

## Product datasheet for **TP750007**

### TNF alpha (TNF) (NM\_000594) Human Recombinant Protein

#### Product data:

|                                       |  |
|---------------------------------------|--|
| Product Type:                         | Recombinant Proteins   |
| Description:                          | Recombinant protein of human Tumor Necrosis Factor- $\alpha$ (TNF $\alpha$ ) produced in E. coli.  |
| Species:                              | Human  |
| Expression Host:                      | E. coli  |
| Expression cDNA Clone or AA Sequence: | A DNA sequence encoding the region (Val77-Leu233) of TNF $\alpha$  |
| Tag:                                  | Tag Free   |
| Predicted MW:                         | 17.5 kDa   |
| Concentration:                        | >0.1 $\mu\text{g}/\mu\text{L}$ as determined by microplate BCA method  |
| Purity:                               | >95% as determined by SDS-PAGE and Coomassie blue staining   |
| Buffer:                               | Lyophilized from a sterile solution containing 20 mM PB, pH 7.2  |
| Bioactivity:                          | Determined by the cytolysis of L929 cells in the presence of Actinomycin D. ED50 for this effect is typically 0.19-0.27 ng/ml.                       |
| Endotoxin:                            | < 0.1 EU per 1 $\mu\text{g}$ of the protein by the LAL   |
| Note:                                 | For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process. |
| Storage:                              | Store at -80°C.  |
| Stability:                            | Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.        |
| RefSeq:                               | <a href="#">NP_000585</a>  |
| Locus ID:                             | 7124   |
| UniProt ID:                           | <a href="#">P01375</a>   |
| RefSeq Size:                          | 1686   |
| Cytogenetics:                         | 6p21.33  |
| RefSeq ORF:                           | 699  |
| Synonyms:                             | DIF; TNF-alpha; TNFA; TNFSF2; TNLG1F   |



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**Summary:**

This gene encodes a multifunctional proinflammatory cytokine that belongs to the tumor necrosis factor (TNF) superfamily. This cytokine is mainly secreted by macrophages. It can bind to, and thus functions through its receptors TNFRSF1A/TNFR1 and TNFRSF1B/TNFR. This cytokine is involved in the regulation of a wide spectrum of biological processes including cell proliferation, differentiation, apoptosis, lipid metabolism, and coagulation. This cytokine has been implicated in a variety of diseases, including autoimmune diseases, insulin resistance, psoriasis, rheumatoid arthritis ankylosing spondylitis, tuberculosis, autosomal dominant polycystic kidney disease, and cancer. Mutations in this gene affect susceptibility to cerebral malaria, septic shock, and Alzheimer disease. Knockout studies in mice also suggested the neuroprotective function of this cytokine. [provided by RefSeq, Aug 2020]

**Protein Families:**

Druggable Genome, Secreted Protein, Transcription Factors, Transmembrane

**Protein Pathways:**

Adipocytokine signaling pathway, Allograft rejection, Alzheimer's disease, Amyotrophic lateral sclerosis (ALS), Apoptosis, Asthma, Cytokine-cytokine receptor interaction, Dilated cardiomyopathy, Fc epsilon RI signaling pathway, Graft-versus-host disease, Hematopoietic cell lineage, Hypertrophic cardiomyopathy (HCM), MAPK signaling pathway, Natural killer cell mediated cytotoxicity, NOD-like receptor signaling pathway, RIG-I-like receptor signaling pathway, Systemic lupus erythematosus, T cell receptor signaling pathway, TGF-beta signaling pathway, Toll-like receptor signaling pathway, Type I diabetes mellitus, Type II diabetes mellitus

**Product images:**