Recombinant Human TNF alpha (C-6His)

Catalog No: CG90

Description	Recombinant Human Tumor Necrosis Factor Alpha is produced by our E.coli expression system and the target gene encoding Val77-Leu233 is expressed with a 6His tag at the C-terminus.
Source	E. coli
Alternative name	Tumor Necrosis Factor; Cachectin; TNF-Alpha; Tumor Necrosis Factor Ligand Superfamily Member 2; TNF-a; TNF; TNFA; TNFSF2
Accession No.	P01375
Predicted Molecular Weight	18.5kDa
AP Molecular Weight	16kDa, reducing conditions.
Formulation	Lyophilized from a 0.2 μm filtered solution of 20mM Tris-HCl, 150mM NaCl, pH 8.0.
Quality Control	Purity: Greater than 95% as determined by reducing SDS-PAGE. Endotoxin: Less than 0.1 ng/μg (1 IEU/μg) as determined by LAL test.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature listed below.
Storage	Lyophilized protein should be stored at < -20°C, though stable at room temperature for 3 weeks. Reconstituted protein solution can be stored at 4-7°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

Background

Tumor Necrosis Factor- α (TNF- α) is secreted by macrophages, monocytes, neutrophils, T-cells, and NK-cells following stimulation by bacterial LPS. Cells expressing CD4 secrete TNF-α while cells that express CD8 secrete little or no TNF- α . Synthesis of TNF- α can be induced by many different stimuli including interferons, IL2, and GM-CSF. The clinical use of the potent anti-tumor activity of TNF-α has been limited by the proinflammatory side effects such as fever, dose-limiting hypotension, hepatotoxicity, intravascular thrombosis, and hemorrhage. Designing clinically applicable TNF-α mutants with low systemic toxicity has been of intense pharmacological interest. Human TNF- α 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- α , which binds to both murine TNF receptors. Based on these results, many TNF- α 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- α High Active Mutant differs from the wild-type by amino acid subsitution 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.

SDS-Page