

DATASHEET
Version 20181206**TNF- α , Human (P. pastoris-expressed)****Cat. No.:** Z02682-50**Size:** 50.0 ug**Synonyms:** Tumor Necrosis Factor-alpha (TNF-alpha), Cachectin.**Description:**

Tumor Necrosis Factor-Alpha (TNF-alpha) plays a major role in growth regulation, differentiation, inflammation, viral replication, tumorigenesis, and autoimmune diseases. 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. TNF alpha-1a is a potent lymphoid factor that exerts cytotoxic effects on a wide range of tumor cells and certain other target cells. Recombinant human Tumor Necrosis Factor-Alpha (rhTNF-alpha) produced in *Pichia pastoris* is a glycosylated polypeptide chain of 157 amino acids. A fully biologically active molecule, rhTNF-alpha has a molecular mass of 17.4kDa analyzed by reducing SDS-PAGE and is obtained by proprietary refolding and chromatographic techniques at GenScript.

Amino Acid Sequence:

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00001 VRSSSRTPSD KPAHVVPNP QAEGQLQWLN RRANALLANG
00041 VELRDNLQV V PSEGLYLIYS QVLFKGQGCP STHVLLTHTI
00081 SRIAVSYQTK VNLLSAIKSP CQRETPEGAE AKPWYEPIYL
00121 GGVFQLEKGD RLSAEINRPD YLDAESGQV YFGIIAL
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Source: *P. pastoris***Species:** Human**Biological Activity:** ED₅₀ < 0.08 ng/ml, measured in a cytotoxicity assay using L-929 mouse fibrosarcoma cells in the presence of the metabolic inhibitor actinomycin D, corresponding to a specific activity of > 1.25 x 10⁷ units/mg.**Molecular Weight:** 17.4kDa, observed by reducing SDS-PAGE.**Formulation:** Lyophilized after extensive dialysis against PBS.**Reconstitution:** Reconstituted in ddH₂O at 100 µg/ml.**Purity:** > 95% by SDS-PAGE analysis.**Endotoxin Level:** < 1.0 EU/µg, determined by LAL method.**Storage:** Lyophilized recombinant human Tumor Necrosis Factor-Alpha (rhTNF-alpha) remains stable up to 12 months at lower than -70°C from date of receipt. Upon reconstitution, rhTNF-alpha should be stable up to 4 weeks at 4°C or up to 6 months at -20°C.