

## 32-9444: Recombinant Human Tumor Necrosis Factor alpha/TNFalpha (N-6His)

**Alternative Name :** Tumor Necrosis Factor, Cachectin, TNF-Alpha, Tumor Necrosis Factor Ligand Superfamily Member 2, TNF-a, TNF, TNFA, TNFSF2

### Description

Source : E. coli;

Tumor Necrosis Factor--Alpha (TNF--Alpha) is secreted by macrophages, monocytes, neutrophils, T-cells, and NK-cells following stimulation by bacterial LPS. Cells expressing CD4 secrete TNF--Alpha while cells that express CD8 secrete little or no TNF--Alpha. Synthesis of TNF--Alpha can be induced by many different stimuli including interferons, IL2, and GM-CSF. The clinical use of the potent anti-tumor activity of TNF--Alpha has been limited by the proinflammatory side effects such as fever, dose-limiting hypotension, hepatotoxicity, intravascular thrombosis, and hemorrhage. Designing clinically applicable TNF--Alpha mutants with low systemic toxicity has been of intense pharmacological interest. Human TNF--Alpha that binds to murine TNF-R55 but not murine TNF-R7, exhibits retained anti-tumor activity and reduced systemic toxicity in mice compared with murine TNF--Alpha, which binds to both murine TNF receptors. Based on these results, many TNF--Alpha mutants that selectively bind to TNF-R55 have been designed. These mutants displayed cytotoxic activities on tumor cell lines in vitro and have exhibited lower systemic toxicity in vivo. Recombinant Human TNF--Alpha High Active Mutant differs from the wild-type by amino acid substitution of amino acids 1-7 with Arg8, Lys9, Arg10 and Phe157. This mutant form has been shown to have increased activity with less inflammatory side effects in vivo.

### Product Info

**Amount :** 500 µg / 50 µg

**Content :** Lyophilized from a 0.2 µm filtered solution of 20mM PB,100mM NaCl, pH 7.2.

**Amino Acid :** Recombinant Human Tumor Necrosis Factor alpha is produced by our E.coli expression system and the target gene encoding Gly57-Leu233 is expressed with a 6His tag at the N-terminus.