

## Recombinant Murine Tumor Necrosis Factor

**Cat. No.** Tnf-331M    **Lot. No.** (See product label)

### SPECIFICATION

<b>Product Overview</b>	Recombinant Murine Tumor Necrosis Factor-alpha (rMu TNF-alpha) is a pleiotropic proinflammatory cytokine secreted by various cells including adipocytes, activated monocytes, macrophages, B cells, T cells and fibroblasts expressed in <i>Steptomyces lividans</i> . MW=17.3kDa.
<b>Species</b>	Mouse
<b>Source</b>	Steptomyces lividans
<b>Description</b>	TNF-alpha is cytotoxic to a wide variety of tumor cells and is an essential factor in mediating the immune response against bacterial infections. TNF-alpha also plays a role in the induction of septic shock, auto immune diseases, rheumatoid arthritis, inflammation, and diabetes. Recombinant murine TNF-alpha is a soluble 156 amino acid protein which corresponds to C-terminal extracellular domain of the full length transmembrane protein.
<b>Quantity</b>	20 µg.
<b>Specific Activity</b>	≥ 9 × 10 <sup>8</sup> IU/mg.
<b>Purity</b>	Greater than 98% (determined by SDS-PAGE and HPLC analysis).
<b>Endotoxin Level</b>	< 0.1 ng per µg of rMu TNF-alpha (1EU/µg).
<b>Biological Activity</b>	Recombinant human TNF-alpha is fully biologically active when compared to a

 Tel: 1-631-559-9269    1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)     Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

standard. The ED<sub>50</sub>, 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  $\geq 9 \times 10^8$  units/mg.

**Formulation**

Sterile, lyophilized protein. Each mg contains 50 mM Tris-HCl (pH 8.0) and 20 mM NaCl.

**Reconstitution**

Please note: Always centrifuge product briefly before opening the vial. The lyophilized rMu TNFalpha should be reconstituted in sterile, ultra-pure water to a concentration of 0.1-1.0 mg/ml. This solution can then be further diluted into other aqueous buffers and stored at -20°C for future use.

**Storage And Stability**

The lyophilized protein, though stable at room temperature for up to 3 weeks, is best stored desiccated at -20°C. Reconstituted rMu TNF-alpha protein should be used immediately or stored long-term in undiluted working aliquots at -20°C. For long-term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid repeated freeze-thaw cycles.

## GENE INFORMATION

**Gene Name**

[Tnf tumor necrosis factor \[ Mus musculus \]](#)

**Synonyms**

Tnf; tumor necrosis factor; DIF; Tnfa; TNFSF2; Tnfsf1a; TNFalpha; MGC151434; TNF-alpha; TNF alpha; tumor necrosis factor alpha; tumor necrosis factor-alpha

**Gene ID**

[21926](#)

**mRNA Refseq**

[NM\\_013693](#)

**Protein Refseq**

[NP\\_038721](#)

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<b>UniProt ID</b>	P06804
<b>Chromosome Location</b>	19.06 cM
<b>Pathway</b>	Adipocytokine signaling pathway; Allograft rejection; Alzheimer"s disease; Amyotrophic lateral sclerosis (ALS); Apoptosis; Asthma; Cytokine-cytokine receptor interaction; Fc epsilon RI signaling pathway; Graft-versus-host disease; Hematopoietic cell lineage; Hypertrophic cardiomyopathy (HCM); MAPK signaling pathway; Natural killer cell mediated cytotoxicity; RIG-I-like receptor signaling pathway; Systemic lupus erythematosus; T cell receptor signaling pathway; TGF-beta signaling pathway; Toll-like receptor signaling pathway; Type I diabetes mellitus; Type II diabetes mellitus
<b>Function</b>	cytokine activity; tumor necrosis factor receptor binding

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