

Recombinant Human TNF α Protein

Catalog Number: TL-303

Product name

Generic names	Recombinant Human TNF α Protein
Gene Name Synonym	Tumor Necrosis Factor, TNFSF2, Cachectin, Differentiation-inducing factor (DIF), Necrosin, Cytotoxin.

Product information

Construction	A DNA sequence encoding the human TNF- α (NP_000585.2) was expressed with a polyhistidine tag at the C- terminus.
Source	Human
Expression Host	HEK293 cells
QC Testing Purity	> 90 % as determined by SDS-PAGE
Bio Activity	The ED ₅₀ , as determined by the cytolysis of murine L929 cells in the presence of Actinomycin D, is ≤ 0.1 ng/ml, corresponding to a specific activity of $\geq 1 \times 10^7$ units/mg.
Endotoxin	< 0.1EU per μ g of the protein as determined by the LAL method.
Molecular Mass	18.2 KDa
Formulation	Lyophilized from sterile PBS, pH 7.4. 6 % - 8 % trehalose is added as protectant before lyophilization.
Stability & Storage	Stable for up to 24 months from date of receipt at 4 °C. Recommend to aliquot the protein into smaller quantities for optimal storage. Avoid repeated freeze-thaw cycles.

Background

TNF- α is a pleiotropic pro-inflammatory cytokine secreted by various cells, including adipocytes, activated monocytes, macrophages, B cells, T cells and fibroblasts. It belongs to the TNF family of ligands, and signals through two receptors, TNFR1 and TNFR2. TNF- α is cytotoxic to a wide variety of tumor cells, and is an essential factor in mediating the immune response against bacterial infections. TNF- α also plays a role in the induction of septic shock, autoimmune diseases, rheumatoid arthritis, inflammation, and diabetes. TNF- α is produced mainly by macrophages, and large amounts of this cytokine are released in response to lipopolysaccharide, other bacterial products, and Interleukin-1 (IL-1). TNF- α is involved in fighting against tumorigenesis, thus, is regarded as a molecular insight into cancer treatment.

References

- Hector J, *et al.* (2007) TNF- α alters visfatin and adiponectin levels in human fat. *Horm Metab Res.* 39(4): 250-5.

- Berthold-Losleben M, *et al.* (2008) The TNF- α System: Functional Aspects in Depression, Narcolepsy and Psychopharmacology. *Curr Neuropharmacol.* 6(3): 193-202.