

Recombinant Mouse TNF- α (Animal-Free)

Catalog# / Size	718004 / 20 μ g
Regulatory Status	RUO
Other Names	Tumor necrosis factor- α , Cachectin, Necrosin, Macrophage cytotoxic factor (MCF), Differentiation inducing factor (DIF), TNFSF2
Description	TNF- α is secreted by macrophages, monocytes, neutrophils, T-cells (principally CD4 ⁺), and NK-cells. Many transformed cell lines also secrete TNF- α . TNF- α forms multimeric complexes; stable trimers are most common in solution. A 26 kD membrane form of TNF- α has also been described. TNF- α binding to surface receptors elicits a wide array of biologic activities including: cytolysis and cytostasis of many tumor cell lines <i>in vitro</i> , hemorrhagic necrosis of tumors <i>in vivo</i> , increased fibroblast proliferation, and enhanced chemotaxis and phagocytosis in neutrophils.

Product Details

Source	Mouse TNF- α , amino acids Leu80-Leu235 (Accession# NM_013693), was expressed in <i>E. coli</i> .
Molecular Mass	The 157 amino acid N-terminal methionylated recombinant protein has a predicted molecular mass of 17.4 kD. The predicted N-terminal amino acid is Met.
Purity	>98%, as determined by Coomassie stained SDS-PAGE and HPLC analysis.
Formulation	Lyophilized, carrier-free.
Endotoxin Level	Less than 0.1 ng per μ g of protein.
Storage & Handling	Unopened vial can be stored at -20°C or -70°C. For maximum results, quick spin vial prior to opening. Reconstitute in water to a concentration of 0.1-1.0 mg/ml. Do not vortex. It is recommended to further dilute in a buffer, such as 5% Trehalose, and store working aliquots at -20°C to -80°C. Avoid repeated freeze/thaw cycles.
Activity	The expected ED ₅₀ is \leq 0.1 ng/ml, corresponding to a specific activity of \geq 1.0 x 10 ⁷ units/mg, as determined by the cytolysis of murine L929 cells in the presence of Actinomycin D.
Application	Bioassay

Antigen Details

Structure	Cytokine
Distribution	Activated monocytes, neutrophils, macrophages, T cells, B cells, NK cells, LAK cells
Function	Type II integral membrane protein processed by TACE for secretion; upregulated by interferons, IL-2, GM-CSF, substance P, bradykinin, PAF, immune complexes, cyclooxygenase; downregulated by IL-6, TGF- β , vitamin D3, prostaglandin E2, PAF antagonists
Ligand/Receptor	TNFRSF1A (TNF-R1, CD120a, TNFR-p60 Type β , p55), TNFRSF1B (TNF-R2, CD120b, TNFR-p80 Type A, p75)
Bioactivity	Paracrine/endocrine mediator of inflammatory and immune functions; selectively cytotoxic for transformed cells; endothelial cell alterations; chemoattractant
Biology Area	Cell Biology, Immunology, Neuroinflammation, Neuroscience
Molecular Family	Cytokines/Chemokines
Antigen References	<ol style="list-style-type: none"> 1. Fitzgerald K, <i>et al.</i> Eds. 2001. The Cytokine FactsBook. Academic Press San Diego. 2. Beutler B, <i>et al.</i> 1988. <i>Annu. Rev. Biochem.</i> 57:505. 3. Beutler B, <i>et al.</i> 1989. <i>Annu. Rev. Immunol.</i> 7:625. 4. Tracey K, <i>et al.</i> 1993. <i>Crit. Care Med.</i> 21:S415.

Gene ID

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