



# Recombinant Protein Technical Manual

**Recombinant Human TNF-alpha/TNFA Protein  
(Active)**  
RPES4122

## Product Data:

**Product SKU:** RPES4122

**Size:** 10µg

**Species:** Human

**Expression host:** E. coli

**Uniprot:** P01375

## Protein Information:

**Molecular Mass:** 17.5 kDa

**AP Molecular Mass:** 16 kDa

### Tag:

**Bio-activity:** Measured in a cytotoxicity assay using L-929 mouse fibroblast cells in the presence of the metabolic inhibitor actinomycin D. The ED50 for this effect is 10-50 µg/ml.

**Purity:** > 95% as determined by reducing SDS-PAGE.

**Endotoxin:** < 1.0 EU per µg as determined by the LAL method.

**Storage:** Lyophilized protein should be stored at < -20°C, though stable at room temperature for 3 weeks. Reconstituted protein solution can be stored at 4-7°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

**Shipping:** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation:** Lyophilized from a 0.2 µm filtered solution of 20mM PB, 150mM NaCl, pH 7.0.

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:** Cell Culture

**Synonyms:** Tumor Necrosis Factor; Cachectin; TNF-Alpha; Tumor Necrosis Factor Ligand Superfamily Member 2; TNF-a; TNF; TNFA; TNFSF2

## Immunogen Information:

**Sequence:** Val77-Leu233

## Background:

TNF $\alpha$  is a homotrimer with a subunit molecular mass of 17 kD cytokine that binds to TNFRSF1A/TNFR1 and TNFRSF1B/TNFR2. It is mainly secreted by macrophages and can induce cell death of certain tumor cell lines. It plays a major role in growth regulation, differentiation, inflammation, viral replication, tumorigenesis, autoimmune diseases and in viral, bacterial, fungal, and parasitic infections. Besides inducing hemorrhagic necrosis of tumors, TNF was 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.