

Human TNF-alpha / TNFA Protein (Fc Tag)

Catalog Number: 10602-H01H



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

TNFA, TNFSF2

Protein Construction:

A DNA sequence encoding the human TNF (NP_000585.2) (Val77-Leu233) was expressed with the Fc region of human IgG1 at the N-terminus.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE.

Endotoxin:

< 1.0 EU per µg protein as determined by the LAL method.

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Glu

Molecular Mass:

The recombinant human TNF consists 417 amino acids and predicts a molecular mass of 45.8 kDa.

Formulation:

Lyophilized from sterile PBS, pH 7.4.

Normally 5 % - 8 % trehalose and mannitol are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

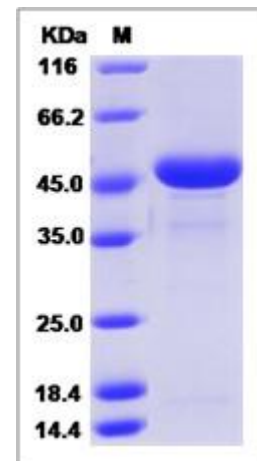
Usage Guide

Storage:

Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

SDS-PAGE:



Reconstitution:

Detailed reconstitution instructions are sent along with the products.

Protein Description

Tumor necrosis factor alpha (TNFa), also known as cachectin and TNFSF1A, is the prototypic cytokine of the TNF superfamily, and is a multifunctional molecule involved in the regulation of a wide spectrum of biological processes including cell proliferation, differentiation, apoptosis, lipid metabolism, and coagulation. TNFa is produced mainly by macrophages, and large amounts of this cytokine are released in response to lipopolysaccharide, other bacterial products, and Interleukin-1 (IL-1). TNFa is primarily produced as a 26 kDa type II transmembrane protein arranged in stable homotrimers, and a 55 kDa soluble trimeric form of TNFa is released via proteolytic cleavage by the metalloprotease TACE/ADAM17. Two receptors mediating the TNFa function have been identified, the ubiquitous TNFR1 from which most signaling are derived, and the hematopoietic cell-restricted TNFR2. Upon the TNFa trimers binding, TNF receptors also form trimers, undergo a conformational change, and enable the adaptor protein TRADD to bind to the death domain, and thus initiates the signal pathways such as the NF-κB, Jak/STAT, and the MAPK pathways, as well as the death signaling. As a major mediator of apoptosis, inflammation and immunity, TNFa has been implicated in the pathogenesis of a variety of diseases including autoimmune diseases, insulin resistance, and cancer.

References

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7. Marchetti, L. et al., 2004, J. Biol. Chem. 279: 32869-81.

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