

TNF-alpha, recombinant Human

Cat# NB-50-0287

Description

Recombinant Human TNF- α

Product Informations

Expiration Date: December 2023

Source: *E.coli*

Lot# 031825

Synonyms: Tumor Necrosis Factor- α , TNFSF2, Cachectin, Differentiation-inducing factor (DIF), Necrosin, Cytotoxin, TNSF1A

Description: TNF- α is a pleiotropic pro-inflammatory cytokine secreted by various cells, including adipocytes, activated monocytes, macrophages, B cells, T cells and fibroblasts. It belongs to the TNF family of ligands, and signals through two receptors, TNFR1 and TNFR2. TNF- α is cytotoxic to a wide variety of tumor cells, and is an essential factor in mediating the immune response against bacterial infections. TNF- α also plays a role in the induction of septic shock, autoimmune diseases, rheumatoid arthritis, inflammation, and diabetes. Human and murine TNF- α demonstrate significant cross-species reactivity. TNF- α exists in two forms; a type II transmembrane protein, and a mature soluble protein. The TNF- α transmembrane protein is proteolytically cleaved to yield a soluble, biologically active, 17 kDa TNF- α , which forms a non-covalently linked homotrimer in solution. Recombinant Human TNF- α is a soluble 157 amino acid protein (17.4 kDa) which corresponds to C-terminal extracellular domain of the full length transmembrane protein.

Sequence: VRSSSRTPSD KPVAHVVANP QAEGQLQWLN RRANALLANG
VELRDNQLVV PSEGLYLIYS QVLFKGGQCP STHVLLTHTI
SRIAVSYQTK VNLLSAIKSP CQRETPEGAE AKPWYEPIYL
GGVFQLEKGD RLSAEINRPD YLDFAESGQV YFGIIAL

Storage & Handling

Handling: Centrifuge vial prior to opening. Do not vortex after reconstitution. Avoid repeated freeze-thaw cycles.

Reconstitution: Initially reconstitute in water to 0.1-1.0 mg/ml. Note: Allow the reconstituted vial to sit at room temperature for 2 hours before use. Store at 2°C to 8°C for up to 1 week or prepare for extended storage.

Extended Storage: After initial reconstitution, further dilute in a buffer containing a carrier protein or stabilizer (e.g. 0.1% BSA). Store working aliquots at -20°C to -80°C.

Storage/Stability:

Product Form	Temperature	Storage Time
Lyophilized	-20°C to -80°C	December 2023
Lyophilized	4°C	12 months
Lyophilized	Room Temperature	1 month
Reconstituted	2°C to 8°C	1 week
Extended Storage	-20°C to -80°C	12 months

Specifications

Formulation: Sterile filtered through a 0.2-micron filter. Lyophilized from 3mM Sodium Phosphate, pH 8.0 + 20mM NaCl.

Authenticity: Verified by N-terminal and Mass Spectrometry analyses (when applicable).

Purity: ≥ 98% by SDS-PAGE gel and HPLC analyses.

Endotoxin: Endotoxin level is < 0.1 ng/μg of protein (< 1 EU/μg).

Protein Content: Verified by UV Spectroscopy and/or SDS-PAGE gel.

Biological Activity: The ED₅₀ as determined by the cytolysis of murine L929 cells in the presence of Actinomycin D is ≤ 0.05 ng/ml, corresponding to a specific activity of ≥ 2 x 10⁷ units/mg.

For reference only

For Research Use Only. Not for Diagnostic or Therapeutic Use.

