

## TNF

### Recombinant Porcine Tumor Necrosis Factor-alpha

<b>Catalog No.</b>	CRT107A CRT107B CRT107C	<b>Quantity:</b>	5 µg 20 µg 1 mg
<b>Alternate Names:</b>	TNF-alpha, Tumor necrosis factor ligand superfamily member 2, TNF-a, Cachectin, DIF, TNFA, TNFSF2.		
<b>Description:</b>	<p>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.</p> <p>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.</p> <p>Dysregulation and, in particular, overproduction of TNF have been implicated in a variety of human diseases- autoimmune diseases, insulin resistance, and cancer.</p> <p>Recombinant Porcine TNF-alpha is a single, non-glycosylated, polypeptide chain containing 157 amino acids purified by standard chromatographic techniques.</p>		
<b>Physical Appearance:</b>	Sterile Filtered White lyophilized (freeze-dried) powder.		
<b>Gene ID:</b>	397086		
<b>Source:</b>	<i>E. coli</i>		
<b>Molecular Mass:</b>	17.274 Dalton		
<b>Formulation:</b>	The protein was lyophilized with no additives.		
<b>Purity:</b>	>95% as determined by SDS-PAGE analysis.		
<b>Solubility:</b>	It is recommended to reconstitute the lyophilized Tumor Necrosis Factor-alpha in sterile distilled H <sub>2</sub> O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.		
<b>Biological Activity:</b>	The ED <sub>50</sub> as determined by the cytotoxicity of porcine PK15 cells was found to be 0.001 -0.015 ng/ml.		
<b>Protein Content:</b>	<p>Protein quantitation was carried out by two independent methods:</p> <ol style="list-style-type: none"> <li>1. UV spectroscopy at 280 nm using the absorbency value of 1.26 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics).</li> <li>2. Analysis by RP-HPLC, using a calibrated solution of TNF-a as a Reference Standard.</li> </ol>		
<b>Amino Acid Sequence:</b>	The sequence of the first five N-terminal amino acids was determined and was found to be Met-Leu-Arg-Ser-Ser.		
<b>Reconstitution:</b>	<p><b>Centrifuge vial prior to opening.</b> Lyophilized pig TNF-alpha should be reconstituted in sterile, deionized H<sub>2</sub>O to a concentration of 0.1-1.0 mg/ml to regain full activity. These stock solutions should be apportioned into working aliquots and stored at ≤ -20°C. Further dilutions should be made in low endotoxin medium or buffered solution with heat inactivated FCS or tissue culture grade BSA. The optimal concentration should be determined by the user for each specific application.</p>		



**Storage & Stability:**

Lyophilized Tumor Necrosis Factor- $\alpha$  although stable at room temperature for 3 weeks, should be stored desiccated below  $-20^{\circ}\text{C}$ . Upon reconstitution TNF- $\alpha$  may be stored at  $2-4^{\circ}\text{C}$  between 2-7 days and for future use aliquoted and stored at  $-20^{\circ}\text{C}$  to  $-80^{\circ}\text{C}$ .

For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

**Please prevent freeze-thaw cycles.**

**NOT FOR HUMAN USE. FOR RESEARCH ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.**

