

DATASHEET

Version 20181206

TNF- α , Human**Cat. No.:** Z01001-1**Size:** 1.0 mg

Synonyms: TNF-alpha, Tumor necrosis factor ligand superfamily member 2, TNF-a, Cachectin, DIF, TNFA, TNFSF2

Description:

Tumor Necrosis Factor-alpha (TNF-a) is a homotrimer with a subunit molecular mass of 17.3 kDa. Tumor Necrosis Factor-alpha (TNF-a) 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 Human Tumor Necrosis Factor-alpha (TNF- α) produced in *E.coli* is a single non-glycosylated polypeptide chain containing 157 amino acids. A fully biologically active molecule, rhTNF- α has a molecular mass of 17.3 kDa analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques at GenScript.

Amino Acid Sequence:

```
00001 VRSSSRTPSD KPAHVAVNP QAEGQLQWLN RRANALLANG
00041 VELRDNQLVV PSEGLYLIYS QVLFKGQGCP STHVLLTHTI
00081 SRIAVSYQTK VNLLSAIKSP CQRETPEGAE AKPWYEPIYL
00121 GGVFQLEKGD RLSAEINRPD YLDFAESGQV YFGIIAL
```

Source: *E. coli***Species:** Human

Biological Activity: ED₅₀ < 30 pg/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 > 3.3 x 10⁷ units/mg.

Molecular Weight: 17.3 kDa, observed by reducing SDS-PAGE.

Formulation: Lyophilized after extensive dialysis against PBS.

Reconstitution: Reconstituted in ddH₂O or PBS at 100 µg/ml.

Purity: > 98% as analyzed by SDS-PAGE and HPLC.

Endotoxin Level: Less than 0.2 EU/µg determined by LAL test.

Storage: Lyophilized recombinant Human Tumor Necrosis Factor-alpha (TNF- α), remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, human TNF- α should be stable up to 1 week at 4°C or up to 3 months at -20°C.