

## Recombinant Porcine Tumor Necrosis Factor alpha (rp TNF-alpha)

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

**Introduction:** Tumor necrosis factor is a cytokine involved in systemic inflammation and is a member of a group of cytokines that all stimulate the acute phase reaction. TNF is mainly secreted by macrophages. TNF causes apoptotic cell death, cellular proliferation, differentiation, inflammation, tumorigenesis and viral replication, TNF is also involved in lipid metabolism and coagulation. TNF's primary role is in the regulation of immune cells. Dysregulation and in particular overproduction of TNF have been implicated in a variety of human diseases, such as autoimmune diseases, insulin resistance and cancer.

**Description:** Recombinant porcine Tumor Necrosis Factor alpha produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 157 amino acids and having a molecular mass of 17,274 Dalton. The TNF-alpha is purified by standard chromatographic techniques.

**Source:** *Escherichia Coli*.

**Physical Appearance:** Sterile filtered white lyophilized (freeze-dried) powder.

**Formulation:** Lyophilized from a concentrated solution containing no additives. The samples of 1µg contain Trehalose 5% (w/vol) for better recovery

**Solubility:** It is recommended to reconstitute the lyophilized rp TNFa in sterile H<sub>2</sub>O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

**Stability:** Lyophilized rp TNFa, although stable at room temperature for 3 weeks, should be stored desiccated below -18° C. Upon reconstitution rp TNFa should be stored at 4° C between 2-7 days and for future use below -18° C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

**Purity:** Greater than 95.0% as determined by RP-HPLC and by SDS-PAGE.

**Amino acid sequence:** The sequence of the first five N-terminal amino acids was determined and was found to be Met-Leu-Arg-Ser-Ser.

**Endotoxicity:** The endotoxin level is less than 1 EU / µg determined by LAL method.

**Biological Activity:** The ED<sub>50</sub> as determined by the cytotoxicity of porcine PK15 cells was found to be < 0.008ng/ml.

This material is offered for **research only**. Not for use in human. For in vitro use only. ImmunoTools will not be held responsible for patent infringement or other violations that may occur with the use of our products.

<i>small</i>	5 µg	Cat.N°	16343010
<i>medium</i>	20 µg	Cat.N°	16343014
<i>large</i>	100 µg	Cat.N°	16343016

**ImmunoTools** Excellent Quality - Advantageously priced

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