# ARG70034
# Human TNF alpha recombinant protein (Active) (His-tagged, C-ter)

Package: 100 µg
Store at: -20°C

## Summary

| | |
|---|---|
| Product Description | E. coli expressed, His-tagged (C-ter) Active Human TNF alpha recombinant protein |
| Tested Application | SDS-PAGE |
| Target Name | TNF alpha |
| Species | Human |
| A.A. Sequence | Val77 - Leu233 |
| Expression System | E. coli |
| Activity | Active |
| Activity Note | Determined by its ability to induce cytotoxicity in L929 cells in the presence of actinomycin D. The ED50 for this effect is < 0.1 ng/mL. The specific activity of recombinant human TNF alpha is approximately 1 x 10^7 IU/mg. |
| Alternate Names | Tumor necrosis factor ligand superfamily member 2; DIF; Cachectin; ICD2; ICD1; N-terminal fragment; TNF-a; TNFA; TNFSF2; TNF-alpha; Tumor necrosis factor; NTF |

## Properties

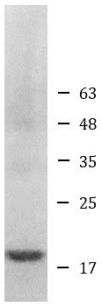
| | |
|---|---|
| Form | Powder |
| Purification Note | Endotoxin level is less than 0.1 EU/µg of the protein, as determined by the LAL test. |
| Purity | > 97% (by SDS-PAGE) |
| Buffer | PBS (pH 8.0) |
| Reconstitution | It is recommended to reconstitute the lyophilized protein in sterile water to a concentration not less than 200 µg/mL and incubate the stock solution for at least 20 min at room temperature to make sure the protein is dissolved completely. |
| Storage instruction | For long term, lyophilized protein should be stored at -20°C or -80°C. After reconstitution, aliquot and store at -20°C or -80°C for up to one month. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. |
| Note | For laboratory research only, not for drug, diagnostic or other use. |

## Bioinformation

| | |
|---|---|
| Gene Symbol | TNF |
| Gene Full Name | tumor necrosis factor |
| Background | 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. [provided by RefSeq, Jul 2008] |

| | |
|---|---|
| Function | Cytokine that binds to TNFRSF1A/TNFR1 and TNFRSF1B/TNFBR. It is mainly secreted by macrophages and can induce cell death of certain tumor cell lines. It is 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. Impairs regulatory T-cells (Treg) function in individuals with rheumatoid arthritis via FOXP3 dephosphorylation. Upregulates the expression of protein phosphatase 1 (PP1), which dephosphorylates the key 'Ser-418' residue of FOXP3, thereby inactivating FOXP3 and rendering Treg cells functionally defective. Key mediator of cell death in the anticancer action of BCG-stimulated neutrophils in combination with DIABLO/SMAC mimetic in the RT4v6 bladder cancer cell line.<br><br>The TNF intracellular domain (ICD) form induces IL12 production in dendritic cells. [UniProt] |
| Highlight | Related products:<br>TNF alpha antibodies; TNF alpha ELISA Kits; TNF alpha Duos / Panels; TNF alpha recombinant proteins;<br>Related news:<br>HMGB1 in inflammation<br>Inflammatory Cytokines |
| PTM | The soluble form derives from the membrane form by proteolytic processing. The membrane-bound form is further proteolytically processed by SPPL2A or SPPL2B through regulated intramembrane proteolysis producing TNF intracellular domains (ICD1 and ICD2) released in the cytosol and TNF C-domain 1 and C-domain 2 secreted into the extracellular space.<br><br>The membrane form, but not the soluble form, is phosphorylated on serine residues. Dephosphorylation of the membrane form occurs by binding to soluble TNFRSF1A/TNFR1.<br><br>O-glycosylated; glycans contain galactose, N-acetylgalactosamine and N-acetylneuraminic acid. [UniProt] |
| Cellular Localization | Cell membrane; Single-pass type II membrane protein. Tumor necrosis factor, membrane form: Membrane; Single-pass type II membrane protein. Tumor necrosis factor, soluble form: Secreted. C-domain 1: Secreted. C-domain 2: Secreted. [UniProt] |

## Images




Human TNF alpha recombinant protein

ARG70034 Human TNF alpha recombinant protein (Active) (His-tagged, C-ter) SDS-PAGE image

SDS-PAGE analysis of ARG70034 Human TNF alpha recombinant protein (Active) (His-tagged, C-ter).