

**Synonym**

DIF, TNF-alpha, TNFA, TNFSF2, cachexin, cachectin, TNF $\alpha$

**Source**

Mouse TNF-alpha Protein, Fc Tag(TNA-M5257) is expressed from human 293 cells (HEK293). It contains AA Leu 80 - Leu 235 (Accession # [P06804-1](#) ).

Predicted N-terminus: Leu 80

**Molecular Characterization**

TNF-alpha(Leu 80 - Leu 235) P06804-1	Fc(Pro 100 - Lys 330) P01857
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This protein carries a human IgG1 Fc tag at the C-terminus

The protein has a calculated MW of 43.7 kDa. The protein migrates as 45-50 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  $\mu$ g by the LAL method.

**Purity**

>90% as determined by SDS-PAGE.

>95% as determined by SEC-MALS.

**Formulation**

Lyophilized from 0.22  $\mu$ m 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**

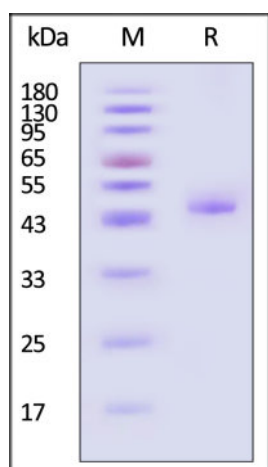
For long term storage, the product should be stored at lyophilized state at -20 $^{\circ}$ C or lower.

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

- -20 $^{\circ}$ C to -70 $^{\circ}$ C for 12 months in lyophilized state;
- -70 $^{\circ}$ C for 3 months under sterile conditions after reconstitution.

**SDS-PAGE**



Mouse TNF-alpha Protein, Fc Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With [Star Ribbon Pre-stained Protein Marker](#)).

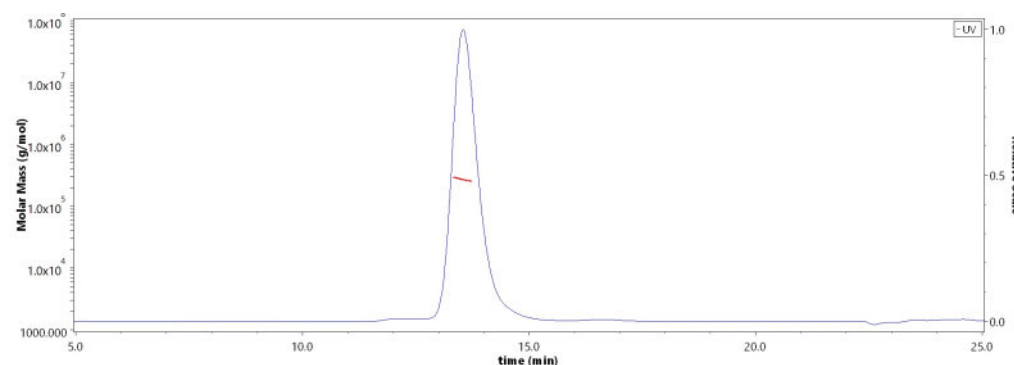
**Bioactivity-ELISA**

TNF-alpha ELISA

Immobilized Mouse TNF-alpha Protein, Fc Tag (Cat. No. TNA-M5257) at 5  $\mu$ g/mL (100  $\mu$ L/well) can bind Human TNFR1, His Tag (Cat. No. TN1-H5222) with a linear range of 1-16 ng/mL (QC tested).

TNF-alpha ELISA

**SEC-MALS**



The purity of Mouse TNF-alpha Protein, Fc Tag (Cat. No. TNA-M5257) is more than 95% and the molecular weight of this protein is around 255-275 kDa verified by SEC-MALS.

[Report](#)

TNF-alpha ELISA

Immobilized Human TNFR1, His Tag (Cat. No. TN1-H5222) at 5  $\mu$ g/mL (100  $\mu$ L/well) can bind Mouse TNF-alpha Protein, Fc Tag (Cat. No. TNA-M5257) with a linear range of 0.1-2 ng/mL (Routinely tested).

Immobilized Biotinylated Human TNFR2, His,Avitag (Cat. No. TN2-H82E3) at 1 µg/mL (100 µL/well) on streptavidin (Cat. No. STN-N5116) precoated (0.5 µg/well) plate can bind Mouse TNF-alpha Protein, Fc Tag (Cat. No. TNA-M5257) with a linear range of 0.1-1 ng/mL (Routinely tested).

## Background

Tumor necrosis factor alpha (TNF $\alpha$ ) 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 $\alpha$  is in the regulation of immune cells. TNF $\alpha$  is able to induce apoptotic cell death, to induce inflammation, and to inhibit tumorigenesis and viral replication. Dysregulation of TNF $\alpha$  production has been implicated in a variety of human diseases, including major depression, Alzheimer's disease and cancer. Recombinant TNF $\alpha$  is used as an immunostimulant under the INN tasonermin. TNF $\alpha$  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.

## Clinical and Translational Updates

Please contact us via [TechSupport@acrobiosystems.com](mailto:TechSupport@acrobiosystems.com) if you have any question on this product.