

## Recombinant murine Tumor Necrosis Factor-alpha (rm TNF-alpha)

**TNF- $\alpha$**  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- $\alpha$  causes apoptotic cell death, cellular proliferation, differentiation, inflammation, tumorigenesis and viral replication and is also involved in lipid metabolism and coagulation. TNF's primary role is in the regulation of immune cells. TNF- $\alpha$  also plays a role in the induction of septic shock, auto immune diseases, rheumatoid arthritis, inflammation, diabetes and cancer.

Recombinant murine TNF-alpha is a soluble 156 amino acid protein (17.3 kDa) which corresponds to C-terminal extracellular domain of the full length transmembrane protein.

**Synonyms :** TNFSF2, Cachectin, Differentiation-inducing factor (DIF), Necrosin, Cytotoxin

**Source:** *Escherichia coli*

**AA Sequence:** MLRSSSQNSS DKPVAHVVAN HQVEEQLEWL SQRANALLAN GMDLKDNLV  
VPADGLYLVY SQVLFKGGQC PDYVLLTHTV SRFAISYQEK VNLLSAVKSP  
CPKDTPEGAE LKPWYEPIYL GGVFQLEKGD QLSAEVNLPK YLDFAESGQV  
YFGVIAL

**Formulation:** Lyophilisate from a 0.22  $\mu$ m filtered carrier free solution in 25 mM Tris, 250 mM NaCl, pH 8.0

**Reconstitution:** Reconstitute in sterile endotoxin free water not less than 100  $\mu$ g/ml

**Stability:** The lyophilized protein is stable for at least 2 years at -20 $^{\circ}$ C. Reconstituted rm TNF $\alpha$  is stable for at least 3 months when stored in concentrated working aliquots (100 ng/ $\mu$ l or higher) at -20 $^{\circ}$ C. Avoid repeated freeze/thaw cycles.

**Biological Activity:** Determined by the cytolysis of murine L929 cells in the presence of actinomycin D the ED50 is < 0.05 ng/ml

**Purity:** 95% (verified by SDS-PAGE / silver stain)

**Endotoxicity:** The endotoxin level is less than 0.1 ng per  $\mu$ g (1EU/ $\mu$ g) determined by LAL method

**Order N $^{\circ}$**  rm-TNF $\alpha$  +Size  
available sizes: 5  $\mu$ g, 20  $\mu$ g, 100  $\mu$ g

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