

**DATASHEET**  
Version 20181206**TNF- $\alpha$ , Rat****Cat. No.:** Z02999-50**Size:** 50.0 ug**Synonyms:** Tumor Necrosis Factor, TNFSF2, Cachectin, Differentiation-inducing factor (DIF), Necrosin, Cytotoxin**Description:**

Tumor Necrosis Factor-Alpha (TNF-Alpha) also known as Cachectin and TNFSF1A, plays a major role in growth regulation, differentiation, inflammation, viral replication, tumorigenesis, and autoimmune diseases; and in viral, bacterial, fungal, and parasitic infections. Besides inducing hemorrhagic necrosis of tumors, TNF has been found to be involved in tumorigenesis, tumor metastasis, viral replication, septic shock, fever, inflammation, and autoimmune diseases including Crohn's disease, and rheumatoid arthritis as well as graft-versus-host disease.

Recombinant rat Tumor Necrosis Factor-Alpha (rrTNF-Alpha) produced in *P. pastoris* is a glycosylated polypeptide chain containing 157 amino acids. A fully biologically active molecule, rrTNF-Alpha has a molecular mass of 17.4kDa analyzed by reducing SDS-PAGE and is obtained by proprietary chromatographic techniques at GenScript.

**Amino Acid Sequence:**

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00001 MLRSSSQNSS DKPVAHVVAN HQAEEQLEWL SQRANALLAN
00041 GMDLKDNQLV VPADGLYLIY SQVLFGQGC PDYVLLTHTV
00081 SRFAISYQEK VLLSAIKSP CPKDTPEGAE LKPWYEPMYL
00121 GGVFQLEKGD LLSAEVNLPK YLDITESGQV YFGVIAL
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**Source:** *P. pastoris***Species:** Rat**Biological Activity:** ED<sub>50</sub> < 50 pg/ml, measured in a cytotoxicity assay using mouse L-929 cells in the presence of actinomycin D, corresponding to a specific activity of > 2.0 × 10<sup>7</sup> units/mg.**Molecular Weight:** 17.4kDa, observed by reducing SDS-PAGE.**Formulation:** Lyophilized after extensive dialysis against PBS.**Reconstitution:** Reconstituted in ddH<sub>2</sub>O at 100 µg/ml.**Purity:** > 95% by SDS-PAGE and HPLC analyses.**Endotoxin Level:** < 0.2 EU/µg, determined by LAL method.**Storage:** Lyophilized recombinant rat Tumor Necrosis Factor-Alpha (rrTNF-Alpha) remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, rrTNF-Alpha should be stable up to 2 weeks at 4°C or up to 3 months at -20°C.