



## Rat Tumor Necrosis Factor alpha (DAG287)

This product is for research use only and is not intended for diagnostic use.

### PRODUCT INFORMATION

<b>Product Overview</b>	Rat TumorNecrosis Factor alpha (TNF- $\alpha$ ), Recombinant. Recombinant Rat TNF-alpha is a single, non-glycosylated, polypeptide chain containing 157 amino acids and having a molecular weight of 17,339.44 Da. The sequence of the first five N-terminal amino acids wa
<b>Antigen Description</b>	Cytokine that binds to TNFRSF1A/TNFR1 and TNFRSF1B/TNFB. It is mainly secreted by macrophages and can induce cell death of certain tumor cell lines. It is a 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.
<b>Species</b>	Rat
<b>Conjugate</b>	Unconjugated
<b>Applications</b>	The ED <sub>50</sub> is determined by the cytotoxicity of murine L929 cells in the presence of Actinomycin D and is approximately 0.05 ng/ml, corresponding to a specific activity of 5 x 10 <sup>7</sup> IU/mg. Each laboratory should determine an optimum working titer for use in its particular application.
<b>Format</b>	Purified, Lyophilized. Reconstitute using sterile deionized water to a concentration of 100 $\mu$ g/ml. Further dilutions can be made in other aqueous buffers.
<b>Concentration</b>	1 mg/ml (OD <sub>280nm</sub> , E <sub>0.1%</sub> = 1.25) (prior to lyophilization)
<b>Buffer</b>	Not applicable
<b>Preservative</b>	None
<b>Storage</b>	2-8°C short term, -20°C long term

### BACKGROUND

**Introduction**

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/TNFBR. 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, and cancer. Knockout studies in mice also suggested the neuroprotective function of this cytokine.

**Keywords**

TNF; tumor necrosis factor; DIF; TNFA; TNFSF2; TNF-alpha; tumor necrosis factor (TNF superfamily, member 2); superfamily, member 2; Tumor necrosis factor; Cachectin; TNF-alpha; Tumor necrosis factor ligand superfamily member 2; TNF-a; Tumor necrosis facto