Biotinylated Human TNF-alpha Protein, epitope tag free, ultra sensitivity (primary amine labeling), active trimer (MALS verified)

Catalog # TNA-H8211

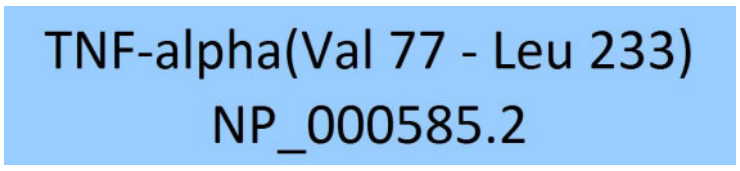
Synonym

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

Source

Biotinylated Human TNF-alpha, epitope tag free, primary amine labeling(TNA-H8211) 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



The product does NOT contain any epitope tags. The protein has a calculated MW of 17.4 kDa. The protein migrates as 18 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Labeling

The primary amines in the side chains of lysine residues and the N-terminus of the protein are conjugated with biotins using standard chemical labeling method. A standard biotin reagent (13.5 angstroms) is used in this product.

Protein Ratio

Passed as determined by the HABA assay / binding ELISA.

Endotoxin

Less than 1.0 EU per μg by the LAL 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

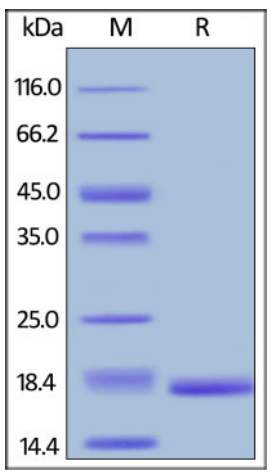
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

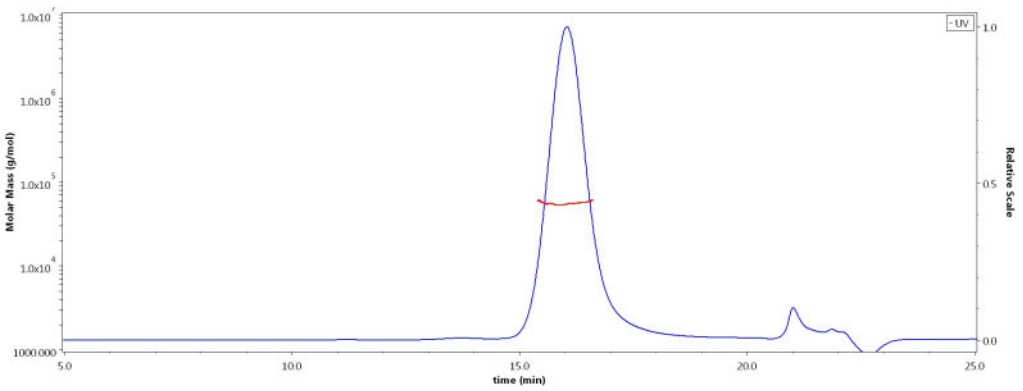
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



Biotinylated Human TNF-alpha, epitope tag free, primary amine labeling on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

SEC-MALS



The purity of Biotinylated Human TNF-alpha, epitope tag free, primary amine labeling (Cat. No. TNA-H8211) is more than 95% and the molecular weight of this protein is around 48-65 kDa verified by SEC-MALS.
Report

Bioactivity-ELISA

Biotinylated Human TNF-alpha Protein, epitope tag free, ultra sensitivity (primary amine labeling), active trimer (MALS verified)

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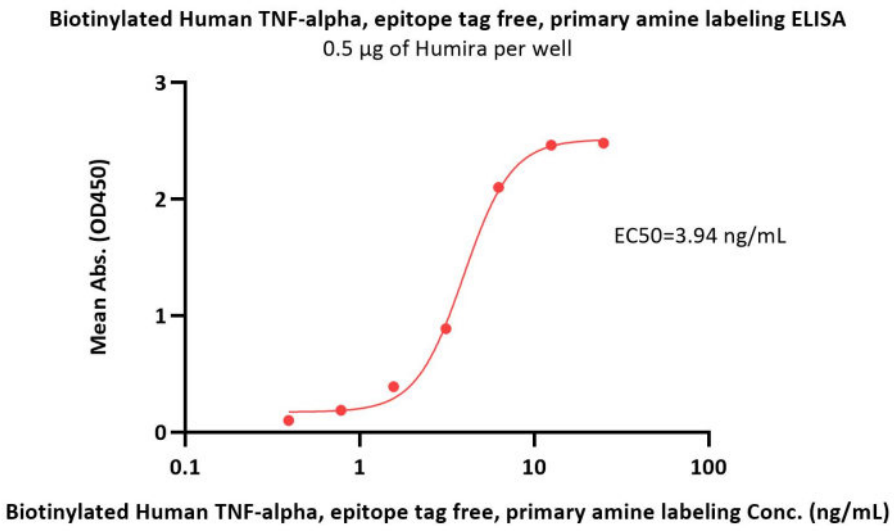
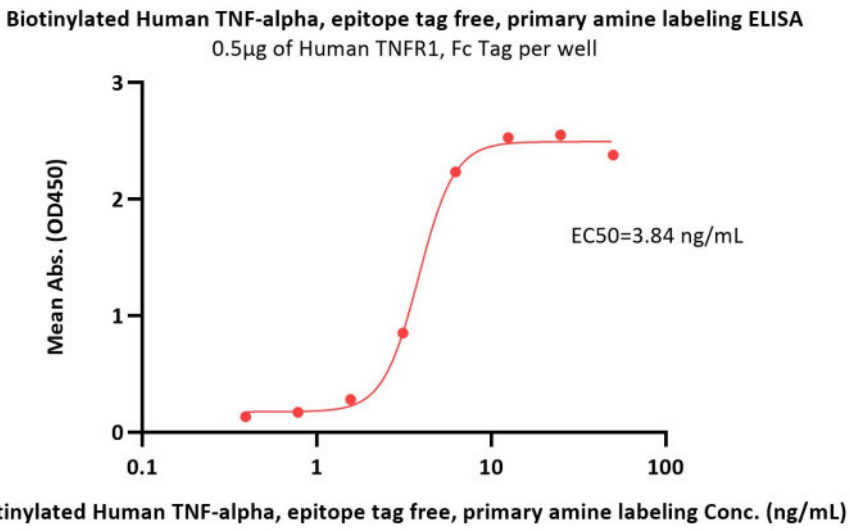


Immobilized Humira at 5 μg/mL (100 μL/well) can bind Biotinylated Human TNF-alpha, epitope tag free, primary amine labeling (Cat. No. TNA-H8211) with a linear range of 0.4-6 ng/mL (QC tested).



Immobilized Human TNFR1, Fc Tag (Cat. No. TN1-H5251) at 5 μg/mL (100 μL/well) can bind Biotinylated Human TNF-alpha, epitope tag free, primary amine labeling (Cat. No. TNA-H8211) with a linear range of 0.4-6 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.

Clinical and Translational Updates