

Recombinant TNF- α :

Tumor necrosis factor- α (TNF- α) also known as cachectin, is a pleiotropic cytokine secreted mainly by monocytes and macrophages. It is a trimetric protein encoded within the major histocompatibility complex. It is expressed as a 26 kDa membrane bound protein and is then cleaved by TNF- α converting Genzyme (TACE) to release the soluble 17 kDa monomer, which forms homotrimers in circulation. TNF- α plays a major role in antitumor activity, inflammation, immune system development, apoptosis, anorexia, cachexia, septic shock, viral replication and lipid metabolism. TNF- α also shows antiviral effects against both DNA and RNA Viruses and it induces production of several other cytokines.

- Product code: #RTNF001
- Qty: 100 μ g
- Lot No:
- Expiry:

Package Contents:

Lyophilized vial of TNF- α protein
at a conc. of 0.4 mg/mL

Product Specifications

Homo Sapiens Tumor Necrosis Factor
(UniProt: P01375 TNFA_HUMAN)



Nature: Recombinant (*E. coli*)

Amino acid sequence (77-233):

VRSSSRTPSDKPVAVHVVANPQAEGLQLQWLNRRANALLANGVELRDNQLVVPSEGLYLIYSQVLFKGGQCPSTHVLLTHTISRIA
VSYQTKVNLLSAIKSPCQRETPEGAEAKPWYEPYIYLGGVFQLEK GDRLSAEINRPDYLDFAESGQVYFGIIAL

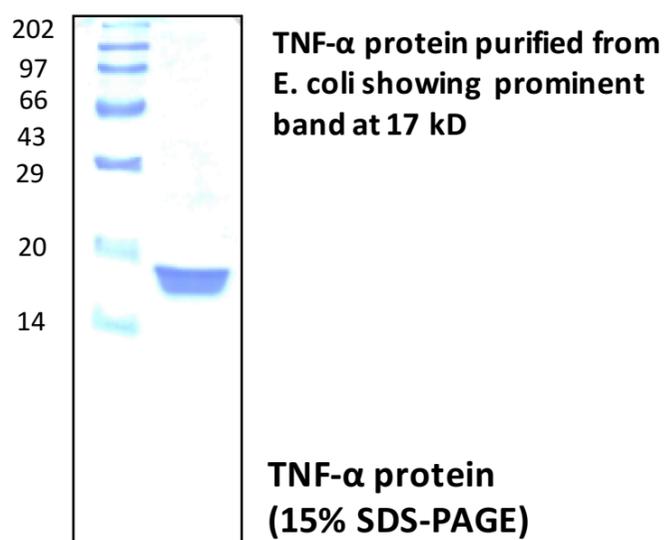
Purification tag: C-terminus 6 \times His tag

Mol. Wt.: 17 kDa

Purity: > 96%, SDS-PAGE (Coomassie blue staining)

Constituents: 10 mM Tris-HCl + 0.1% Glucose

Applications: Functional studies, drug discovery, protein for research purposes.



Quality Control Assays

The IC₅₀ value (i.e, the concentration of Cytotoxic agent necessary to decrease cell growth by 50%) for TNF- α is determined by MTT bioassay using murine L929 cells. The IC₅₀ value was noted to be **100 μ g/ml** in presence of Actinomycin D and its potency ranges from **0.01-0.05 μ g/ml**.

Recombinant TNF- α

Catalogue Number	RTNF001
Quantity	100 μ g
Lot Number	
Amino Acid sequence	VRSSSRTPSDKPVAVHVVANPQAEGQLQWLNRRANALLANG VELRDNQLVVPSEGLYLIYSQVLFKGGCPSTHVLLTHTISRIA VSYQTKVNLLSAIKSPCQRETPEGAEAKPWYEPIYLGGVFQLE KGDRLSAEINRPDYLDFAESGQVYFGIIAL
Molecular Weight	17.4 kDa
Purification method	SDS-PAGE
Purity	> 96%, SDS-PAGE (Coomassie blue staining)
Quantification	Bradford and Lowry's method
Biological Activity	ED ₅₀ in the range of 100 pg/mL as determined by the dose dependent cytotoxic effect on murine L929 cells in the presence of Actinomycin D and potency in the range of 0.01-0.05 pg/mL
Formulation	Lyophilized powder
Sterility	Filtered prior to lyophilization through a 0.22 μ sterile filter.
Production	Recombinant produced in <i>E. coli</i> with C-terminus 6 \times His tag
Reconstitution Recommendation	It is recommended to briefly spin the vial prior to opening to bring the contents to the bottom. Reconstitute lyophilized protein in 250 μ L of buffer (10 mM Tris-HCl, pH 8.5 + 0.1% Glucose)
Suggested Working Dilutions	The optimal concentration should be determined for each specific application.
Storage	Store lyophilized human TNF- α at 2 $^{\circ}$ C to 8 $^{\circ}$ C, preferably desiccated. Upon reconstitution, prepare working aliquots and store at \leq -20 $^{\circ}$ C. Avoid repeated freeze/thaw cycles.
Expiration Date	Expires two years from date of receipt when stored as instructed.

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