

Recombinant Mouse Tumor Necrosis Factor

Cat. No. Tnf-371M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Mouse Tnf is a disulfide-linked monomer protein, consisting of 157 amino acids and migrates as an approximately 17 kDa protein under reducing conditions, and was lyophilized from 0.2 µm filtered PBS solution, pH 7.0.
Species	Mouse
Source	Mouse
Description	Tnf is secreted by macrophages, monocytes, neutrophils, T-cells, NK-cells following their stimulation by bacterial lipopolysaccharides. Cells expressing CD4 secrete TNF-α while CD8(+) cells secrete little or no TNF-α. Stimulated peripheral neutrophilic granulocytes but also unstimulated cells and also a number of transformed cell lines, astrocytes, microglial cells, smooth muscle cells, and fibroblasts also secrete Tnf. Human milk also contains this factor. The synthesis of TNF-α is induced by many different stimuli including interferons, IL2, GM-CSF, SP, Bradykinin, Immune complexes, inhibitors of cyclooxygenase and PAF (platelet activating factor).
Purity	>97%, as determined by SDS-PAGE and HPLC.
Sequence	MSTESMIRDV ELAEEALPQK MGGFQNSRRC LCLSLFSFLL VAGATTLFCL LNFGVIGPQR DEKFPNGLPL ISSMAQTLTL RSSSQNSSDK PVAHVVANHQ VEEQLEWLSQ RANALLANGM DLKDNQLVVP ADGLYLVYSQ VLFKGQGCPCD YVLLTHTVSR FAISYQEKVN LLSAVKSPCP KDTPEGAELK PWYEPIYLGG VFQLEKGDQL SAEVNLPKYL DFAESGQVYF GVIAL

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Molecular Weight	Tnf is generated by the proteolytic removal of the signal peptide and propeptide, this molecule has a calculated mass of approximately 17kDa.
Biological Activity	TheED(50) was determined by cytolysis of murine L929 cells in the presence of Actinomycin D is ≤ 0.05 ng/ml, corresponding to a specific activity of $\geq 3 \times 10^7$ units/mg.
Endotoxin	Endotoxin content was assayed using a LAL gel clot method. Endotoxin level was found to be less than 0.1 ng/g (1EU/g).
Reconstitution	A quick spin of the vial followed by reconstitution in distilled water to a concentration not less than 0.1 mg/mL. This solution can then be diluted into other buffers.
Storage	The lyophilized protein is stable for at least 2 years from date of receipt at -20°C. Upon reconstitution, this cytokine can be stored in working aliquots at 2°C - 8°C for one month, or at -20°C for six months, with a carrier protein without detectable loss of activity. Avoid repeated freeze/thaw cycles.
Official Symbol	Tnf
Pathways	Adipocytokine signaling pathway; Adipogenesis; African trypanosomiasis; Allograft rejection; Alzheimer's disease; Amoebiasis; Apoptosis; Asthma; Death Receptor Signalling; Diabetes pathways; Dilated cardiomyopathy; HTLV-I infection; Hepatitis C; Herpes simplex infection; Influenza A

GENE INFORMATION

Gene Name	Tnf tumor necrosis factor [<i>Mus musculus</i>]
Synonyms	Tnf; tumor necrosis factor; DIF; Tnfa; TNFSF2; Tnfsf1a; TNFalpha; MGC151434; TNF-alpha; tumor necrosis factor; TNF-a; TNF alpha; cachectin; tumor necrosis factor alpha;

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tumor necrosis factor-alpha; tumor necrosis factor ligandsuperfamily member 2	
Gene ID	21926
mRNA Refseq	NM_013693
Protein Refseq	NP_038721
UniProt ID	P06804
Function	cytokine activity; identicalprotein binding; protease binding; protein binding; transcription regulatoryregion DNA binding; tumor necrosis factor receptor binding
Model of TNF-alpha,produced by M. musculus, based on PDB structure	

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