



## Synonym

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

## Source

Canine TNF-alpha, His Tag(TNA-C52H3) is expressed from human 293 cells (HEK293). It contains AA Val 77 - Leu 233 (Accession # [P51742-1](#)).

Predicted N-terminus: Val 77

## Molecular Characterization

TNF-alpha(Val 77 - Leu 233)  
P51742-1 Poly-his

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

The protein has a calculated MW of 18.6 kDa. The protein migrates as 19-22 kDa 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.

>90% 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

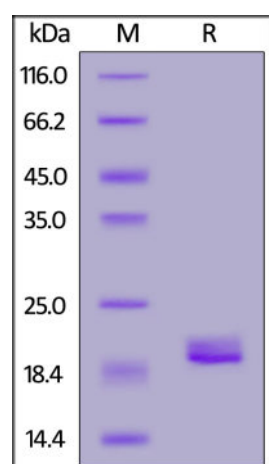
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*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.

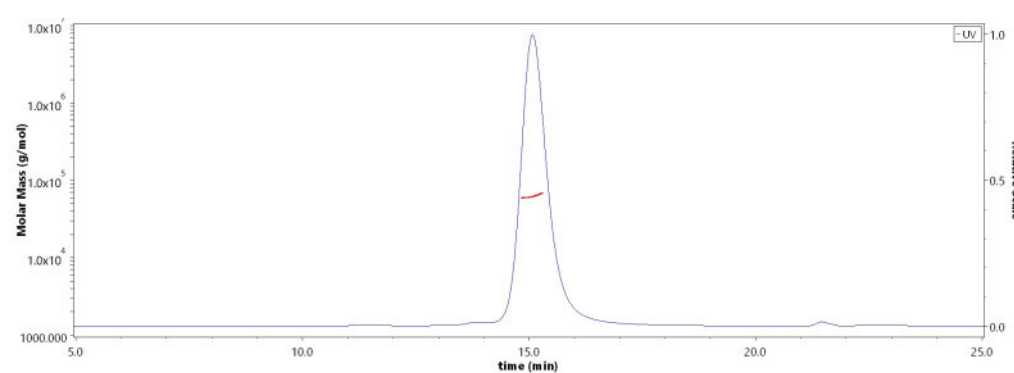
## SDS-PAGE



Canine TNF-alpha, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90%.

## Bioactivity-ELISA

## SEC-MALS



The purity of Canine TNF-alpha, His Tag (Cat. No. TNA-C52H3) is more than 90% and the molecular weight of this protein is around 55-65 kDa verified by SEC-MALS.

[Report](#)

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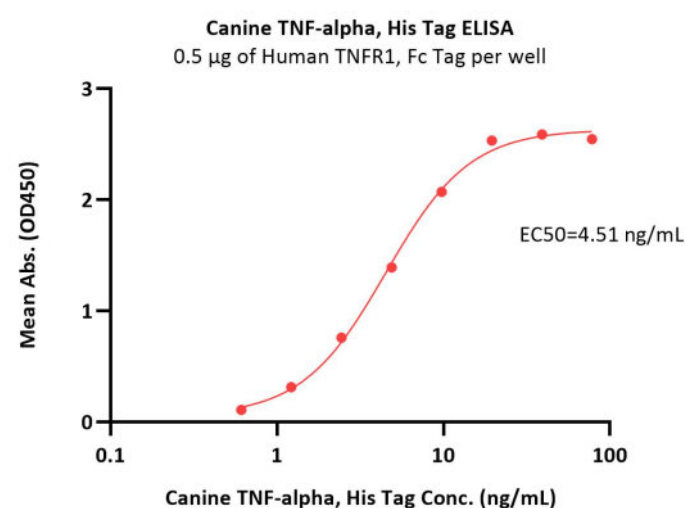
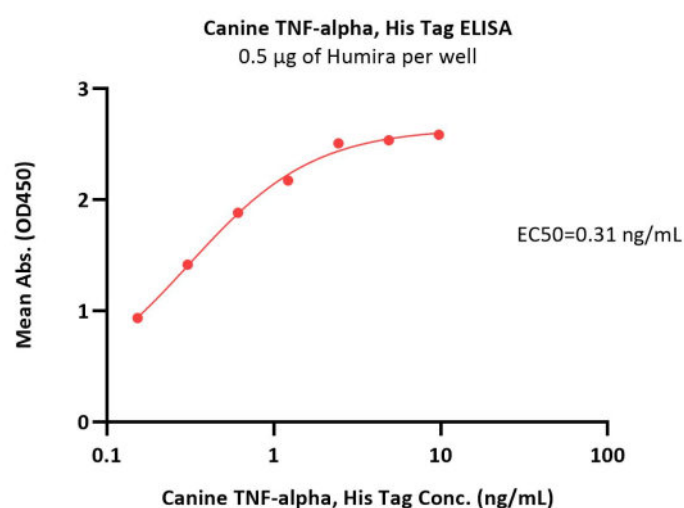


# Canine TNF-alpha Protein, His Tag, active trimer (MALS verified)

Catalog # TNA-C52H3



BIOSYSTEMS  
**Acro**



Immobilized Humira at 5 µg/mL (100 µL/well) can bind Canine TNF-alpha, His Tag (Cat. No. TNA-C52H3) with a linear range of 0.3-1 ng/mL (QC tested).

Immobilized Human TNFR1, Fc Tag (Cat. No. TN1-H5251) at 5 µg/mL (100 µL/well) can bind Canine TNF-alpha, His Tag (Cat. No. TNA-C52H3) with a linear range of 2-10 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

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5/9/2024