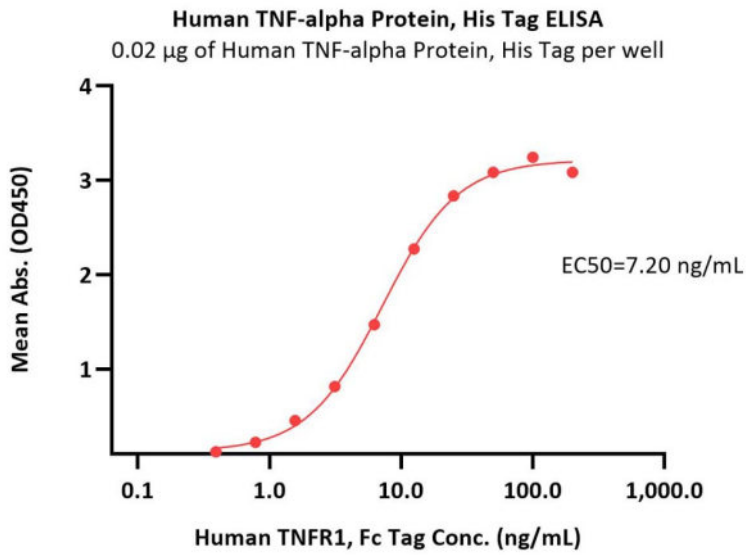
The purity of Human TNF-alpha Protein, His Tag (Cat. No. TNA-H5228) is more than 95% and the molecular weight of this protein is around 55-70 kDa verified by SEC-MALS.

[Report](#)

Bioactivity-ELISA

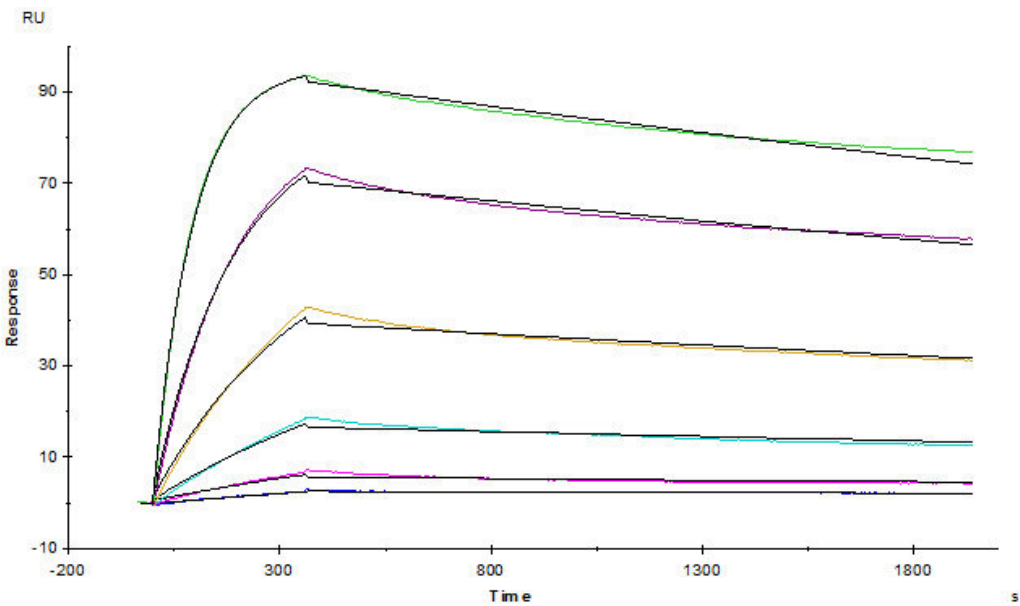
Discounts, Gifts,
and more!





