

# TNF- $\alpha$

Catalog # PVGS1039

## Product Information

---

<b>Primary Accession Species</b>	<a href="#">P06804</a> Mouse
<b>Sequence</b>	Leu80-Leu235, expressed with an N-terminal Met
<b>Purity</b>	> 98% as analyzed by SDS-PAGE > 98% as analyzed by HPLC
<b>Endotoxin Level Biological Activity</b>	Fully biologically active when compared to standard. The ED <sub>50</sub> as determined by a cytotoxicity assay using murine L929 cells is less than 0.1 ng/ml, corresponding to a specific activity of > 1.0 × 10 <sup>7</sup> IU/mg in the presence of actinomycin D.
<b>Expression System</b>	E. coli
<b>Theoretical Molecular Weight</b>	17.4 kDa
<b>Formulation Reconstitution</b>	Lyophilized from a 0.2 $\mu$ m filtered solution in PBS, pH 7.2. It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/ml.
<b>Storage &amp; Stability</b>	Upon receiving, this product remains stable for up to 6 months at -70°C or -20°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. Avoid repeated freeze-thaw cycles.

## Additional Information

---

<b>Gene ID</b>	21926
<b>Other Names</b>	Tumor necrosis factor, Cachectin, TNF-alpha, Tumor necrosis factor ligand superfamily member 2, TNF-a, Tumor necrosis factor, membrane form, N-terminal fragment, NTF, Intracellular domain 1, ICD1, Intracellular domain 2, ICD2, C-domain 1, C-domain 2, Tumor necrosis factor, soluble form, Tnf, Tnfa, Tnfsf2
<b>Target Background</b>	Tumor necrosis factor alpha (TNF- $\alpha$ ) is produced by neutrophils, activated lymphocytes, macrophages, NK cells, LAK cells, astrocytes endothelial cells, smooth muscle cells and some transformed cells. Mouse TNF- $\alpha$ occurs as a membrane-anchored form. The naturally-occurring form of TNF- $\alpha$ is glycosylated, but non-glycosylated recombinant TNF- $\alpha$ has comparable biological activity. The biologically active native form of TNF- $\alpha$ is reportedly a

trimer. Human and mouse TNF- $\alpha$  show approximately 79% homology at the amino acid level and crossreactivity between the two species.

## Protein Information

---

<b>Name</b>	Tnf
<b>Synonyms</b>	Tnfa, Tnfsf2
<b>Function</b>	Cytokine that binds to TNFRSF1A/TNFR1 and TNFRSF1B/TNFR. It is mainly secreted by macrophages and can induce cell death of certain tumor cell lines. It is potent pyrogen causing fever by direct action or by stimulation of interleukin-1 secretion and is implicated in the induction of cachexia, Under certain conditions it can stimulate cell proliferation and induce cell differentiation (By similarity). Induces insulin resistance in adipocytes via inhibition of insulin-induced IRS1 tyrosine phosphorylation and insulin-induced glucose uptake. Induces GKAP42 protein degradation in adipocytes which is partially responsible for TNF-induced insulin resistance (PubMed: <a href="#">25586176</a> ). Plays a role in angiogenesis by inducing VEGF production synergistically with IL1B and IL6 (By similarity). Promotes osteoclastogenesis and therefore mediates bone resorption (PubMed: <a href="#">32741026</a> ).
<b>Cellular Location</b>	Cell membrane; Single-pass type II membrane protein [Tumor necrosis factor, soluble form]; Secreted. [C-domain 2]: Secreted.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.