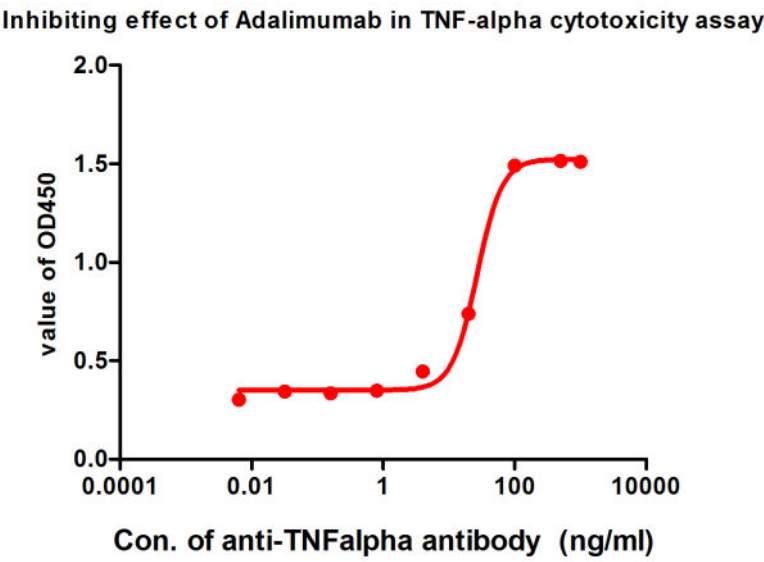
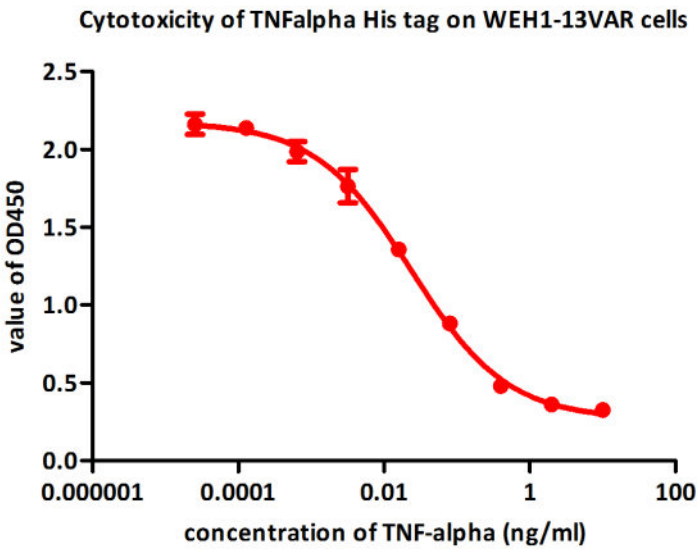
Immobilized Human TNF-alpha Protein, His Tag (Cat. No. TNA-H5228) at 0.2 µg/mL (100 µL/well) can bind Human TNFR1, Fc Tag (Cat. No. TN1-H5251) with a linear range of 0.4-13 ng/mL (QC tested).

Bioactivity-SPR



Humira (Adalimumab) captured on CM5 chip via anti-human IgG Fc antibodies surface, can bind Human TNF-alpha Protein, His Tag (Cat. No. TNA-H5228) with an affinity constant of 0.244 nM as determined in a SPR assay (Biacore T200) (Routinely tested).

Bioactivity-CELL BASE



Human TNF-alpha Protein, His Tag, active trimer (MALS verified)

Catalog # TNA-H5228



Human TNF-alpha Protein, His Tag (Cat. No. TNA-H5228) induces cytotoxicity effect on the WEH1-13VAR cells in the presence of the metabolic inhibitor actinomycin D. The EC50 for this effect is 0.013-0.074 ng/mL (Routinely tested).

Neutralization assay shows that the cytotoxicity effect of Human TNF-alpha Protein, His Tag (Cat. No. TNA-H5228) was inhibited by increasing concentration of Adalimumab. The concentration of TNF-alpha used is 1 ng/mL. The IC50 is 26.8 ng/mL (Routinely tested).

Background

Tumor necrosis factor alpha (TNFα) is a cytokine produced primarily by monocytes and macrophages. It is found in synovial cells and macrophages in the tissues. The primary role of TNFα is in the regulation of immune cells. TNFα is able to induce apoptotic cell death, to induce inflammation, and to inhibit tumorigenesis and viral replication. Dysregulation of TNFα production has been implicated in a variety of human diseases, including major depression, Alzheimer's disease and cancer. Recombinant TNFα is used as an immunostimulant under the INN tasonermin. TNFα can be produced ectopically in the setting of malignancy and parallels parathyroid hormone both in causing secondary hypercalcemia and in the cancers with which excessive production is associated.

Discounts, Gifts,
and more!

